MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

CONTRACT DOCUMENTS

CONTRACT 2024.07

BRIDGE REPAIRS
ST. LAWRENCE & ATLANTIC OVERPASS (MM 74.50)
BLACKSTRAP ROAD OVERPASS (MM FS0.40)
MCRR OVERPASS (EB/WB) (MM FS0.50/FS0.51)
GRAY ROAD (ROUTE 26 & 100) UNDERPASS (MM FS0.70)

NOTICE TO CONTRACTORS

PROPOSAL

CONTRACT AGREEMENT

CONTRACT BOND

FINAL LIEN AND CLAIM WAIVER AND AFFIDAVIT

SPECIFICATIONS

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

The Specifications are divided into two parts:
Part I, Supplemental Specifications and Part II, Special Provisions.

The Maine Turnpike Supplemental Specifications are additions and alterations to the 2014 Maine Department of Transportation Standard Specifications. See Subsection 100.1.

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MAINE TURNPIKE AUTHORITY

NOTICE TO CONTRACTORS

Sealed Proposals will be received by the Maine Turnpike Authority for:

CONTRACT 2024.07

BRIDGE REPAIRS
ST. LAWRENCE & ATLANTIC OVERPASS (MM 74.50)
BLACKSTRAP ROAD OVERPASS (MM FS0.40)
MCRR OVERPASS (EB/WB) (MM FS0.50/FS0.51)
GRAY ROAD (ROUTE 26 & 100) UNDERPASS (MM FS0.70)

at the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, ME, until 11:00 a.m., prevailing time as determined by the Authority on April 18, 2024 at which time and place the Proposals will be publicly opened and read. Bids will be accepted from Contractors **prequalified** by the Maine Department of Transportation for Bridge Construction Projects. All other bids may be rejected. This Project includes a wage determination developed by the State of Maine Department of Labor.

The work consists of bridge repairs at four locations. At the St. Lawrence & Atlantic Overpass in the City of Auburn, the work generally includes pavement and high performance membrane removal and replacement, approach paving, repairs to impact damage on the bridge rail, bridge joint repairs and miscellaneous superstructure repairs. At the Blackstrap Road Overpass in the Town of Falmouth, the work generally consists of joint repairs and header installations, adjacent pavement replacement, and miscellaneous superstructure repairs. At the MCRR Overpass (EB/WB) in the Town of Falmouth, the work generally consists of joint repairs and header installations, adjacent pavement replacement, and miscellaneous superstructure repairs. At the Gray Road (Route 26 & 100) Underpass in the Town of Falmouth, the work generally consists of joint modifications and header installations, adjacent pavement replacement, removing existing girder haunches, abutment patch repairs, and miscellaneous superstructure and substructure repairs. The work also includes maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

Plans and Contract Documents may be examined by prospective Bidders weekdays between 8:00 a.m. and 4:30 p.m. at the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine. **The half size Plans** and Contract Documents may be obtained from the Authority upon payment of Fifty ($50.00) Dollars for each set, which payment will not be returned. Checks shall be made payable to: Maine Turnpike Authority. The Plans and Contract Documents may also be downloaded from a link on our website at http://www.maineturnpike.com/project-and-planning/Construction-Contracts.aspx.

For general information regarding Bidding and Contracting procedures, contact Nate Carll, Purchasing Manager, at (207)482-8115. For information regarding Schedule of Items, plan holders list and bid results, visit our website at **http://www.maineturnpike.com/project-and-**

planning/Construction-Contracts.aspx . For Project specific information, fax all questions to Nate Carll, Purchasing Manager, at (207) 871-7739 or email ncarll@maineturnpike.com. Responses will not be prepared for questions received by telephone. Bidders shall not contact any other Authority staff or Consultants for clarification of Contract provisions, and the Authority will not be responsible for any interpretations so obtained.

All work shall be governed by the Specifications entitled "State of Maine, Department of Transportation, Standard Specifications, Revision of November 2014", "Standard Details, Revision of November 2014" and "Best Management Practices for Erosion and Sediment Control", latest issue. Copies and recent updates to these publications can be downloaded at: http://www.maine.gov/mdot/contractors/publications/ .

Proposals must be accompanied by an original bid bond, certified or cashier's check payable to the Maine Turnpike Authority in an amount not less than Five (5%) Percent of the Total Amount in the Proposal, but not less than $500.00. The Bidder to whom a Contract is awarded will be required to furnish a Surety Corporation Bond, satisfactory to the Authority, on the standard Contract Bond form of the Authority, for a sum not less than the Total Amount of the Proposal.

Proposals must be made upon the Proposal Forms furnished by the Authority separately with the Contract Documents, and must be enclosed in the sealed special addressed envelope provided therefore bearing the name and address of the Bidder, the name of the Contract, and the date and time of Proposal opening on the outside.

A pre-bid conference will be held on April 9, 2024 at 1:00 p.m. at the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine.

The Authority reserves the unqualified right to reject any or all Proposals and to accept that Proposal which in its sole judgment will under all circumstances serve its best interest.

MAINE TURNPIKE AUTHORITY

Nate Carll
Purchasing Manager
Maine Turnpike Authority

Portland, Maine

Maine Turnpike Authority

MAINE TURNPIKE

PROPOSAL

CONTRACT 2024.07

ST. LAWRENCE & ATLANTIC OVERPASS (MM 74.50)
BLACKSTRAP ROAD OVERPASS (MM FS0.40)
MCRR OVERPASS (EB/WB) (MM FS0.50/FS0.51)
GRAY ROAD (ROUTE 26 & 100) UNDERPASS (MM FS0.70)

MAINE TURNPIKE AUTHORITY

PROPOSAL

CONTRACT 2024.07

ST. LAWRENCE & ATLANTIC OVERPASS (MM 74.50)
BLACKSTRAP ROAD OVERPASS (MM FS0.40)
MCRR OVERPASS (EB/WB) (MM FS0.50/FS0.51)
GRAY ROAD (ROUTE 26 & 100) UNDERPASS (MM FS0.70)

TO MAINE TURNPIKE AUTHORITY:

The work consists of bridge repairs at four locations. At the St. Lawrence & Atlantic Overpass in the City of Auburn, the work generally includes pavement and high performance membrane removal and replacement, approach paving, repairs to impact damage on the bridge rail, bridge joint repairs and miscellaneous superstructure repairs. At the Blackstrap Road Overpass in the Town of Falmouth, the work generally consists of joint repairs and header installations, adjacent pavement replacement, and miscellaneous superstructure repairs. At the MCRR Overpass (EB/WB) in the Town of Falmouth, the work generally consists of joint repairs and header installations, adjacent pavement replacement, and miscellaneous superstructure repairs. At the Gray Road (Route 26 & 100) Underpass in the Town of Falmouth, the work generally consists of joint modifications and header installations, adjacent pavement replacement, removing existing girder haunches, abutment patch repairs, and miscellaneous superstructure and substructure repairs. The work also includes maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

This Work will be done under a Contract known as Contract 2024.07 according to the Plans and Specifications which are on file in the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine.

On the acceptance of this Proposal for said Work, the undersigned will give the required bond with good security conditioned for the faithful performance of said Work, according to said Plans and Specifications, and the doing of all other work required by said Specifications for the consideration herein named and with the further condition that the Maine Turnpike Authority shall be saved harmless from any and all damages that might accrue to any person, persons or property by reason of the carrying out of said Work, or any part thereof, or by reason of negligence of the undersigned, or any person or persons under his employment and engaged in said Work.

The undersigned hereby declares that he/she has carefully examined the Plans, Specifications and other Contract Documents, and that he/she will contract to carry out and complete the said Work as specified and delineated at the price per unit of measure for each scheduled item of Work stated in the Schedule of Prices as follows:

It is understood that the TOTAL AMOUNT stated by the undersigned in the following Schedule of Prices is based on approximate quantities and will be used solely for the comparison of bids, and that the quantities stated in the Schedule of Prices for the various items are estimates only and may be increased or decreased all as provided in the Specifications.

SCHEDULE OF BID PRICES
CONTRACT NO. 2024.07
BRIDGE REPAIRS

ST. LAWRENCE & ATLANTIC OVERPASS (MM 74.50)
BLACKSTRAP ROAD OVERPASS (MM FS0.40)
MCRR OVERPASS (EB/WB) (MM FS0.50/FS0.51)
GRAY ROAD (ROUTE 26 & 100) UNDERPASS (MM FS0.70)

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
202.1211	Removing Existing Girder Haunches	Linear Foot	1350				
202.127	Removing Existing Pavement and High Performance Waterproofing Membrane	Square Yard	800				
202.202	Removing Pavement Surface	Square Yard	4875				
202.206	Removing Rumble Strips	Linear Foot	1700				
202.912	Removing Existing Conduit	Lump Sum	1				
403.208	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size	Ton	483				
409.15	Bituminous Tack Coat RS-1 or RS1h - Applied	Gallon	265				
502.7011	Weep Drain Extensions	Each	72				
507.812	Aluminum Bridge Rail, 2 Bar Repair	Lump Sum	1				
508.14	High Performance Waterproofing Membrane	Lump Sum	1				
515.201	Pigmented Protective Coating for Concrete Surfaces	Square Yard	130				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
515.202	Clear Protective Coating for Concrete Surfaces	Square Yard	985				
518.10	Abutment Repairs	Square Foot	45				
518.391	Reparing Granite Curb Joint and Bedding Mortar	Linear Foot	50				
518.4	Epoxy Injection Crack Repair	Linear Foot	17				
518.70	Repair of Overhead Surfaces < 8 inches	Square Foot	40				
518.80	Partial Depth Concrete Deck Repairs	Square Foot	240				
518.81	Full Depth Concrete Deck Repairs	Square Foot	120				
518.864	Elastomeric Concrete Header Repair	Cubic Foot	235				
520.23	Asphaltic Plug Joint	Linear Foot	193				
520.234	Expansion Device - Silicone Coated and Pre-compressed Seal	Linear Foot	76				
520.234	Expansion Device - Silicone Coated and Pre-compressed Seal (Gray Road)	Linear Foot	45				
520.921	Bridge Joint Modification (St. Lawrence & Atlantic)	Each	2				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
520.922	Bridge Joint Modification (Gray Road - Abutment 2)	Each	1				
526.306	Temporary Concrete Barrier, Type I - Supplied by the Authority (St. Lawrence & Atlantic RR)	Lump Sum	1				
526.306	Temporary Concrete Barrier, Type I - Supplied by the Authority (Blackstrap & MCRR)	Lump Sum	1				
527.341	Work Zone Crash Cushions - TL-3	Unit	6				
606.24	Guardrail Type 3d - Single Rail	Linear Foot	15				
609.13	Vertical Bridge Curb Type I	Linear Foot	36				
652.30	Flashing Arrow	Each	5				
652.33	Drum	Each	400				
652.34	Cone	Each	125				
652.35	Construction Signs	Square Foot	2168				
652.361	Maintenance of Traffic Control Devices (St. Lawrence & Atlantic RR)	Lump Sum	1				
652.361	Maintenance of Traffic Control Devices (Blackstrap & MCRR)	Lump Sum	1				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
652.361	Maintenance of Traffic Control Devices (Gray Road)	Lump Sum	1				
652.38	Flagger	Hour	1120				
652.41	Portable-Changeable Message Sign	Each	7				
652.47	Sequential Flashing Warning Lights	Each	155				
656.75	Temporary Soil Erosion and Water Pollution Control	Lump Sum	1				
659.10	Mobilization	Lump Sum	1				

TOTAL:

Acknowledgment is hereby made of the following Addenda received since issuance of the Plans and Specifications: _____

_____

_____

Accompanying this Proposal is an original bid bond, cashiers or certified check on _____ Bank, for _____, payable to the Maine Turnpike Authority. In case this Proposal shall be accepted by the Maine Turnpike Authority and the undersigned should fail to execute a Contract with, and furnish the security required by the Maine Turnpike Authority as set forth in the Specifications, within the time fixed therein, an amount of money equal to Five (5%) Percent of the Total Amount of the Proposal for the Contract awarded to the undersigned, but not less than $500.00, obtained out of the original bid bond, cashier's or certified check, shall become the property of the Maine Turnpike Authority; otherwise the check will be returned to the undersigned.

The performance of said Work under this Contract will be completed during the time specified in Subsection 107.1.

It is agreed that time is of the essence of this Contract and that I (we) will, in the event of my (our) failure to complete the Work within the time limit named above, pay to Maine Turnpike Authority liquidated damages in the amount or amounts stated in the Specifications.

The undersigned is an Individual/Partnership/Corporation under the laws of the State of _____, having principal office at _____, thereunto duly authorized.

_____ *(SEAL)*

_____ *(SEAL)*

Affix Corporate Seal
or Power of Attorney
Where Applicable

_____ *(SEAL)*

By: _____

Its: _____

Information below to be typed or printed where applicable:

INDIVIDUAL:

(Name)	(Address)

PARTNERSHIP - Name and Address of General Partners:

(Name)	(Address)
(Name)	(Address)
(Name)	(Address)
(Name)	(Address)

INCORPORATED COMPANY:

(President)	(Address)
(Vice-President)	(Address)
(Secretary)	(Address)
(Treasurer)	(Address)

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

YORK TO AUGUSTA

CONTRACT AGREEMENT

This Agreement made and entered into between the Maine Turnpike Authority, and sometimes termed the "Authority", and _____

_____

herein termed the "Contractor":

WITNESSETH: That the Authority and the Contractor, in consideration of the premises and of the mutual covenants, considerations and agreements herein contained, agree as follows:

FIRST: The parties hereto mutually agree that the documents attached hereto and herein incorporated and made a part hereof collectively evidencing and constituting the entire Contract to the same extent as if herein written in full, are the Notice to Contractors, the Accepted Proposal, the Specifications, the Plans, this Agreement, the Contract Bond and all Addenda to the Contract Documents duly issued and herewith enumerated:

_____

_____

SECOND: The Contractor for and in consideration of certain payments to be made as hereafter specified, hereby covenants and agrees to perform and execute all of the provisions of this Contract and of all documents and parts attached hereto and made a part thereof, and at his own cost and expense to furnish and perform everything necessary and required to construct and complete, ready for its intended purpose, in accordance with the Contract and such instructions as the Engineer may give, acceptable to the Authority, in the times provided, all of the Work covered and included under Contract No. _____ covering _____ as herein described.

THIRD: In consideration of the performance by the Contractor of his covenants and agreements as herein set forth, the Authority hereby covenants and agrees to pay the Contractor according to the Schedule of Prices set forth in the Proposal with additions and deductions as elsewhere herein provided in the times and in the manner stated in the Specifications. This Agreement shall insure to the benefit of, and shall be binding upon the parties hereto, and upon their respective successors and assigns; but neither party hereto shall assign or transfer his interest herein in whole or in part without the consent of the other, except as herein provided.

IN WITNESS WHEREOF the parties to this Agreement have executed the same in quintuplicate.

AUTHORITY -

MAINE TURNPIKE AUTHORITY

By: _____

Title: CHAIRMAN

Date of Signature: _____

ATTEST:

_____
Secretary

CONTRACTOR -

_____
CONTRACTOR

By: _____

Title: _____

Date of Signature: _____

WITNESS:

_____

CONTRACT BOND

KNOW ALL MEN BY THESE PRESENTS that _____

of _____ in the County of _____ and 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 Maine Turnpike Authority in the sum of _____Dollars ($_____.___), to be paid to said Maine Turnpike Authority, or its successors, for which payment, well and truly to be made, we bind ourselves, our heirs, executors, successors and assigns jointly and severally by these presents.

The condition of this obligation is such that the Principal, designated as Contractor in the foregoing Contract No. _____ shall faithfully perform the Contract on his part and satisfy all claims and demands incurred for the same and shall pay all bills for labor, material, equipment and all other items contracted for, or used by him, in connection with the Work contemplated by said Contract, and shall fully reimburse 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.

Signed and sealed this _____ day of _____, A.D., 202___

Witnesses: CONTRACTOR

_____ _____ *(SEAL)*

_____ _____ *(SEAL)*

_____ _____ *(SEAL)*

SURETY

_____ _____ *(SEAL)*

_____ _____ *(SEAL)*

_____ _____ *(SEAL)*

(Surety must attach copy of Power of Attorney showing authority of Office or Agent to execute bonds)

FINAL LIEN AND CLAIM WAIVER AND AFFIDAVIT

Upon receipt of the sum of _____, which sum represents the total amount paid, including the current payment for work done and materials supplied for Project No. _____, in _____, Maine, under the undersigned's Contract with the Maine Turnpike Authority.

The undersigned, on oath, states that the Final Payment of _____ is the final payment for all work, labor, materials, services and miscellaneous (all of which are hereinafter referred to as "Work Items") supplied to the said Project through _____and that no additional sum is claimed by the undersigned respecting said Project.

The undersigned, on oath, states that all persons and firms who supplied Work Items to the undersigned in connection with said Project have been fully paid by the undersigned for such Work Items or that such payment will be fully effected immediately upon receipt of this payment.

In consideration of the payment herewith made, the undersigned does fully and finally release and hold harmless the Maine Turnpike Authority, and its Surety, if any, from any and all claims, liens or right to claim or lien, arising out of this Project under any applicable bond, law or statute.

It is understood that this Affidavit is submitted to assure the Owner and others that all liens and claims relating to the Work Items furnished by the undersigned are paid.

_____
(Contractor)

By: _____

Title: _____

State of MAINE

County of _____

I, _____, hereby certify on behalf of _____
(Company Officer) *(Company Name)*

its _____, being first duly sworn and stated that the foregoing representations are
(Title)

are true and correct upon his own knowledge and that the foregoing is his free act and deed in said capacity and the free act and deed of the above-named

_____

.

(Company Name)

The above-named, _____, personally appeared before me this ____ day of _____ and swears that this is his free act and deed.

(SEAL)

_____
Notary Public

My Commission Expires: _____

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

PART I – SUPPLEMENTAL SPECIFICATIONS

(Rev. November 10, 2016)

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

PART II – SPECIAL PROVISIONS

PART II - SPECIAL PROVISIONS

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

PART II - SPECIAL PROVISIONS

All work shall be governed by the Maine Department of Transportation Standard Specifications, Revision of November 2014, except for that work which applies to sections of the Maine Department of Transportation Standard Specifications which are amended by the Maine Turnpike Supplemental Specifications and the following modifications, additions and deletions.

General Description of Work

The work consists of bridge repairs at four locations. At the St. Lawrence & Atlantic Overpass in the City of Auburn, the work generally includes pavement and high performance membrane removal and replacement, approach paving, repairs to impact damage on the bridge rail, bridge joint repairs and miscellaneous superstructure repairs. At the Blackstrap Road Overpass in the Town of Falmouth, the work generally consists of joint repairs and header installations, adjacent pavement replacement, and miscellaneous superstructure repairs. At the MCRR Overpass (EB/WB) in the Town of Falmouth, the work generally consists of joint repairs and header installations, adjacent pavement replacement, and miscellaneous superstructure repairs. At the Gray Road (Route 26 & 100) Underpass in the Town of Falmouth, the work generally consists of joint modifications and header installations, adjacent pavement replacement, removing existing girder haunches, abutment patch repairs, and miscellaneous superstructure and substructure repairs. The work also includes maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

Plans

The drawings included in these Contract Documents, and referred to as the Plans, show the general character of the work to be done under this Contract. They bear the general title “Maine Turnpike – Contract 2024.07 – Bridge Repairs – St. Lawrence and Atlantic Overpass (MM 74.50), Blackstrap Road Overpass (MM FS0.40), MCRR Overpass (EB/WB) (MM FS0.50/0.51), Gray Road (Route 26 & 100) Underpass (MM FS0.70)”. The right is reserved by the Resident to make such minor corrections or alterations in the Plans as he deems necessary without change in the unit prices on the Schedule of Prices of the Proposal.

101.2 Definition

Holidays

The following is added after Memorial Day in the Supplemental Specifications:

Independence Day 2024 (Fourth of July)	12:01 p.m. preceding Wednesday to 6:00 a.m. the following Friday.

Indigenous Peoples Day (10/14/24)	12:01 p.m. preceding Friday to 6:00 a.m. the following Tuesday

103.4 Notice of Award

The following sentence is added:

The Maine Turnpike Authority Board is scheduled to consider the Contract Award on April 25, 2024.

104.3.8 Wage Rates and Labor Laws

Section 104.3.8 Wage Rates and Labor Laws has been amended as follows:

The fair minimum hourly rates determined by the State of Maine Department of Labor for this Contract are as follows:

THIS DOCUMENT MUST BE CLEARLY POSTED AT ALL CONSTRUCTION SITES FUNDED IN PART WITH STATE FUNDS

State of Maine Department of Labor - Bureau of Labor Standards
Augusta, Maine 04333-0045 - Telephone (207) 623-7906

Wage Determination - In accordance with 26 MRS §1301 et. seq., this is a determination by the Bureau of Labor Standards, of the fair minimum wage rate to be paid to laborers and workers employed on the below titled project.

2024 Fair Minimum Wage Rates -- Heavy & Bridge Androscoggin County

Occupational Title	Minimum Wage	Minimum Benefit	Total
Brickmasons And Blockmasons	$35.00	$0.86	$35.86
Bulldozer Operator	$31.50	$7.53	$39.03
Carpenter	$30.65	$4.44	$35.09
Cement Masons And Concrete Finisher	$24.35	$15.65	$40.00
Commercial Divers	$26.50	$2.66	$29.16
Construction And Maintenance Painters	$22.18	$6.33	$28.51
Construction Laborer	$25.00	$2.60	$27.60
Crane And Tower Operators	$32.25	$7.49	$39.74
Crushing Grinding And Polishing Machine Operators	$23.00	$4.94	$27.94
Drywall And Ceiling Tile Installers	$26.20	$10.62	$36.82
Earth Drillers - Except Oil And Gas	$24.16	$2.53	$26.69
Electrical Power - Line Installer And Repairers	$38.93	$9.15	$48.08
Electricians	$35.00	$6.45	$41.45
Elevator Installers And Repairers	$68.38	$45.29	$113.67
Excavating And Loading Machine And Dragline Operators	$29.13	$5.10	$34.23
Excavator Operator	$32.50	$5.20	$37.70
Fence Erectors	$24.00	$2.05	$26.05
Flaggers	$20.00	$0.50	$20.50
Floor Layers - Except Carpet/Wood/Hard Tiles	$27.00	$6.21	$33.21
Glaziers	$37.00	$6.60	$43.60
Grader/Scraper Operator	$23.00	$1.99	$24.99
Hazardous Materials Removal Workers	$21.50	$1.54	$23.04
Heating And Air Conditioning And Refrigeration Mechanics And Installers	$32.00	$5.46	$37.46
Heavy And Tractor - Trailer Truck Drivers	$27.63	$3.79	$31.42
Highway Maintenance Workers	$20.00	$0.00	$20.00
Industrial Machinery Mechanics	$32.00	$0.96	$32.96
Industrial Truck And Tractor Operators	$30.00	$2.90	$32.90
Insulation Worker - Mechanical	$24.05	$3.59	$27.64
Ironworker - Ornamental	$27.75	$4.50	$32.25
Light Truck Or Delivery Services Drivers	$22.84	$1.25	$24.09
Millwrights	$32.00	$7.83	$39.83
Mobile Heavy Equipment Mechanics - Except Engines	$27.00	$4.32	$31.32
Operating Engineers And Other Equipment Operators	$28.00	$2.67	$30.67
Paver Operator	$25.30	$3.73	$29.03
Pile-Driver Operators	$32.75	$1.95	$34.70
Pipelayers	$28.50	$4.89	$33.39
Plumbers Pipe Fitters And Steamfitters	$30.75	$7.32	$38.07
Pump Operators - Except Wellhead Pumpers	$31.49	$32.08	$63.57
Radio Cellular And Tower Equipment Installers	$27.00	$3.86	$30.86
Reclaimer Operator	$27.03	$7.68	$34.71
Reinforcing Iron And Rebar Workers	$30.83	$24.97	$55.80
Riggers	$31.25	$7.68	$38.93
Roofers	$24.00	$3.35	$27.35
Screed/Wheelman	$29.25	$4.94	$34.19
Sheet Metal Workers	$27.38	$6.74	$34.12
Structural Iron And Steel Workers	$29.93	$5.74	$35.67
Tapers	$28.00	$1.71	$29.71
Telecommunications Equipment Installers And Repairers - Except Line Installers	$28.33	$6.08	$34.41
Telecommunications Line Installers And Repairers	$25.88	$4.34	$30.22
Tile And Marble Setters	$27.75	$6.73	$34.48

Welders are classified as the trade to which welding is incidental (e.g. welding structural steel is Structural Iron and Steel Worker)

Apprentices – The minimum wage rates for registered apprentices are the rates recognized in the sponsorship agreement for registered apprentices working in the pertinent classification.

For any other specific trade on this project not listed above, contact the Bureau of Labor Standards for further clarification.

Title 26 §1310 requires that a clearly legible statement of all fair minimum wage and benefits rates to be paid the several classes of laborers, workers and mechanics employed on the construction on the public work must be kept posted in a prominent and easily accessible place at the site by each contractor and subcontractor subject to sections 1304 to 1313.

Appeal – Any person affected by the determination of these rates may appeal to the Commissioner of Labor by filing a written notice with the Commissioner stating the specific grounds of the objection within ten (10) days from the filing of these rates.

A true copy

Attest: Scott R. Cotnoir
Scott R. Cotnoir
Wage & Hour Director
Bureau of Labor Standards

Expiration Date: 12-31-2024
Revision Date: 1-3-2024

THIS DOCUMENT MUST BE CLEARLY POSTED AT ALL CONSTRUCTION SITES FUNDED IN PART WITH STATE FUNDS

State of Maine Department of Labor - Bureau of Labor Standards
Augusta, Maine 04333-0045 - Telephone (207) 623-7906

Wage Determination - In accordance with 26 MRS §1301 et. seq., this is a determination by the Bureau of Labor Standards, of the fair minimum wage rate to be paid to laborers and workers employed on the below titled project.

2024 Fair Minimum Wage Rates -- Heavy & Bridge Cumberland County

Occupational Title	Minimum Wage	Minimum Benefit	Total
Brickmasons And Blockmasons	$35.00	$0.86	$35.86
Bulldozer Operator	$31.50	$7.53	$39.03
Carpenter	$30.65	$4.06	$34.71
Cement Masons And Concrete Finisher	$24.35	$15.65	$40.00
Commercial Divers	$26.50	$2.66	$29.16
Construction And Maintenance Painters	$27.50	$23.07	$50.57
Construction Laborer	$25.00	$4.68	$29.68
Crane And Tower Operators	$34.50	$4.29	$38.79
Crushing Grinding And Polishing Machine Operators	$23.00	$4.94	$27.94
Drywall And Ceiling Tile Installers	$26.20	$10.62	$36.82
Earth Drillers - Except Oil And Gas	$24.16	$2.53	$26.69
Electrical Power - Line Installer And Repairers	$38.93	$9.75	$48.68
Electricians	$33.41	$12.91	$46.32
Elevator Installers And Repairers	$68.38	$45.29	$113.67
Excavating And Loading Machine And Dragline Operators	$31.50	$3.08	$34.58
Excavator Operator	$35.00	$4.94	$39.94
Fence Erectors	$24.00	$2.05	$26.05
Flaggers	$20.00	$0.50	$20.50
Floor Layers - Except Carpet/Wood/Hard Tiles	$27.00	$6.21	$33.21
Glaziers	$37.00	$6.60	$43.60
Grader/Scraper Operator	$23.00	$1.99	$24.99
Hazardous Materials Removal Workers	$21.50	$1.54	$23.04
Heating And Air Conditioning And Refrigeration Mechanics And Installers	$32.00	$5.46	$37.46
Heavy And Tractor - Trailer Truck Drivers	$28.25	$3.63	$31.88
Highway Maintenance Workers	$20.00	$0.00	$20.00
Industrial Machinery Mechanics	$32.00	$0.96	$32.96
Industrial Truck And Tractor Operators	$30.00	$2.90	$32.90
Insulation Worker - Mechanical	$24.05	$3.59	$27.64
Ironworker - Ornamental	$27.75	$4.50	$32.25
Light Truck Or Delivery Services Drivers	$22.84	$1.25	$24.09
Millwrights	$31.00	$7.59	$38.59
Mobile Heavy Equipment Mechanics - Except Engines	$29.38	$3.44	$32.82
Operating Engineers And Other Equipment Operators	$28.00	$2.67	$30.67
Paver Operator	$25.30	$3.73	$29.03
Pile-Driver Operators	$35.00	$1.73	$36.73
Pipelayers	$28.50	$4.89	$33.39
Plumbers Pipe Fitters And Steamfitters	$29.75	$4.33	$34.08
Pump Operators - Except Wellhead Pumpers	$31.49	$32.08	$63.57
Radio Cellular And Tower Equipment Installers	$27.00	$3.86	$30.86
Reclaimer Operator	$27.03	$7.68	$34.71
Reinforcing Iron And Rebar Workers	$30.83	$24.97	$55.80
Riggers	$31.25	$7.68	$38.93
Roofers	$24.00	$3.35	$27.35
Screed/Wheelman	$29.25	$4.94	$34.19
Sheet Metal Workers	$27.38	$6.74	$34.12
Structural Iron And Steel Workers	$29.93	$5.74	$35.67
Tapers	$28.00	$1.71	$29.71
Telecommunications Equipment Installers And Repairers - Except Line Installers	$28.33	$6.08	$34.41
Telecommunications Line Installers And Repairers	$26.00	$2.65	$28.65
Tile And Marble Setters	$27.75	$6.73	$34.48

Welders are classified as the trade to which welding is incidental (e.g. welding structural steel is Structural Iron and Steel Worker)

Apprentices – The minimum wage rates for registered apprentices are the rates recognized in the sponsorship agreement for registered apprentices working in the pertinent classification.

For any other specific trade on this project not listed above, contact the Bureau of Labor Standards for further clarification.

Title 26 §1310 requires that a clearly legible statement of all fair minimum wage and benefits rates to be paid the several classes of laborers, workers and mechanics employed on the construction on the public work must be kept posted in a prominent and easily accessible place at the site by each contractor and subcontractor subject to sections 1304 to 1313.

Appeal – Any person affected by the determination of these rates may appeal to the Commissioner of Labor by filing a written notice with the Commissioner stating the specific grounds of the objection within ten (10) days from the filing of these rates.

A true copy

Attest: Scott R. Cotnoir

Scott R. Cotnoir
Wage & Hour Director
Bureau of Labor Standards

Expiration Date: 12-31-2024
Revision Date: 1-3-2024

104.4.6 Utility Coordination

This Subsection is amended by the addition of the following:

These Special Provisions outline the arrangements which have been established by the Authority for coordination of the work to be accomplished by the utilities. The scope and schedule of utility relocation work is noted herein. The Contractor shall plan and conduct his work accordingly.

General

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

The Contractor shall plan and conduct his operations in accordance with the following utility schedule. The Contractor must comply with all OSHA regulations pertaining to work adjacent to utility wires. The Contractor shall plan and conduct his work accordingly.

The following utilities are located within the Project limits. The Contractor shall ascertain the location of the existing utilities and any other necessary information by direct inquiry at the office of the following utility owners:

AERIAL UTILITIES

COMMUNICATION:

Consolidated Communications
5 Davis Farm Road
Portland, ME 04103
ATTN: Marty Pease (207) 272-7993
martin.pease@consolidated.com

Consolidated Communications has aerial utilities and services within the project limits. No work or coordination is anticipated as part of this project.

CABLE:
Charter Communications, Inc.
118 Jonson Road
Portland, ME 04102
ATTN: Peter Deteso (207) 318-6542
PETER.DETESO@CHARTER.COM

Charter Communications has aerial utilities and services within the project limits. No work or coordination is anticipated as part of this project.

ELECTRIC:

Central Maine Power Company
438 Sanford Road
Alfred, ME 04002
ATTN: Jeff Howes (207) 242-0723
Jeffrey.Howes@cmpco.com

Central Maine Power has aerial utilities and services within the project limits. No work or coordination is anticipated as part of this project.

104.4.7 Cooperation With Other Contractors

This Subsection is amended by the addition of the following:

Adjacent contracts currently scheduled for the 2024 construction season include:

MTA Contract 2023.03 – Route 122 Underpass Superstructure Replacement, MM 74.00
MTA Contract 2024.04 – Exit 75 Interchange Rehabilitation

The following Subsection is added:

105.2.4.2 Lead Paint

The Contractor shall note that the existing bridge structure may contain lead based paint. The Contractor shall institute every precaution when working with materials coated with lead based paints.

Lead Paint Removal

The Contractor is required to remove and dispose of lead based paint and paint residue before cutting, grinding, drilling and sandblasting existing materials in preparation of completing the work except as provided under the Drilling of Lead Based Paint subsection in this Special Provision. All lead based paint and paint residue shall be removed, handled, stored and disposed of in conformance with all local, State and Federal laws and regulations governing lead based paint. The Contractor may use his own properly trained employees to abate the lead based paint in accordance with applicable regulations and requirements; or he may hire a licensed lead abatement subcontractor to abate the lead based paint in accordance with applicable regulations and requirements.

The Contractor, or licensed lead abatement subcontractor, shall submit a Project specific Health and Safety (OSHA) Plan and a Hazardous Waste Management Plan (EPA/DEP) a minimum of two (2) weeks prior to undertaking the removal of lead based paint.

Drilling of Lead Based Paint

The Contractor may drill lead based painted steel, without lead based paint removal, provided the Contractor collects and recycles the drill cuttings at a licensed metal recycling facility. If the Contractor chooses not to collect and recycle the drill cuttings at a licensed metal recycling

facility he will be required to abate the area where drilling is to occur in full accordance with the lead based paint removal, storage and disposal requirement of this Special Provision.

The Authority will require a signed statement from the Contractor stating the drill cuttings were collected and recycled at a licensed metal recycling facility and the name the recycling facility.

Health and Safety Plan

The Health and Safety Plan submittal shall describe how the Contractor/licensed lead abatement subcontractor intends to remove the lead based paints; and shall outline how the Contractor/licensed lead abatement subcontractor will adhere to all Federal, State and local ordinances which govern worker (including authorized representatives of the Authority) exposure to lead based paints, and ensure the safety of the workers performing lead removal. Copies of current worker training certificates (OSHA), medical screenings, and respirator fit up shall be included in the submittal.

Hazardous Waste Management Plan

The Hazardous Waste Management Plan submittal shall describe how the Contractor/licensed lead abatement subcontractor intends to manage the hazardous waste that will be generated, temporarily accumulated, stored, transported off-site and disposed; adhere to ordinances associated with the management of hazardous wastes; and ensure protection of the environment.

The Hazardous Waste Management Plan shall:

- Be signed by the Contractor;
- State whether Contractor or licensed lead abatement subcontractor will be undertaking the work; and,
- State whether abated lead materials will be accumulated and stored on-site (required if Contractor is not licensed by DEP/EPA to transport and temporarily store lead based hazardous waste), or be removed in HEPA vacuums daily to the removal Contractor's licensed waste storage facility (permitted only if Contractor is licensed by DEP/EPA to transport and temporarily store lead based hazardous waste).

If abated lead materials are to be accumulated and stored on-site, the Hazardous Waste Management Plan shall include (at a minimum) the following:

- Container size and labeling standards:
  - Containers must be 55 gallons or less
  - Containers must have the labeled "HAZARDOUS WASTE"

- Accumulation requirements:
  - Labels will include accumulation start date and container full date
  - On-site storage will not exceed 180 days from full date
  - Total on-site storage shall not exceed 55 gallons or 220 pounds

- Inspections (including frequency and checklist):
  - Inspections shall be performed each day the Contractor works
  - Inspection checklist shall be similar to MaineDEP format (Refer to Appendix A1 of MaineDEP Handbook for Hazardous Waste Generators – January 2008)
- Transport and DOT "pre-transport requirements":
  - Specify the licensed hazardous waste transporter to be used
  - Obtain Generator's EPA ID No. (typically a provisional ID # is obtained through the licensed hazardous waste transporter)
  - USDOT – approved containers must be used for shipment
  - Schedule MTA for signing Hazard Waste Manifest

- Recordkeeping requirements:
  - Describe where at the jobsite the required records (e.g., inspection logs, training records, Lead Determination report/hazardous waste characterization, etc.) will be maintained
  - Describe how and when copies of the required documents specified above will be transferred to the MTA Environmental Services Coordinator's office

The Contractor/licensed lead abatement subcontractor, shall provide documentation to the MTA that the employees who will be removing, handling, managing and/or directly supervising the hazardous waste operations have received required Resource Conservation and Recovery Act (RCRA) hazardous waste management training, and all training is current.

The lead based hazardous waste must remain on-site, unless the removal is being performed by a licensed lead abatement subcontractor that collects the paint residue in HEPA vacuums and is licensed by DEP/EPA to transport and temporarily store lead based hazardous waste at the removal Contractor's licensed waste storage facility. Both on-site and licensed off-site lead based hazardous waste storage facilities require secure storage and daily inspection of the stored waste.

If the removal Contractor is not licensed by DEP/EPA to transport and temporarily store lead based hazardous waste off-site, then an EPA licensed Hazardous Waste transporter(s) shall be used to remove hazardous waste from the site. All removal and disposal documentation will be required when the hazardous waste leaves the site. As the Generator, only the Authority's Environmental Services Coordinator or his trained designee shall sign waste manifests when material is removed from the Project site.

The removal, storage, handling, transporting, and disposal of lead based paint and lead based paint residue will not be measured separately for payment, but shall be incidental to the various Contract work items.

The following Subsection is added:

105.8.2 Permit Requirements

The Project is subject to the Stormwater Memorandum of Agreement for Stormwater Management Between the Maine Department of Transportation, Maine Turnpike Authority, and Maine Department of Environmental Protection (Stormwater MOA). Under the Stormwater MOA, all MTA construction, operation, and maintenance activities are subject to Maine

Stormwater Law Basic Standards through implementation of MaineDOT's Best Management Practices for Erosion and Sedimentation Control (MaineDOT BMP Manual), which are the Contractor's responsibility to implement.

The Contractor shall prepare a limits of disturbance plan (LOD) illustrating the Contractor's proposed limit of earthwork disturbance. The LOD plan shall show all construction access locations, field office locations, material and temporary waste storage locations, as well as include the Contract limits of earthwork disturbance. All applicable erosion and sedimentation control devices needed shall be detailed on the Contractor's LOD plan and are not limited to those devices shown on the Contract LOD plan. **This Plan shall be submitted for review and approval, to the Resident within 14 days of Contract award.** Payment for creating, revising, and completing this plan shall be incidental to Item 659.10, Mobilization.

The LOD for this Contract has been estimated to be 0.4 acres.

If at any time during the Contract, the Limit of Disturbance needs to be adjusted to accommodate construction activities, the Contractor shall resubmit the LOD plan (including any additional erosion and sedimentation control measures needed) to the Resident for review and approval prior to any additional disturbance taking place:

- If the cumulative area of disturbance is less than one acre, the Resident shall have a minimum of five (5) working days to approve the revised LOD plan.
- If the cumulative area of disturbance exceeds one acre, the Resident shall first approve of the plan and then possibly submit a MCGP NOI for Maine DEP approval. The approval may take a minimum of 14 working days once submitted to Maine DEP.

Compliance with the erosion and sedimentation control requirements outlined in this Contract is required by the Contractor.

The Contractor shall comply with the Maine Erosion and Sedimentation Control Law, and, as applicable to the proposed scope of work, the Maine Pollutant Discharge Elimination System General Permit for stormwater discharge associated with construction activity. The Contractor shall indemnify and hold harmless the Maine Turnpike Authority or its agents, representatives and employees against any and all claims, liabilities or fines arising from or based on the violation of the above noted permits.

This Project is also subject to the requirements of the Maine Pollutant Discharge and Elimination System (MPDES) General Permit for the Discharge of Stormwater from MTA's Municipal Separate Storm Sewer Systems (MS4), because it is located within an Urbanized Area (UA) as defined by the 2000 census by the U.S. Bureau of the Census. MS4 compliance requires all Contractors to be properly trained in Erosion and Sedimentation Control (ESC) measures (as per Special Provision Subsections 105.8.1 and 656.07) and implement measures to reduce pollutants in stormwater runoff from construction activities.

105.11 As-Built Plans

The Contractor shall provide the Authority with as-built plans in PDF and MicroStation or AutoCAD. The as-built plans shall note changes to the bid documents, including, but not limited to pavement, concrete, barrier, guardrail, culverts, drainage, foundations, wiring, signs, etc. The as-builts plans shall also provide GPS accurate locations of all underground work. Submittal of Draft, Final Draft, and 100% as-built plans to the Resident shall be conditions of Mobilization Payment, Retainage Reduction, and Final Payment as noted in Special Provision 108.

105.11.1 As-Built Plan Submittals

The Contractor shall make the following submittals of as-built plans to the Resident as part of the conditions of Mobilization Payment, Retainage Reduction, and Final Payment as noted in Special Provision 108:

a. Draft As-built Plans containing any underground work completed within the prior 30 day period once 50% of the Work is complete.
b. Final Draft As-Built Plans containing all underground work
c. 100% As-Built Plans containing all underground work and changes

105.11.2 As Built Plan Requirements

As-built plans and CADD files shall conform to the following requirements:

a. Include legend of line weights and styles
b. Project stationing shall be on its own layer and be color white
c. Changes to pavement, concrete, barrier, guardrail, foundations, signs etc. shall be on their own layer and be color brown
d. Electric power lines, cable, conduit, and lighting cables shall be on their own layer and be color red
e. Gas, oil, steam, petroleum, or gaseous materials shall be on their own layer and be color yellow
f. Communication, alarm or signal lines, cables, or conduit shall be on their own level and be color orange
g. Potable water shall be on its own layer and be color blue
h. Sewers and drain lines shall be on their own layer and be color green
i. Reclaimed water, irrigation, and slurry lines shall be on their own level and be color purple

107.1 Contract Time and Contract Completion Date

This Subsection is amended by the addition of the following:

At the St. Lawrence & Atlantic Overpass and Gray Road (Route 26 & 100) Underpass:

- All work shall be completed on or before November 22, 2024.
- All work shall be substantially complete by November 1, 2024. Supplemental Liquidated Damages on a calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that substantial completion is not achieved.

At the Blackstrap Road Overpass and MCRR Overpass:

- All work shall be completed on or before November 21, 2025.
- All work shall be substantially complete by October 31, 2025. Supplemental Liquidated Damages on a calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that substantial completion is not achieved.

107.1.1 Substantial Completion

This Subsection is amended by the addition of the following:

Substantially complete shall be defined by the Authority as the following:

- All bridge repair work at all locations required by the Contract that requires shoulder and/or lane closures.
- All roads fully opened to two-way traffic including shoulders, surface pavement and pavement markings.

Supplemental Liquidated damages on a calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that substantial completion is not achieved.

107.4.6 Prosecution of Work

The following restrictions shall be applied to the work at the St. Lawrence & Atlantic Overpass:

- The Authority has submitted a Right-of-Entry Application to G&W, attached as Appendix A, and paid all fees. The Contractor is responsible for reviewing the Right-of-Entry Application and complying with all requirements, including all insurance requirements. The Contractor shall submit an updated Right-of-Entry Application to initiate coordination with the Railroad.
- The Contractor shall coordinate all work at the St. Lawrence & Atlantic Overpass with the Genesee & Wyoming Railroad Services, Inc. (G&W) prior to beginning any work. The Contractor shall not enter the railroad right-of-way without permission of the railroad.
- All track access and track protection shall be scheduled by the Contractor. The Contractor shall provide invoices for track protection to the Authority and the Authority will make payment for the track protection directly to the Railroad.
- The Contractor shall be allowed to close each lane for a maximum of twenty-eight (28) consecutive calendar days. Supplemental liquidated damages on a calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that each lane is closed in excess of twenty-eight (28) consecutive calendar days.

The following restrictions shall be applied to the work at the Blackstrap Road Overpass:

- The Contractor shall be allowed to close each lane for a maximum of twenty-eight (28) consecutive calendar days. Supplemental liquidated damages on a calendar day basis

in accordance with Subsection 107.8 shall be assessed for each calendar day that each lane is closed in excess of twenty-eight (28) consecutive calendar days.

The following restrictions shall be applied to the work at the MCRR Overpass:

- The Contractor shall be allowed to close each lane for a maximum of twenty-eight (28) consecutive calendar days. Supplemental liquidated damages on a calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that each lane is closed in excess of twenty-eight (28) consecutive calendar days.
- The Contractor shall complete all work from the topside of the bridge and the approaches. The Contractor shall not do any work or access the bridge from below.

The following restrictions shall be applied to the work at the Gray Road (Route 26 & 100) Underpass:

- The Contractor shall not do any work requiring lane closures of the Falmouth Spur while the Maintenance of Traffic at the Blackstrap Road Overpass or MCRR Overpass is in place.
- Lanes on Gray Road (Route 26 & 100) shall not be closed until 8:00 p.m. and shall be reopened the following day by 6:00 a.m. Supplemental liquidated damages of $500 per hour shall be assessed for each hour that any lane is closed past 6:00 a.m. each day.
- The Contractor shall close each lane on Gray Road (Route 26 & 100) for a maximum of five nights per lane. The maximum five nights of closures per lane are not required to be consecutive nights.

The Contractor shall submit to the Authority a construction schedule which shall document that the Contractor has the necessary labor and equipment to work immediately and continuously at the project site once the bridge is closed. The intent of this specification is to minimize the amount of time for bridge closure, while providing the Contractor sufficient time to complete the work in a diligent manner and reopen the bridge as prescribed by the project's Substantial Completion date.

108.2.3 Mobilization Payment

The second paragraph is deleted in its entirety and replaced with the following:

Upon approval of all pre-construction submittals required for approval by this Contract, including those listed in Section 104.4.2 – Preconstruction Conference, the Contractor will receive payment of 50% of the Lump Sum price for Mobilization, not to exceed 5% of the Bid less the amount bid for Mobilization. After the Authority determines that the Work is 50% complete and the Contractor has submitted a Draft (50%) as-built submittal of all underground work to date (within the prior 30 day pay period) as defined in Special Provision 105., the Contractor will receive the other 50% of the Lump Sum price for Mobilization, not to exceed 5% of the Bid less the amount bid for Mobilization. Any remaining Mobilization will be at the completion of physical work.

108.3 Retainage

The seventh paragraph is deleted in its entirety and replaced with the following:

When requested by the Contractor, an 80 percent reduction of retainage will be considered by the Authority when the Project is substantially complete and the Contractor has submitted a Final Draft (98%) as-built submittal of all underground work, in accordance with Special Provision 105. When requesting a reduction, the Contractor shall include an explanation of the outstanding Work, an estimate of the cost to complete the Work, and a schedule for completing the Work. Seasonal limitations as well as warranty and establishment periods (for vegetation) shall be addressed.

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Existing Girder Haunches)

202.03 Removing Existing Superstructure, Structural Concrete, Railings, Curbs, Sidewalks and Bridges

The following paragraphs are added:

The work shall also include removing the existing girder haunches at the Gray Road (Route 26 & 100) Underpass as shown on the plans and as directed by the Resident.

Removing existing girder haunches shall consist of removing and properly disposing of concrete haunches as shown on the plans and shall be accomplished without damage to the portion of the existing structure to remain. The Contractor shall submit a girder haunch removal plan to the Resident for approval. The girder haunch removal plan shall describe the removal procedure, type and size of equipment, containment methods and disposal.

The existing girder haunches shall be removed using pneumatic chipping hammers of a size approved by the Resident, or other methods approved by the Resident. The Contactor shall remove the haunch to an approximate 45^{o} angle, as shown in the Plans. The Contractor is not required to grind the removal line to a smooth finish.

The Contractor shall coat all newly exposed areas of concrete with a Type 1c penetrating silane concrete sealer, in accordance with Standard Specification Section 515.

202.07 Method of Measurement

The following paragraph is added:

Removing Existing Girder Haunches will be measured for payment by the linear foot of haunch removed on each side of a girder. The removal of the haunch on each side of a girder top flange will be measured separately for payment.

202.08 Basis of Payment

Removing Existing Girder Haunches will be paid for at the contract unit price per linear foot complete, accepted and disposed of. The payment will be full compensation for furnishing all materials, labor, equipment, access, and for all incidentals necessary to complete the work, including coating all newly exposed areas of concrete.

Payment will be made under:

Pay Item		Pay Unit
202.1211	Removing Existing Girder Haunches	Linear Foot

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Existing Pavement and High Performance Waterproofing Membrane)

202.01 Description

The following paragraph is added:

This work shall consist of the complete removal and proper disposal of the existing pavement and high performance waterproofing membrane at the St. Lawrence & Atlantic Overpass.

The following Sections are added:

202.011 Submittals

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

a. The Contractor shall provide a detailed written procedure indicating the proposed method(s) of removal of the existing pavement and high performance waterproofing membrane. The written procedure shall include an example of a previous project where the proposed method(s) for similar work were performed successfully.
b. Complete and detailed Product Data Sheets of the proposed equipment to be used. Data sheets shall include information on equipment properties; operation procedures and requirements; and Safety Data Sheets.
c. Detailed construction procedure, including equipment placement and staging, method of removal and disposal, surface preparation for the proposed high performance waterproofing membrane, and QC procedures.

202.012 Construction Requirements

The existing pavement and high performance waterproofing membrane shall be removed from the bridge deck with a power operated diamond grinder, micromilling machine (4mm maximum), or other approved method capable of uniformly removing the pavement and membrane to approved surface finish according to the high performance waterproofing membrane manufacturer’s latest written recommendations for the proposed new high performance waterproofing membrane. Shot blasting is not permitted for the initial removal of the existing membrane. The Contractor shall demonstrate that pavement and membrane removal operations do not damage or remove any portion of the existing concrete deck.

The Contractor shall ensure that the milled surface is free of millings and debris at the end of each day's operations. Road brooms shall be equipped with a water tank, spray assembly to

control dust, a pick-up broom, a dual gutter broom, and a pick-up hopper. Road brooms shall be capable of removing millings and loose debris from the milled surface.

Prior to proceeding with this work, the Contractor shall remove existing pavement and membrane in a 6-foot wide by 10-foot long (maximum) demonstration area on the bridge deck in an area approved by the Resident. The Contractor shall provide 48 hours' notice to the Resident prior to proceeding with removal of the existing pavement and membrane in the demonstration area. The Resident shall be present during removal operations at the demonstration area and shall approve the proposed method of removal prior to the Contractor continuing with removal on the remainder of the deck. The Contractor shall continuously monitor removal operations as not to damage the deck. The Contractor shall modify the removal method or use another method approved by the Resident if any deck damage occurs during removal with no additional compensation or allowance for time extension.

The Contractor shall perform Quality Control inspection of the finished surface. During removal operations, the Contractor must check the finished surface, both transversely and longitudinally at 20' intervals, using a 10' straightedge supplied by the Contractor. Should this testing show the finished surface does not meet the required surface finish profile the Contractor shall stop removal operations. Removal operations shall not resume until the Contractor has corrected the problem to the satisfaction of the Resident. The Contractor shall monitor the finished surface for irregularities and make adjustments as necessary to maintain uniformity in the finished surface, and depth of cut. Inspection activities during removal of existing wearing surface and high performance waterproofing membrane may be performed by qualified production personnel (e.g. Skilled Laborers, Foremen, and Superintendents). However, the Contractor's QC personnel shall have overall responsibility for QC inspection. The Resident shall be provided the opportunity to monitor and witness all QC inspection.

The Contractor shall locate and remove all objects in the pavement throughout the work area that would be detrimental to the machinery used during removal. Removal operations within 1'-6"± of deck joints shall be performed by hand work, in a manner that will not damage the deck joints. The Contractor shall submit to the Resident for approval his proposed method of hand work prior to beginning removal operations.

The Contractor shall provide all equipment and debris shields as may be required to accomplish the work. The Contractor shall protect adjacent surfaces as required during removal operations. The Contractor is notified that it is unacceptable for any material(s) to fall into the areas below the bridge, including the railroad, or project into the adjacent travel lanes. All debris, dust, and grit shall be contained by draping the work area or other approved means and shall be collected and removed from the work area at the end of each day, as well as during the workday as required. If heavy rainfall is forecasted or weather conditions dictate, the Contractor is responsible for removing any coverings which restrict storm runoff to allow for proper drainage from the bridge deck. If the Resident determines that adequate protective devices are not employed, the work shall be suspended until adequate protection is provided, with no allowance for time extension.

Shielding shall be installed or removed only upon approval of the Resident. All materials used in the shielding system shall become the property of the Contractor and shall be removed from the site at the completion of the project.

The Contractor shall repair any concrete damaged by the Contractor's operations at no additional cost to the Authority. Repairs shall be made to the satisfaction of the Resident. Any areas of concern, such as delaminations or spalling shall be identified after removal operations are complete. Repairs to the deck that are not a result of the Contractor's operations shall be paid for under the application Section 518 Items.

The finished surface shall be free from gouges, excessive longitudinal grooves and ridges, oil film, and other imperfections, non-uniform milling teeth, improper use of equipment, or otherwise poor workmanship. The concrete surface shall be prepared in accordance with the manufacturer's requirements for the placement of the new high performance waterproofing membrane. Any unsatisfactory surfaces produced are the responsibility of the Contractor and shall be corrected at the Contractor's expense and to the satisfaction of the Resident, with no allowance for time extension.

202.07 Method of Measurement

The following paragraph is added:

Removing Existing Pavement and High Performance Waterproofing Membrane will be measured by the square yard.

202.08 Basis of Payment

The following paragraph is added:

Removing Existing Pavement and High Performance Waterproofing Membrane will be paid for at the contract unit price per square yard, completed and accepted, in accordance with the plans and this Special Provision which shall include full compensation for all materials, transportation, tools, equipment and labor to include, but to be limited to, removal and disposal of the existing wearing surface and membrane, surface cleaning and preparation, submittals and engineering, demonstration work in the control area, Quality Control activities, debris containment and shielding, and other incidentals required to complete the work.

Pay Item		Pay Unit
202.127	Removing Existing Pavement and High Performance Waterproofing Membrane	Square Yard

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Pavement Surface)

202.01 Description

The following sentences are added:

This work shall also consist of removing the surface of the bituminous concrete pavement in all locations to the depth, width, grade, and cross section on the mainline as shown on the Plans or as directed by the Resident.

Full-depth removal of the pavement from the bridge decks shall be completed by scraping or other methods that will not damage the existing concrete deck surface. Milling of bridge deck pavement shall not be allowed for full-depth removal.

Removal of approach pavement and partial depth bridge pavement shall be completed using a milling machine meeting the requirements in the first two paragraphs of section 202.061.

Areas requiring shim pavement to reach final pavement grade shall not be milled.

This work shall also consist of construction of temporary ramps at all butt joints as shown in the MaineDOT Standard Details, November 2020 Edition – Pavement Overlay Butt Joint Detail (Roadways), Page 202(01) or as approved by the Resident. The length of the temporary ramp shall be at least 1/2 L.

The following subsection is added:

202.032 Removing Bridge Pavement Surface and Membrane

All bridge deck pavement, membrane and scrapings shall be disposed of by the Contractor off of the turnpike right-of-way in accordance with the Maine Department of Environmental Protection Solid Waste Management Requirements.

The following paragraph is added:

Extreme care shall be taken to avoid damaging the existing concrete or bituminous pavement intended to remain. All existing bituminous pavement and bridge deck concrete, intended to remain, damaged by the Contractor's removal operations shall be repaired by the Contractor as approved by the Resident at no additional cost to the Authority.

202.061 Removing Pavement Surface

This Subsection is deleted and replaced with the following:

The equipment for removing the bituminous surface, excluding bridge decks, shall be a power-operated milling machine or grinder capable of removing the bituminous concrete pavement to the required depth, transverse cross slope, and profile grade using an automated grade and slope control system. The controls shall automatically increase or decrease the pavement removal depth as required, and readily maintain desired cross slope to compensate for surface irregularities in the existing pavement course. The milling machine shall accurately establish profile grades by referencing from a fixed point such as a 30-foot minimum contact ski (floating beam), 24-foot non-contact ski (floating beam) with 3 or more sensors; or 3 non-contact sensors directly affixed to the fore, mid, and aft points of the milling machine. Systems designed to incorporate a contact sensor located at the mid-point of the milling machine in lieu of a non-contact sensor in conjunction with non-contact sensors at the fore and aft points will be permitted. Grade control sensors shall all be located on the same side. A single sensor, contact or otherwise, shall not be permitted. A copy of the automation operations manual shall be provided to the resident upon request. The equipment shall also have an effective means for removing excess material from the surface and preventing flying material in compliance with Subsections 105.2.5 Compliance with Health and Safety Laws and 105.2.6 Convenience of the Public, of the Specification.

The rotary drum on the machine shall be a minimum of 7 feet in width and utilize carbide tipped tools at a maximum 8mm tooth spacing pattern and a minimum triple wrap configuration. The difference in height from the top of any ridge to the bottom of the groove adjacent to that ridge shall not exceed ¼ inch. The carbide tipped tools on the rotary drum shall be continually maintained and shall be replaced as warranted to provide a uniform milled pavement texture. The forward operating speed shall be limited to a maximum speed of 50 feet per minute (fpm). The limited speed is not to be calculated on an average basis over time but shall be the actual limitation at any moment during the milling operation.

The track pads that the machine travel on shall all be of a uniform thickness equal to or exceeding the manufacturers recommendations. A copy of the manufacturer's recommendations shall be provided to the resident upon request.

The Contractor shall locate, identify and remove all objects in the pavement through the work area that would be detrimental to the milling machine.

The Contractor shall be responsible for the layout of the longitudinal centerline along the crown line. The contractor shall layout the site prior to any milling. Layout shall be achieved by physical measurements obtained every 50' along the length to be milled from a fixed reference point. The contractor shall transfer the measurements to the pavement surface every 50' and apply a paint mark at each location. The marks shall then be connected by a smoothed string line and subsequent paint marks applied along the string at no greater than 10' intervals. The Resident will inspect the layout line before milling activities may begin.

The finished milled surface will be inspected before being accepted, and any deviations in the profile exceeding 3/8 inch under a 16-foot string line or straightedge placed parallel to the centerline will be corrected. Any deviations in the cross slope that exceed 3/8 inch under a 12-foot

string line or straightedge placed transversely to the centerline will be corrected. In no case shall the cross slope in a single lane width be inverted resulting in a depression as measured transverse to the direction of travel. Any cross slope inversions or depressions shall be corrected by spot shimming the area with HMA as directed by the resident prior to installing any leveling or wearing course. Any areas requiring corrections will be subject to the same acceptable surface tolerances. These corrections shall be done with no additional expense to the Authority. Excess material that becomes bonded to the milled surface shall be removed to the Resident's satisfaction before the area is accepted.

If a milled safety wedge is required by the contract, it shall not be removed any sooner than 24 hours prior to paving. In no case will a vertical milled edge be permitted over a weekend or holiday. The contractor shall schedule the wedge removal accordingly.

The Contractor shall deliver the cubic yards of pavement grindings as specified below to the following Maintenance Facilities. The exact location of the stockpile shall be as directed by the Resident.

Name of Facility	Mile Marker	Cubic Yards
None.		

All surplus pavement grindings, except for the amount specified above, shall be disposed of by the Contractor off the turnpike right-of-way. All grindings shall be disposed of in accordance with the Maine Department of Environmental Protection Solid Waste Management Requirements.

202.07 Method of Measurement

The removal of existing bituminous concrete pavement – mainline will be measured by the square yard of material removed to the required depth.

The following sentences are added:

Transporting and stockpiling of the pavement grindings at the maintenance facilities will not be measured separately for payment, but shall be incidental to the Removing Pavement Surface items.

Installation of temporary bituminous ramps will not be measured separately for payment, but shall be incidental to the Contract.

Removal of temporary bituminous ramps will not be measured separately for payment, but shall be incidental to the Contract.

Installation of and removal of longitudinal safety wedges will not be measured separately for payment, but shall be incidental to the Contract.

202.08 Basis of Payment

Removing Pavement Surface will be paid for at unit price per square yard which price shall be full compensation for removing and disposing of the bituminous and gravel materials.

Payment will be made under:

Pay Item		Pay Unit
202.202	Removing Pavement Surface	Square Yard

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Rumble Strips)

202.01 Description

The following sentences are added after the first paragraph:

This work shall consist of cutting a pattern of rumble strips at all mill and fill locations where existing rumble strips are present. Rumble strips shall not be placed across ramp openings or on bridges.

The following Subsections are added:

202.065 Rumble Strips

The rumble strips shall not be cut until the Contractor has placed the permanent pavement markings at the required locations.

At proposed rumble strip locations, the bituminous concrete paved surface shall be removed by milling in strips as directed by the Resident. The pattern will be 80 feet of rumble strips followed by a 20 foot space repeated along the entire length on the outside shoulder. The inside shoulder shall be continuous. The rumble strips shall be normal to the baseline of the roadway on tangent sections and radial on curves. The Contractor shall be responsible for the layout of the rumble strips. The milling machines for this type of rumble strip are designed by:

Surface Preparation Technology
81 Texaco Road
Mechanicsburg, PA 17055
Tel. (717) 697-1450

L&C Flashing Barricades
60 Walpole Street
Canton, MA 02021
Tel. (508) 580-6700

Thomas Grinding
110 Fox Lane Southwest
Moore Haven, FL 33471
Tel. (863) 946-1461

The milling machine shall be equipped with a 20 foot pointer to provide longitudinal grade control.

202.07 Method of Measurement

The following paragraph is added:

Rumble Strips will not be measured for payment and shall be considered incidental to the pavement items.

Layout of rumble strips, disposal of milled bituminous pavement and roadway cleanup will not be measured separately for payment, but shall also be incidental to pavement items.

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Rumble Strips)

202.01 Description

The following paragraph is added:

This work shall consist of grinding existing rumble strip locations to a depth of 1-1/2 inches, coating vertical and horizontal surfaces with bituminous tack coat, and installing 1-1/2 inches of hot mix asphalt, 9.5 mm over the entire milled area. Locations and lengths of removal shall be as shown on the Plans or as approved by the Resident.

The following Subsections are added:

202.011 Materials

Grinding shall be done in accordance with Section 202. Bituminous tack coat shall conform to Section 409.

Hot mix asphalt, 9.5 mm shall conform to Section 401.

202.025 General

Existing rumble strips are approximately 16 inches long, seven inches wide, 1/2 inch deep, and spaced approximately every five inches.

202.07 Method of Measurement

The following paragraph is added:

Removing Rumble Strips shall be measured by the linear foot removed and accepted. Measurement shall be parallel to the baseline.

202.08 Basis of Payment

The following sentences are added:

Removing Rumble Strips shall be paid for at the Contract unit price per linear foot which includes all grinding, bituminous tack coat, pavement, equipment and labor necessary to satisfactorily complete the work.

Payment will be made under:

Pay Item		Pay Unit
202.206	Removing Rumble Strips	Linear Foot

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Existing Conduit)

202.03 Removing Existing Superstructure, Structural Concrete, Railings, Curbs, Sidewalks and Bridges

The following paragraphs are added:

The work shall also include removal and disposal of the existing abandoned conduit and hangers under Span 1 at the Gray Road (Route 26 & 100) Underpass. There are two existing 3" +/- steel conduits supported by two utility hangers. The contractor shall remove both conduits, all hangers and any other supporting hardware, as directed by the Resident.

202.07 Method of Measurement

The following paragraph is added:

Removing Existing Conduit will be measured for payment by lump sum.

202.08 Basis of Payment

Removing Existing Conduit will be paid for at the contract unit price per lump sum complete, accepted and disposed of. The payment will be full compensation for furnishing all materials, labor, equipment, access, and for all incidentals necessary to complete the work.

Payment will be made under:

Pay Item		Pay Unit
202.912	Removing Existing Conduit	Lump Sum

SPECIAL PROVISION

SECTION 401

HOT MIX ASPHALT PAVEMENT

Section 401 of the Maine Turnpike Authority 2016 Supplemental Specifications is modified as follows:

401.01 Description

The following paragraph is added:

A Quality Control Plan (QCP) is required.

401.02 Materials

Section 401.02 is deleted in its entirety and replaced with the following:

Aggregates for HMA Pavements Coarse Aggregate and fine aggregate for HMA pavements shall be graded such that when combined in the proper proportions, including filler if required, the resultant blend will meet the composition of mixture for the type of pavement specified. 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

Mainline Surface HMA Coarse aggregate: The material retained on the No. 4 sieve, shall consist of angular fragments obtained from crushed quarry stone and be free of dirt or other objectionable materials. Coarse aggregate shall have a Micro-Deval value of 15.0 percent or less as determined by AASHTO T 327. The crushed stone shall have a maximum of 1.5% material finer than the No. 200 mesh when tested in accordance with AASHTO T-11. Flat and elongated particles shall not exceed a maximum of 8% at a 5:1 ratio in accordance with ASTM D-4791. Coarse aggregate angularity shall be a minimum of 95/90 in accordance with AASHTO T-335.

Mainline Surface HMA Fine aggregate: The material passing the No. 4 sieve, shall be crushed manufactured sand free from dirt, clay balls, or other objectionable material. Natural sand may be incorporated into the mix at a rate no greater than 10 percent by weight of total aggregate. The unconfined void content of the fine aggregate blend shall be a 45 minimum value when tested in accordance with AASHTO T-304, method A. AASHTO T-176 sand equivalent value shall be 45 minimum. The fine aggregate blend, excluding RAP, shall have a Micro-Deval of 15.0 percent or less calculated as a weighted average of the individual fine aggregates tested in accordance with ASTM D-7428. No individual fine aggregate shall have a Micro-Deval value greater than 18.0 percent.

Asphalt Low Modulus Joint Sealer: Asphalt Low Modulus Joint Sealer shall be a modified asphalt and rubber compound designed for sealing and improving the strength and performance of the base asphalt cement and shall conform to ASTM D6690 Type IV and the following specifications:

Cone Penetration	90-150
Flow @ 60°C [140ºF]	3.0mm [1/8 in] max
Bond, non-immersed	Three 12.7mm [½ in] specimens pass 3 cycles @ 200% extension @ -29°C [-20ºF]
Resilience, %	60 min
Asphalt Compatibility, ASTM D5329	pass*

* There shall be no failure in adhesion, formation of any oily exudate at the interface between the sealant and asphaltic concrete or other deleterious effects on the asphaltic concrete or sealant when tested at 60°C [140ºF].

The contractor shall provide the Resident or authorized representative with a copy of the material manufacturer's recommendations pertaining to heating, application, and reheating prior to the beginning of operations or the changing of materials.

Section 401.021 Recycled Asphalt Materials

Delete the second paragraph and replace with the following:

In the event that RAP source or properties change, the Contractor shall notify the Authority of the change and submit new documentation stating the new source or properties. A plant produced test batch meeting all requirements including Hamburg Wheel Tracker results.

Section 401.03 Composition of Mixtures

Section 401.03 is deleted in its entirety and replaced with the following:

HMA pavement mixtures for base, intermediate, shim and local road bridge projects shall be a currently approved MDOT design unless otherwise noted. A maximum of 20% RAP may be used. VMA shall meet the requirements listed in Table 1.

HMA pavement mixtures for Mainline surface paving projects shall conform to the following requirements:

The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), and mineral filler if required. HMA shall be designed and tested according to AASHTO R35 and the volumetric criteria in Table 1. The Contractor shall size,

uniformly grade, and combine the aggregate fractions in proportions that provide a mixture meeting the grading requirements of the Job Mix Formula (JMF). The Contractor may use a maximum of 15 percent reclaimed asphalt pavement (RAP) in any mainline surface course.

The Contractor shall submit a job mix formula (JMF) developed for each specified mixture at least 30 days prior to placement.

The JMF shall establish a single percentage of aggregate passing each sieve size within the limits shown in Subsection 703.09. The mixture shall be designed and produced, including all production tolerances, to comply with the allowable control points for the particular type of mixture as outlined in Subsection 703.09. The JMF shall state the original source, gradation, and percentage to be used of each portion of the aggregate and mineral filler if required. It shall also state the proposed PGAB content, the name and location of the refiner, the supplier, the source of PGAB submitted for approval, the type of PGAB modification if applicable, and the location of the terminal if applicable.

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

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

At the time of JMF submittal, the Contractor shall identify and make available the stockpiles of all proposed aggregates at the plant site. There must be a minimum of 150 ton for coarse aggregate stockpiles, 75 ton for fine aggregate stockpiles before the JMF may be submitted. The Authority shall obtain samples for laboratory testing. The Contractor shall also make available to the Authority the PGAB proposed for use in the mix in enough quantity to test the properties of the asphalt and to produce samples for testing of the mixture. Before the start of paving, the Contractor and the Authority's representative shall test a production sample in the Contractor's laboratory for evaluation. If the Authority finds the mixture acceptable, an approved JMF will be forwarded to the Contractor. The Authority will then notify the Contractor that paving may commence. The first day's production shall be monitored, and the approval may be withdrawn if the mixture exhibits undesirable characteristics such as checking, shoving or displacement. The Contractor shall be allowed to submit aim changes within 24 hours of receipt of the first Acceptance test result for an individual JMF. Adjustments will be allowed of up to 2% on the percent passing the 2.36 mm sieve through the 0.075 mm and 3% on the percent passing the 4.75 mm or larger sieves. Adjustments will be allowed on the %PGAB of up to 0.2 percent. Adjustments will be allowed on GMM of up to 0.010.

Approved mix designs from the previous calendar year may be carried over, however no aim changes will be granted for a carryover mix design and the initial design must not be older than the previous paving season.

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 except natural sand 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. Natural sand may be adjusted up to 5 percent from the amount listed on the JMF but shall not exceed 10% by weight of total aggregates. The cold feed percentage for RAP may be reduced up to five 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.

TABLE 1
VOLUMETRIC DESIGN CRITERIA

Design ESAL's (Millions)	Required Density (Percent of G_{mm})			Voids in the Mineral Aggregate (VMA)(Minimum Percent) Nominal Maximum Aggregate Size (mm)				Voids Filled with Binder (VFB) (Minimum %)	Fines/Eff. Binder Ratio
	$N_{initial}$	N_{design}	N_{max}	19	12.5	9.5	4.75		
10 to <30	≤89.0	96.0	≤98.0	13.5	14.5	15.5	15.5	65-80	0.6-1.2

As part of the JMF submittal, there are Hamburg Wheel Tracker requirements, the Contractor shall provide the Authority the test results in accordance with AASHTO T324. The results shall be generated by a third-party independent testing laboratory as approved by the Authority. The test results for each individual specimen as well as the average shall meet the requirements of Table 1A

TABLE 1A
HAMBURG WHEEL TRACKER REQUIREMENTS

Specified PG Binder Grade	Test Temperature (ºC)	Maximum Rut Depth (mm)	Minimum Number of Passes	Minimum Allowable SIP*
64-28	45	12.5	20,000	15,000
64E-28	48	8.0	20,000	15,000
70E-34	50	6.3	20,000	15,000

Section 401.031 Warm Mix Technology

Add the following to the end of the first paragraph:

Weather and seasonal limitations as outlined in section 401.06 may be reduced by a maximum 5ºF with the use of WMA except for HMA being placed over bridge deck membrane.

Section 401.04 Temperature Requirements

Add the following line item after the third bullet:

- Any HMA placed over bridge deck membrane shall have a minimum temperature of 300° F measured directly behind the screed in the uncompacted mat.

Add the following paragraph:

No vehicular loads shall be permitted on newly completed pavement until adequate stability has been attained and the material has cooled sufficiently to prevent distortion or loss of fines. The newly paved area may be opened to traffic after the internal temperature of the pavement has cooled to 120° F. The Resident will test the internal temperature of the pavement and shall be the sole judge as to the opening to traffic. The period of time before opening to traffic may be extended at the discretion of the Resident. The lane closure may not be removed until the internal temperature has cooled to 120° F.

Section 401.06 Weather and Seasonal Limitations

The first paragraph shall be deleted and replaced with:

The Contractor may place Hot Mix Asphalt Pavement for use other than a traveled way wearing course, provided that the air temperature as determined by an approved thermometer (placed in the shade at the paving location) is 45°F or higher and the area to be paved is not frozen. The Contractor may place Hot Mix Asphalt Pavement as traveled way wearing course, provided the air temperature determined as above is 50°F or higher. For the purposes of this Section, the traveled way includes truck lanes, ramps, approach roads, shoulders, and auxiliary lanes. The atmospheric temperature for all courses on bridge decks shall be 50°F or higher.

Section 401.08 Hauling Equipment Trucks for Hauling HMA

Add the following paragraphs:

The undercarriage of haul units actively hauling HMA to the site shall be relatively free of dust / mud agglomerations. Haul units found to be contaminating the paving surface shall be removed from the site and cleaned prior to returning.

The contractor shall supply enough haul units such that paving is continuous and without any stops or paver speed changes during the installation of ramp or mainline wearing courses utilizing an MTV. Or any course placed on a bridge deck. The contractor will be charged a fee of $1,000. For every occurrence if paving is either stopped or the paver must slow down to avoid stopping due to inadequate number of haul units at the sole discretion of the Authority.

Section 401.09 Pavers

Add the following to the end of the fourth paragraph:

The forward operating speed of the paver shall be limited based on the course being placed. A shim or leveling course shall have a maximum speed of 50 feet per minute (fpm). Any base, intermediate, or surface course shall have a maximum paver speed of 40 fpm. The limited speed is not to be calculated on an average basis over time but shall be the actual limitation at any moment during the paving operation.

Section 401.091 Material Transfer Vehicle (MTV)

The first paragraph shall be deleted and replaced with:

When required by Special Provision Section 403, the paver shall be supplied mixture by a material transfer vehicle (Roadtec SB2500 or approved equal) capable of receiving and storing bituminous mixture from haul trucks, remixing, and delivering the mix to the paver hopper in a consistently uniform manner.

The fourth paragraph shall be deleted and replaced with:

The MTV shall be designed so that the mix receives additional mixing action.

Section 401.11 Preparation of Existing Surface

Add the following paragraph:

The contractor will be permitted to be generally innovative in methods to dry existing wet or damp pavement. Any method which causes damage or burning of the existing pavement, or which causes debris to fly into traffic shall be discontinued.

Section 401.111 Layout

The contractor shall layout the site prior to any pavement course or final striping. Layout shall be achieved by physical measurements obtained every 50’ along the length to be paved or striped from a fixed reference point. The contractor shall transfer the measurements to the pavement surface every 50’ and apply a paint mark at each location. The marks shall then be connected by a smoothed string line and subsequent paint marks applied along the string at no greater than 10’ intervals. The Resident will inspect the layout line before associated activities may begin.

Section 401.165 Longitudinal Joint Density

The first paragraph shall be deleted and replaced with:

When noted in Special Provision Section 403, the Authority will measure the pavement density of longitudinal joints between adjoining mainline travel lanes in both the unconfined and confined condition as determined by the days paving operation.

The eighth paragraph shall be deleted and replaced with:

The minimum density of the completed pavement shall be 92.0 percent of the theoretical maximum density obtained. Two consecutive failing tests shall result in production shut down. Prior to resuming paving operations, the contractor quality control unit shall satisfy the Authority that the paving operation will produce joint densities in compliance with the Specifications.

The eleventh paragraph and associated table shall be deleted and replaced with:

Payment reduction will be applied to each sublot that has a density lower than 92.0% as outlined below.

PERCENT COMPACTION	PERCENT PAY
92.0 or greater	100
91.9 to 90.0	95
89.9 to 88.5	90
88.4 or less	80

Section 401.17 Joints

Delete the following sentence from the third paragraph:

“The Authority may allow feathered or "lap" joints on lower base courses or when matching existing base type pavements.”

The fourth paragraph shall be deleted and replaced with:

When required by Special Provision Section 403, Mainline Longitudinal joints shall be constructed as notched-wedge joint and constructed in a manner that will best ensure joint integrity.

Section 401.18 Quality Control

Add the following paragraph v. to the QCP requirements

v. The contractor shall provide a detailed plan outlining how the number of haul units will be determined and supplied to the project to prevent the paver from stopping on mainline wearing course and bridge deck paving over membrane

The following shall be added to section c. Quality Control Technician(s) QCT:

The QCT shall be on site during paving operations performing quality control activities. QCT's shall not act as equipment operators, trainers or laborers.

Section 401.191 Inspection/Testing

In paragraph nine delete and replace Item #8 with:

8. Secure High-Speed Internet Access

401.21 Method of Measurement

The second paragraph shall be deleted and replaced with:

A reduction in payment will occur when the voids, asphalt content, and density are other than the limits specified below for 100 percent payment. The payment reduction for voids and PGAB content and density will be based upon each sublot (500 tons) of production as specified in Subsections 401.162, 401.163, 401.164, and 401.165. The Contractor may request one retest for each failing sublot for core density only. The original core density and the recut core density shall be averaged together to determine payment for the sublot. No retest will be allowed for voids or asphalt content. The Contractor shall pay $250.00 for each additional core tested. Pavement restoration will not be measured separately for payment but shall be incidental to the respective pay item.

SPECIAL PROVISION

SECTION 403

HOT MIX ASPHALT PAVEMENT

Course	HMA Grading	Item Number	Total Thickness	No. of Layers	Complimentary Notes
St. Lawrence & Atlantic Overpass and Approaches					
Wearing	**12.5 mm**	**403.208**	**Variable**	**1**	**C,I**
Pavement Strip Repair	**12.5 mm**	**403.208**	**1.5”**	**1**	**C,I**
Blackstrap Road Overpass and Approaches					
Wearing	**12.5 mm**	**403.208**	**1.5”**	**1**	**C,I**
Pavement Strip Repair	**12.5 mm**	**403.208**	**1.5”**	**1**	**C,I**
MCRR Overpass and Approaches					
Wearing	**12.5 mm**	**403.208**	**1.5”**	**1**	**C,I**
Pavement Strip Repair	**12.5 mm**	**403.208**	**1.5”**	**1**	**C,I**
Gray Road (Route 26 & 100) Underpass and Approaches					
Wearing	**12.5 mm**	**403.208**	**1.5”**	**1**	**C,I**
Pavement Strip Repair	**12.5 mm**	**403.208**	**1.5”**	**1**	**C,I**

COMPLEMENTARY NOTES

A. The required PGAB for this mixture shall be **64E-28.**
B. RAP may not be used.
C. The Maine DOT will conduct the job mix verification. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract. Minimum and Maximum PGAB content limits from 401.21 shall not apply.
D. The MTA will conduct the job mix verification. The aggregate qualities shall meet the design traffic level of 10 to <30 million ESALS for mix placed under this contract. The design verification, Quality Control, and Acceptance tests for this mix will be performed at **75 gyrations**. (N design)
E. A material transfer vehicle (MTV) shall be used for the placement of Hot Mix Asphalt wearing surface on all roadways including acceleration and deceleration lanes and all ramps.

F. Joints shall be constructed as the “notched wedge” type in accordance with Subsection 401.17.
G. Joint density will be measured in accordance with Subsection 401.165.
H. PGAB shall conform to the provisions of 403.02 – Polymer Modified PGAB for HMA
I. The contractor shall furnish a quality control technician equipped with an approved densometer to ensure density requirements are met.
J. Hydrated Lime shall be incorporated into the mixture.
K. The antistrip additive Zycotherm SP manufactured by Zydex Industries shall be incorporated into the PGAB at a rate of 0.125%.

SPECIAL PROVISION

SECTION 409

BITUMINOUS TACK COAT

409.01 Description

This Subsection is deleted and replaced with the following:

This work consists of furnishing and applying one uniform application of Emulsified Asphalt RS-1 or RS-1h conforming to the specifications of AASHTO M-140. The application rate shall be 0.04 gal/yd^2

This work consists of furnishing and applying one uniform application of UltraTack (NTSS-1HM) by Blacklidge or an approved equal as indicated in this specification and as per manufacturers' recommendation. The application rate shall be 0.06 gal/yd^2

409.05 Equipment

Add "or as determined by the Resident", after the words "gal/yd^2]" in the fourth line of the second paragraph of this Subsection.

409.06 Preparation of Surface

The following paragraph is added:

All existing pavement and shoulder areas on which bituminous concrete mixtures are to be placed shall receive a tack coat. The surface area where the tack coat is to be applied shall be dry and cleaned of all dirt, sand, and loose material. Cleaning shall be accomplished by use of revolving brooms or mechanical sweepers. Undesirable material not removed by the above means shall be cleaned by hand sweeping or scraping, or a combination of both. Small areas otherwise inaccessible may be swept with hand brooms. The tack coat shall be applied only when the existing surface is dry.

409.08 Method of Measurement

The following paragraphs are added:

Measurement will be based on delivery slips made out in duplicate by the Contractor and signed by the Resident, or his representative, at the point of delivery. One of these slips shall be retained by the Resident and one by the Contractor. Delivery slips shall be furnished by the Contractor and shall provide space for identifying the vehicle and driver, for stating the volume of material carried, the source of the material, the date, and the Resident or his representative's signature.

Material included in the delivery slips and not used or rejected shall be deducted from the amount being measured for payment. Each day's delivery slips shall be reconciled by the Contractor and the Resident within 24-hours.

Cleaning of the surface area where tack coat is to be applied shall be incidental to Item 409.152, Bituminous Tack Coat - Applied.

409.09 Basis of Payment

The following pay items are added:

Pay Item		Pay Unit
409.15	Bituminous Tack Coat RS-1 or RS1h – Applied	Gallon
409.152	Bituminous Tack Coat NTSS-1HM Trackless– Applied	Gallon

SPECIAL PROVISION

SECTION 502

STRUCTURAL CONCRETE

(Weep Drain Extensions)

502.01 Description

The following sentence is added:

The work also consists of extending deck weep drains at the St. Lawrence & Atlantic Overpass, Backstrap Road Overpass, and Gray Road (Route 26 & 100) Underpass as directed by the Resident.

502.03 Materials

The following paragraphs are added:

Bridge weep drain extensions shall match the material of the existing weep drains to be extended.

All structural concrete removed shall be replaced with a material from Maine Turnpike Authority's approved concrete patching material list. See Section 518 – Structural Concrete Repair.

502.17 Bridge Drains and Incidental Drainage

The following sentence is added:

Patch concrete with a concrete repair material with a concrete repair material from the Maine Turnpike Authority's approved concrete patching material list.

502.18 Method of Measurement

The following sentence is added:

Weep Drain Extensions will be measured by the each, as required on the Plans and directed by the Resident, complete in place and accepted.

502.19 Basis of Payment

The following paragraphs are added:

Weep Drain Extensions will be paid for at the Contract price per each, which price shall be the full compensation for measuring and preparing the existing weep drains, providing shop drawings for approval by the Engineer of the intended repair method and materials, fabrication

and installation of the weep drain extension, deck removal and repair including all materials, labor, tools, equipment, and incidentals necessary for furnishing and installing the Weep Drain Extensions as detailed in the Plans and Specifications, and as directed by the Resident.

Payment will be made under:

Pay Item		Pay Unit
502.7011	Weep Drain Extensions	Each

SPECIAL PROVISION

SECTION 507

RAILINGS

(Aluminum Bridge Rail, 2 Bar Repair)

507.01 Description

The following paragraphs are added:

This work consists of installing a new Aluminum Bridge Rail, 2 Bar post at the St. Lawrence & Atlantic Overpass as shown on the Plans, in accordance with these Specifications or as directed by the Resident. The work generally includes installing the bridge rail post by drilling and grouting anchor rods into the existing curb, setting the bridge rail post, and connecting the post to the existing bridge rails.

The work shall also include tightening the loose anchor bolt nuts at the post immediately adjacent to the new post installation, as shown on the Plans.

507.02 Materials

The following paragraphs are added:

The Maine Turnpike Authority will supply the bridge rail post and connection hardware to connect the post to the existing bridge rails to the Contractor. The Contractor shall be responsible for picking up the materials at the Crosby Maintenance Area at Mile 45.8 Southbound. All other materials to complete the work shall be supplied by the Contractor.

The new anchor bolts shall be fully threaded rods in accordance with ASTM A325. The nuts for the anchor bolts shall be in accordance with ASTM A563. The washers shall be in accordance with ASTM F436.

The grout for placing the new anchor bolts in the existing concrete curb shall be Keligrout, manufactured by Kelken Construction Systems, or an approved equal. Any proposed substitutions shall be submitted to the Resident for approval. The submittal for an approved equal shall confirm that the proposed grout is capable of fully developing the strength of the anchor bolts.

The preformed pads shall be in accordance with Standard Specification Section 713.03.

507.04 General

The following paragraphs are added:

The contractor shall drill and grout the new anchor bolts in accordance with the grout manufacturer’s recommendations.

507.08 Method of Measurement

Aluminum Bridge Rail, 2 Bar Repair will not be measured for payment and will be paid by the lump sum.

520.06 Basis of Payment

Aluminum Bridge Rail, 2 Bar Repair will be paid for at the Contract unit price per lump sum, which price shall be full compensation for all labor, materials, equipment, professional services, and incidentals required to complete the work as shown on the Contract Plans, in accordance with these Specifications, and as directed by the Resident, including picking and transporting the new post and hardware, drilling and grouting the anchor bolts, installing and connecting the new post, and tightening the nuts at the existing post.

Payment will be made under:

Pay Item		Pay Unit
507.812	Aluminum Bridge Rail, 2 Bar Repair	Lump Sum

SPECIAL PROVISION

SECTION 515

PROTECTIVE COATING FOR CONCRETE SURFACES

(Pigmented Concrete Protective Coating)

Section 515, Protective Coating for Concrete Surfaces, is deleted in its entirety and replaced with the following:

515.01 Description

The work shall include the surface preparation and application of a pigmented concrete protective coating system, consisting of a pigmented penetrating sealer, to protect new and existing concrete and masonry structures. The coating system shall be applied in accordance with the manufacturer's published recommendations.

Where pigmented protective coatings are already present on concrete surfaces specified to receive new protective coatings, the work shall also include removing areas of existing protective coating that are blistered, flaking, peeling, or otherwise loosely adhered to the concrete substrate prior to application of the new coating. The removal of loosely adhered pigmented protective coatings shall be completed by high-pressure washing with a rotating nozzle head.

515.02 Materials

The pigmented penetrating sealer system shall be a one-coat system consisting of ChemMasters TextureDOT Smooth, as manufactured by ChemMasters, Inc., or an approved equal, consisting of the following:

- The coating shall be an acrylic silane polymer blend or an approved equal. This primer shall provide the main protection against the ingress of water borne chlorides and sulfates.

The products shall comply with regulations limiting the Volatile Organic Compound (VOC) content of architectural and industrial maintenance coatings.

The Contractor shall submit the product data sheets, material safety data sheets and recommended instructions for application of the ChemMasters Texture DOT Smooth coating.

The pigmented penetrating sealer color shall be Federal Color Number 16492 Concrete Gray.

Materials shall be delivered to the site in original packages or containers bearing the manufacturer's labels and identification.

515.021 Substitute Materials

The Contractor shall submit a written request for approval of proposed substitute material naming the proposed manufacturer and product. This request shall be accompanied by:

1. Test data from an independent testing laboratory stating that the proposed substitute meets or exceeds the specified requirements as listed and has been tested in accordance with the specified test standards.

2. Documentation that the proposed material has a proven record of performance when used in the intended application as confirmed by actual field tests and successful installations in place on at least five similar projects.

3. Certification that if two or more types of products are intended to be used as part of a system, they will be supplied by the same manufacturer to ensure compatibility of materials, and to maintain single source manufacturer responsibility.

The Resident reserves the right to require additional testing to evaluate any proposed substitute product at no additional cost to the Authority. The Resident's decision as to the acceptability or non-acceptability of the proposed product shall be final.

515.03 Surface Preparation

The surface shall be prepared in accordance with the instructions of the approved manufacturer. Surface shall be fully cured, dry, and free from contamination such as coatings, oil, grease, loose particles, decaying matter, moss, algae growth, and curing compounds. The Contractor shall lightly sandblast the surface to achieve an adequate surface roughness for coating adhesion, in accordance with manufacturer’s recommendations. After sandblasting, all surfaces shall be rinsed by pressure washing, and allowed to air dry for a minimum of 48 hours. Once the surface preparation has been completed to the satisfaction of the Resident, the Contractor may apply the protective coating.

All caulking, patching, and joint sealant shall be installed and cured prior to application of the protective coating.

Existing form tie hole plugs which are loose or deteriorated shall be completely removed. The holes shall be reamed to sound concrete. All open form tie holes, new and existing shall be filled with an approved non-shrinking mortar, and after setting, rubbed level to the adjacent surface. Filled holes shall be cured for at least two (2) days prior to the application of the protective coating.

Grass and vegetation adjacent to surfaces to be coated shall be removed or trimmed closely to permit proper preparation and application of the protective coating.

Where protective coatings are specified to be applied to concrete surfaces that have been previously covered with pigmented coating, the Contractor shall remove any protective coating that, in the judgement of the Resident, is blistered, flaking, peeling, or otherwise loosely adhered to the concrete substrate. Loosely adhered coating shall be generally defined as any coating that can be removed by vigorously scraping the concrete surface using a 3” steel putty knife and firm pressure. The goal of the removal work is to remove areas of flaking, missing or otherwise

compromised coating systems; protective coatings that are tightly adhered to the concrete substrate need not be removed.

The removal of existing protective coatings shall be completed using high pressure washing. The specific pressure, flow rate, nozzle and standoff distance for the high-pressure washing operation shall be selected by the Contractor to remove loosely adhered coatings as specified. After high-pressure washing, the Resident shall verify all loosely adhered coatings have been removed from the specified areas by scraping the surfaces with a putty knife. The Contractor will be required to complete additional pressure washing to remove any remaining loosely adhered coatings identified by the Resident.

The Contractor may use, when required, appropriate cleaning materials recommended by the sealer manufacturer in conjunction with high pressure washing with a rotating nozzle head. Following removal of existing coating systems, all surfaces of the substructure unit to be coated shall be lightly sandblasted to achieve a surface roughness adequate for coating adhesion, then cleaned and rinsed by pressure washing.

The Contractor will be responsible for controlling and filtering runoff resulting from the pressure washing operations in accordance with Supplemental Specification 656, and all local, state, and federal requirements.

515.04 Application

The materials shall be mixed and applied in strict accordance with the instructions of the approved manufacturer. Apply the coating at the recommended application rate. If the surface is very absorbent, the coating should be applied until surface is saturated per the manufacturer's written instructions. All areas not to receive coating shall be marked with straight, even lines as the limit lines.

The Contractor shall, in the presence of the Resident, apply the materials on a sample area which is representative of a jobsite application. When color and application methods are approved, the sample area shall serve as a standard of acceptance for all further work.

The application shall not be conducted when surface and air temperatures are below 40^{o}F or above 90^{o}F. The work shall not be conducted when there is a chance of the surface temperature falling below 40^{o}F in the 24-hours following application; nor should it be applied on hot, windy days.

The treatment shall not be applied during rain to wet surfaces or when there is a chance of rain within 48-hours after application. It shall not be applied when winds are sufficient to carry airborne chemicals to unprotected surfaces.

Coating material shall be applied per the manufacturer's recommended application rate and in strict accordance with the manufacturer's written instructions. The coating shall provide consistent color without light spots or shadows. The Resident reserves the right to have the Contractor recoat coating if the dried coat lacks consistent color or shows light spots or shadows.

For surfaces that have previously received pigmented coating, the coating shall be applied to the complete limits of pigmented coating application as described on the Contract Plans, not just the area of old coating removal.

Regardless of the application method used (sprayer, roller, or brush) the Contractor shall be responsible for achieving 100% coverage of the concrete including the interior surfaces of concrete voids, recesses, or other depressions on the concrete surface.

Protect plants, grass, sealant, asphalt, traffic, etc. during application from spray.

515.05 Method of Measurement

Pigmented Protective Coating will be measured for payment by the square yard satisfactorily applied and accepted.

No separate measurement will be made for providing, cleaning, and coating test area.

515.06 Basis of Payment

Pigmented Protective Coating will be paid at the Contract unit price per square yard which price shall be full compensation for all labor, materials, equipment and incidentals required for furnishing and applying the coating as shown on the Plans, in accordance with these Specifications or as approved by the Resident.

Surface preparation, including high-pressure washing to remove existing pigmented coatings, sandblasting, vegetation removal, and protection of surfaces not designated for treatment will not be measured separately for payment, but shall be incidental to the Pigmented Protective Coating pay item.

Providing, cleaning, and coating test area will not be measured separately for payment, but shall be incidental to the Pigmented Protective Coating pay item.

Payment will be made under:

Pay Item		Pay Unit
515.201	Pigmented Protective Coating for Concrete Surfaces	Square Yard

SPECIAL PROVISION

SECTION 515

PROTECTIVE COATING FOR CONCRETE SURFACES

(Clear Concrete Protective Coating)

Section 515, Protective Coating for Concrete Surfaces, is deleted in its entirety and replaced with the following:

515.01 Description

The work shall include the surface preparation and application of a clear protective coating on concrete surfaces to protect new cast-in-place concrete, precast concrete and masonry structures. The coating system shall be applied to transition barriers, curbs and fascia in accordance with the Plans, Specifications and the manufacturer's published recommendations.

515.02 Materials

The penetrating sealer shall be:

Certi-Vex Penseal 244-100%

Type	1c Penetrating Silane
Min. Appl.Temp. (F)	20-90
Silanes (%)	100% silane, alcohol based
VOCs (g/L)	< 250

Sikagard 705 L

Type	1c Penetrating Silane
Min. Appl.Temp. (F)	40-95
Silanes (%)	100% silane, alcohol based
VOCs (g/L)	100

SIL-ACT ATS-100 LV Silane

Type	1c Penetrating Silane
Min. Appl.Temp. (F)	40-110
Silanes (%)	100% silane, alcohol based
VOCs (g/L)	< 250

SIL-ACT ATS-300

Type	1c Penetrating Silane
Min. Appl.Temp. (F)	20-110
Silanes (%)	100% silane, solvent based
VOCs (g/L)	242

The product shall comply with regulations limiting the Volatile Organic Compound (VOC) content of architectural and industrial maintenance coatings.

The Contractor shall submit the product's data sheets, material safety data sheets and recommended instructions for application.

Materials shall be delivered to the site in original packages or containers bearing the manufacturer's labels and identification.

515.021 Substitute Materials

The Contractor shall submit a written request for approval of proposed substitute material naming the proposed manufacturer and product. This request shall be accompanied by:

1. Test data from an independent testing laboratory stating that the proposed substitute meets or exceeds the specified requirements as listed and has been tested in accordance with the specified test standards.

2. Documentation that the proposed material has a proven record of performance when used in the intended application as confirmed by actual field tests and successful installations in place on at least five similar projects.

3. Certification that if two or more types of products are intended to be used as part of a system, they will be supplied by the same manufacturer to ensure compatibility of materials, and to maintain single source manufacturer responsibility.

The Resident reserves the right to require additional testing to evaluate any proposed substitute product at no additional cost to the Authority. The Resident's decision as to the acceptability or non-acceptability of the proposed product shall be final.

515.03 Surface Preparation

All caulking, patching, and joint sealant shall be installed prior to application of the sealer. On new surfaces to be treated, all voids shall be dressed by dry rubbing to remove form marks and blemishes to present a neat appearance. Concrete and masonry surfaces shall be cleaned free of dust, surface dirt, oil, efflorescence and contaminants to ensure penetration of the sealer. The surface may be slightly damp at the time of treatment.

The Contractor may use, when required, appropriate cleaning materials recommended by the sealer manufacturer in conjunction with high pressure water for cleaning the concrete or masonry.

515.04 Application

The Contractor shall apply the clear concrete protective coating in strict accordance with the manufacturer's published recommendations.

The work shall not be conducted when there is a chance of the surface temperature falling below minimum allowable temperature in the 24-hours following application; nor should it be applied on hot, windy days.

The treatment shall not be applied during rain to wet surfaces. It shall not be applied when winds are sufficient to carry airborne chemicals. Product shall be cured per the manufactures recommendations.

Prior to applying the sealer, the Contractor shall protect all surrounding non-masonry/non-concrete surfaces, landscape and lawn areas, and surfaces not designated for treatment, from contact with the penetrating sealer, and prevent overspray of the penetrating sealer caused by wind drift.

The Contractor shall ensure that all safety equipment, facilities and precautions recommended by the product manufacturer are furnished and/or strictly adhered to.

The sealer material shall be applied in the manner and with the equipment recommended by the product manufacturer. Coverage will vary depending on condition, texture and porosity of the surfaces. Pre-testing is required to determine acceptability of the procedure.

Sealer shall be applied as packaged without dilution or alteration. Sufficient material shall be applied to thoroughly saturate the surface making sure to brush out excess material that does not penetrate.

When the sealer is applied to horizontal surfaces, it shall be applied in a single saturating application with sufficient material and applied so the surface remains wet for one to two minutes before penetration into the concrete. Surface residues, pools and puddles shall be broomed-out thoroughly until they completely penetrate into the surface.

When the sealer is applied to vertical and sloped surfaces, it shall be applied in a "wet-on-wet" application for best results on most porous materials. In the case of extremely dense concrete, it may be necessary to restrict the amount of material applied to one saturating application in order to prevent surface darkening.

515.05 Method of Measurement

Clear Protective Coating for Concrete Surfaces will be measured for payment by the square yard, satisfactorily applied and accepted.

515.06 Basis of Payment

Clear Protective Coating for Concrete Surfaces will be paid at the Contract unit price per square yard which price shall be full compensation for all labor, materials, equipment and incidentals required for furnishing and applying the clear concrete protective coating as shown on the Plans, in accordance with these Specifications or as approved by the Resident.

Surface preparation, vegetation removal, and protection of surfaces not designated for treatment will not be measured separately for payment, but shall be incidental to the Clear Concrete Protective Coating item.

Payment will be made under:

Pay Item		Pay Unit
515.202	Clear Protective Coating for Concrete Surfaces	Square Yard

SPECIAL PROVISION

SECTION 518

STRUCTURAL CONCRETE REPAIR

(Repairing Granite Curb Joint and Bedding Mortar)

518.01 Description:

The following paragraphs are added:

This work shall consist of the removal and replacement of existing deteriorated granite curb joint and granite curb bedding mortar as shown on the plans or as directed by the Resident.

518.02 Repair Materials:

The following paragraph is added:

Mortar shall be an approved salt-resistant epoxy resin mortar, or an approved salt-resistant polymer modified cementitious repair mortar.

The following Subsection is added:

518.071 Construction Requirements:

For structures where the existing wearing surface is not removed, the Resident will designate areas where the existing granite curb joint mortar is to be repaired.

For structures where the existing wearing surface is removed the Resident will, after the existing wearing surface is removed, designate areas where the existing granite curb joint mortar and the existing granite curb bedding mortar is to be repaired.

In areas designated for granite curb joint mortar repair, the existing granite curb joint mortar shall be removed between curb sections to a minimum depth of 1 inch from the face of curb. Any loose mortar shall also be removed. The repair area shall be repointed with new mortar and tooled concave at the face of curb. The mortar shall be proportioned, mixed, and applied in accordance with the Manufacturer's recommendations.

In areas designated for granite curb bedding mortar repair, the existing granite bedding mortar shall be removed under the curb to a minimum depth of 1 inch from the face of curb. Any loose mortar shall also be removed. The mortar shall be replaced with new mortar and finished as shown in the Plans. The mortar shall be proportioned, mixed, and applied in accordance with the manufacturer’s recommendations.

518.10 Method of Measurement:

The following paragraph is added:

Repairing Granite Curb Joint and Bedding Mortar will be measured for payment by the linear foot along the curb, horizontally and vertically, complete and accepted.

518.11 Basis of Payment:

The following paragraphs are added:

Repairing Granite Curb Joint and Bedding Mortar will be paid for at the contract unit price per linear foot, which will include all materials, labor, equipment, and incidentals necessary to complete the work including removal of existing mortar.

Payment will be made under:

Pay Item		Pay Unit
518.391	Repairing Granite Curb Joint and Bedding Mortar	Linear Foot

SPECIAL PROVISION

SECTION 518

STRUCTURAL CONCRETE REPAIR

(Epoxy Injection Crack Repair)

518.01 Description

The following paragraphs are added:

The work includes epoxy injection crack repair as described below.

- Epoxy Injection Crack Repair includes repair of concrete cracks with widths equal to or greater than 1/8 inches as shown on the Plans or identified by the Resident.

518.02 Repair Materials.

The following paragraphs are added:

Epoxy Injection Crack Repairs shall be completed using a high strength, low viscosity moisture tolerant epoxy resin as recommended by the manufacturer and approved by the Resident. The proposed repair materials shall be submitted to the Resident for approval.

The structural properties of all crack repair materials shall meet or exceed the following requirements:

Tensile Strength (@ 7 days)	5,000 psi	ASTM D638
Bond Strength (@ 14 days)	1,000 psi	ASTM C882
Compressive Strength (@ 3 days, 73 °F)	5,000 psi	ASTM D695
Compressive Modulus (@ 7 days)	250 ksi	ASTM D695
Flexural Strength (@14 days)	8,000 psi	ASTM D790

Wide cracks (1/2" +/- and greater) may be repaired with a non-shrink cementitious grout as recommended by the manufacturer. The following product shall be used:

- CONSPEC UW300 as manufactured by Dayton Superior, 7777 Washington Village Drive, Suite 130, Dayton OH, 45459

518.07 Placing Repair Materials

The following Subsection is added:

518.071 Placing Epoxy Injection Materials

a) Mix epoxy components per manufacturer's instructions. Review pot life characteristics of combined materials and prepare quantities accordingly;
b) Open all injection ports along the crack and ensure that all injection ports are securely fastened to the concrete substrate;
c) Attach injection device to the lowest port on vertical cracks, or the first port in the series on horizontal cracks;
d) Slowly and under constant pressure, inject the epoxy material into the first port until the epoxy flows out of the next port in the series. While maintaining constant pressure and flow at the first port, close the adjacent port and continue injection process until epoxy flows from the subsequent port in the series, or until no additional epoxy can be injected into the first port.
e) Repeat the above procedure until all ports have been injected.

518.10 Method of Measurement

The quantity of Epoxy Injection Crack Repair will be measured by the linear foot.

518.11 Basis of Payment

The following paragraphs are added:

Epoxy Injection Crack Repair will be paid at the Contract unit bid price per linear foot for each repair; which price shall include, but not necessarily be limited to, removal and disposal of materials, cleaning existing concrete, placing, curing and finishing epoxy and all materials, labor, equipment, tools and incidentals necessary to complete the work.

Payment will be made under:

Pay Item		Pay Unit
518.4	Epoxy Injection Crack Repair	Linear Foot

SPECIAL PROVISION

SECTION 518

STRUCTURAL CONCRETE REPAIR

(Elastomeric Concrete Header Repair)

518.01 Description

The following paragraph is added:

At the St. Lawrence & Atlantic Overpass, the work includes placement of new elastomeric concrete at the deck expansion joints, as shown on the Plans and as directed by the Resident. The work also includes removal of any areas of deteriorated concrete at the top of the backwall and preparation of the concrete surface in accordance with Supplemental Specification 518 and as directed by the Resident.

At the Blackstrap Road Overpass, the work includes placement of new elastomeric concrete at the Abutment 2 deck expansion joints, as shown on the Plans and as directed by the Resident. The work also includes removal of any areas of deteriorated concrete at the top of the backwall and preparation of the concrete surface in accordance with Supplemental Specification 518 and as directed by the Resident.

At the MCRR Overpass, the work includes placement of new elastomeric concrete at the Abutment 2 deck expansion joints, as shown on the Plans and as directed by the Resident. The work also includes removal of any areas of deteriorated concrete at the top of the backwall and preparation of the concrete surface in accordance with Supplemental Specification 518 and as directed by the Resident.

At the Gray Road (Route 26 & 100) Underpass, the work includes placement of new elastomeric concrete at the deck expansion joints, as shown on the Plans and as directed by the Resident. The work also includes removal of any areas of deteriorated concrete at the top of the backwall at Abutment 1 and preparation of the concrete surface in accordance with Supplemental Specification 518 and as directed by the Resident. All work at the joint at Abutment 2, other than the placement of elastomeric concrete, shall be included in Item 520.922, Bridge Joint Modification (Gray Road – Abutment 2).

518.02 Repair Materials.

The following paragraphs are added:

The materials shall be from one of the manufactures on the Maine Department of Transportation Qualified Products List of Elastomeric Concrete.

Products shall be delivered to the site in Manufacturer's original, intact, labeled containers. Products shall be handled and protected as necessary to prevent damage or deterioration during shipment, handling and storage. Products shall be stored in accordance with Manufacturer's instructions.

518.07 Placing Repair Materials

The following paragraph is added:

All surfaces shall be prepared in accordance with the selected manufacturer's recommendations or as directed by the Resident.

The installation shall be conducted in strict accordance with the selected manufacturer's recommendations.

518.10 Method of Measurement

The following paragraph is added:

The quantity of Elastomeric Concrete Header Repair will be measured by the cubic foot.

518.11 Basis of Payment

The following paragraphs are added:

Elastomeric Concrete Header Repair will be paid for at the contract unit price per cubic foot, which shall be payment in full for furnishing all materials, labor and equipment, including removing any deteriorated backwall concrete, preparation of the surfaces of the joint in accordance with the manufacturer's recommendations, placement of the proposed elastomeric concrete, and all incidentals necessary to complete the work.

Payment will be made under:

Pay Item		Pay Unit
518.864	Elastomeric Concrete Header Repair	Cubic Foot

SPECIAL PROVISION

SECTION 520

EXPANSION DEVICES – NON-MODULAR

(Asphaltic Plug Joint)

Section 520, Expansion Devices, Non-Modular, is deleted in its entirety and replaced with the following:

520.01 Description

This work consists of furnishing and installing asphaltic plug joint systems at the Blackstrap Road Overpass and MCRR Overpass, in accordance with these Specifications or as directed by the Resident. This work shall include furnishing, installation and removal of any bond breaking materials used to prevent asphalt pavement layers from adhering to waterproofing membrane, all temporary header(s) installed with the intent to form the asphaltic plug joint channel, and all preparation required for the installation of the asphaltic plug joint.

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

This work shall also consist of removing and disposing of the existing asphaltic plug joint, including the asphaltic binder material, backer rod and any bearing plates, as directed by the Resident.

Bridging plates for asphaltic plug joint systems shall only be used when shown on the Contract Plans.

520.02 Submittals

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

(a) Complete and detailed Shop Drawings of asphaltic plug joint system. Shop Drawing shall include information covering materials, their properties, installation procedures, storage and handling requirements, and Safety Data Sheets.

(b) The resume of the manufacturer's technical representative, which shall include the representative's experience installing the asphaltic plug joint system along with the names and telephone numbers of contact persons for recent projects where technical assistance was provided.

(c) Certified test reports of the asphaltic binder, closed cell foam backer rod, and the plastic compound.

(d) Certificates of Compliance for bridging plates, centering nails, and aggregate.

520.03 Materials

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

The asphaltic plug joint system shall be selected from the systems and manufacturers listed on the Contract Plans.

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

(a) Asphaltic Binder:

Binder shall meet or exceed requirements of manufacturer's specifications.

(b) Backer Rod:

Backer rod shall be a cylindrical closed cell expanded polyethylene foam rod, with a diameter of 150 percent of joint opening width, capable of withstanding the temperature of the hot binder materials **and shall meet or exceed the manufacturer's specifications.**

(c) Bridging Plate:

Bridging Plate shall be aluminum flashing.

Aluminum Flashing Bridging Plates shall be rust-free roll aluminum. The aluminum flashing shall be a minimum of 6" wide and have a minimum thickness of 0.02 inches.

(d) Centering Nail:

Centering nails shall be 16d or larger and hot dip galvanized in accordance with ASTM A153.

The silicone coated and pre-compressed seal shall meet the requirements of Special Provision Section 520, Expansion Devices – Non-Modular, Silicone Coated and Pre-compressed Seal.

520.04 Installations

The asphaltic plug joint system shall be installed in accordance with this Specification and the manufacturer's latest installation procedures. An installer certified by the membrane manufacturer shall be present during the entire installation to ensure satisfactory results are obtained. Where conflicts between this Specification and the manufacturer's recommendations occur the more stringent requirement, as determined by the Resident, shall govern.

The asphaltic plug joint system shall allow for the joint movement specified on the Contract Plans (with the specified range being from extreme hot to extreme cold temperature). The installation shall be centered over the expansion joint gap as indicated on the **Contract** Plans. Installation shall occur when the structure temperature is between the limits indicated on the **Contract** Plans. It shall not be installed when rain is imminent, or in other environmental conditions disapproved by the Resident. The area shall be free of any dirt, dust, moisture, petroleum or solvents that might contaminate the joint materials or reduce the bond of the joint system to the substrate or vertical faces. The use of compressed air and heat may be required to dry the area before installing the joint system.

The asphalt pavement layers shall be removed to the required dimensions shown on the **Contract** Plans. **For bridges with torch applied waterproofing membrane beneath the asphalt pavement, the waterproofing membrane shall remain in place regardless of the joint manufacturer's recommendations.** The asphalt pavement shall be sawcut to a depth that will not damage the waterproofing membrane but permit the removal of the asphalt pavement layer. The pavement layer shall be removed in a manner that will not damage the waterproofing membrane. **All other types of membrane shall be removed prior to joint installation in accordance with the manufacturer's recommendations. When membrane is required to be removed, the membrane removal limits shall end 1" to 2" from the pavement removal limits to allow the asphaltic joint to overlap with the membrane.**

Bond breakers such as interlayers and fabrics, or temporary header(s), may be used with new hot mix asphalt placements to avoid unnecessary saw cuts and protect the waterproofing membrane from damage. The method of attaching any temporary header(s) to the concrete deck shall be approved by the Resident. The use of a temporary header shall not be allowed if it will need to be anchored into a precast prestressed concrete member. Should a concrete leveling course be required before installing the bridging plates, and the membrane layer is removed in the process, it shall be replaced before the asphaltic plug joint system is installed. Vertical surfaces of the asphalt pavement layers shall be cleaned to remove all water, dust, or other contaminates.

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

Unless otherwise specified by the asphaltic plug joint system manufacturer, liquid asphalt binder meeting the requirements of a 64-28 or 58-28 PGAB shall be used to coat the membrane and bridging plate surfaces.

The binder shall be heated to 350°F to 410°F, or a safe temperature as recommended by manufacturer. Heating kettles shall be equipped with continuous agitation system, temperature controller, calibrated thermometer, and double steel jacket with an oil layer in between, to prevent scorching of the binder. During application, the temperature of binder shall be maintained at a minimum of 350°F, but no greater than 410°F. It shall be poured and leveled into expansion joint openings until overfilled, and the excess binder spreads over the area covered by the bridging plates.

If called for on the **Contract** Plans the bridging plates shall be placed from curb to curb on the roadway portion of expansion joints. The plates shall be centered over joint openings. Centering nails shall be placed in pre-drilled holes and hammered into secure plates.

Once the bridging plates are installed, liquid asphalt binder shall be poured and leveled over the bridging plates and adjacent membrane surfaces in a manner that ensures full coverage. Areas with excessive application, such as pooling of liquid, should be removed or dispersed along the joint area.

Asphaltic plug joint system aggregate shall be heated in a rotating drum mixer to a minimum of 350°F but no greater than 410°F, or as recommended by the manufacturer. The thermoplastic polymeric modified asphalt binder shall be added to the mixer **and thoroughly combined into a coated aggregate mixture.**

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

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

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

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

520.05 Method of Measurement

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

520.06 Basis of Payment

The asphaltic plug joint system will be paid for at the Contract unit price per linear foot, which price shall be full compensation for all labor, materials, equipment, and incidentals required for removing the existing and furnishing and installing the proposed Expansion Device - Asphaltic Plug Joint as shown on the **Contract** Plans, in accordance with these Specifications, and as directed by the Resident.

The backer rod, closed cell foam, all patching needed for the waterproofing membrane, and elastomeric sealant installed up the vertical face, and across the horizontal surfaces, of bridge curbs and sidewalks will not be measured separately for payment, but shall be incidental to the Expansion Device - Asphaltic Plug Joint pay item.

Payment will be made under:

Pay Item		Pay Unit
520.23	Asphaltic Plug Joint	Linear Foot

SPECIAL PROVISION

SECTION 520

EXPANSION DEVICES – NON-MODULAR

(Silicone Coated and Pre-compressed Seal)

520.01 Description

At the St. Lawrence & Atlantic Overpass, the work shall consist of removing the existing compression seal and steel tabs, preparing the existing steel joint armor surface, and furnishing and installing a waterproof expansion joint at Abutment 1 in accordance with the details shown on the plans and the requirements of this specification. Preformed sealant shall be a silicone pre-coated, preformed, pre-compressed, self-expanding, sealant system.

At the MCRR Overpass, the work shall consist of preparing the existing concrete surface and furnishing and installing a waterproof expansion joint in the median joint at each abutment in accordance with the details shown on the plans and the requirements of this specification. Preformed sealant shall be a silicone pre-coated, preformed, pre-compressed, self-expanding, sealant system.

At the Gray Road (Route 26 & 100) Underpass, the work shall consist of removing the existing compression seal and steel tabs, preparing the existing steel joint armor surface, and furnishing and installing a waterproof expansion joint at Abutment 1 in accordance with the details shown on the plans and the requirements of this specification. Preformed sealant shall be a silicone pre-coated, preformed, pre-compressed, self-expanding, sealant system.

520.02 Materials

The pre-compressed sealant shall be Bridge Expansion Joint System (BJES) as manufactured by EMSEAL, Willseal 250 as manufactured by Tremco, or approved equivalent.

Approved equivalents shall meet the following requirements:

The expansion joint system shall be comprised of two components:

1. Cellular polyurethane foam impregnated with hydrophobic 100% acrylic (free in composition of any waxes or asphalts), water based emulsion, and factory coated with highway-grade, fuel resistant silicone.

2. Field-applied epoxy adhesive primer.

Impregnation agent shall have proven non-migratory characteristics. Silicone coating shall be black or grey and be highway-grade, low-modulus, fuel resistant silicone applied to the impregnated foam sealant at a width greater than maximum allowable joint extension and which when cured and compressed will form a bellows

Material shall be capable of movements of +50%, -50% (100% total) of nominal material size, tested in accordance with ASTM E1399.

All products must be certified by independent laboratory test report to be free in composition of any waxes or wax compounds using FTIR and DSC testing.

All products shall be certified in writing to be: a) capable of withstanding 150°F (65°C) for 3 hours while compressed down to the minimum of movement capability dimension of the basis of design product (-50% of nominal material size) without evidence of any bleeding of impregnation medium from the material; and b) that the same material after the heat stability test and after first being cooled to room temperature will subsequently self-expand to the maximum of movement capability dimension of the basis-of-design product (+50% of nominal material size) within 24 hours at room temperature 68°F (20°C).

Alternate manufacturers must demonstrate that their products meet or exceed the design criteria and must submit certified performance test reports performed by nationally recognized independent laboratories. Submittal of alternates must be made three weeks prior to fabrication to allow proper evaluation time.

The following systems have been pre-approved for use on this project:

Bridge Expansion Joint System (BJES) as manufactured by EMSEAL.
25 Bridle Lane
Westborough, MA 01581
Phone: 800-526-8365
www.emseal.com

Willseal 250 as manufactured by Tremco.
34 Executive Drive
Hudson, NH 03051
Phone: 800-274-2813
www.willseal.com

520.03 Fabrication

Submittals – Prior to construction, the Contractor shall prepare and submit:

A. Typical joint seal system drawing(s) indicating pertinent dimensions, general construction, and expansion joint opening dimensions. Directional changes and terminations into horizontal plane surfaces shall be shown in the drawings.

B. Joint seal system product information, including complete installation instructions.

C. Samples of the materials comprising the joint seal system.

The joint seal system shall be supplied pre-compressed to less than the joint size, packaged in shrink-wrapped lengths with a mounting adhesive on one face.

520.04 Delivery

Products shall be delivered to the site in Manufacturer's original, intact, labeled containers. Products shall be handled and protected as necessary to prevent damage or deterioration during shipment, handling and storage. Products shall be stored in accordance with Manufacturer's instructions.

520.05 Installation

The Contractor shall arrange with the pre-compressed sealant's manufacturer to have the services of a competent field representative at the work site prior to any installation to instruct the work crews in the proper installation procedures. The field representative shall remain at the job site after work commences and continue to instruct until the representative and the Contractor, Inspector and Engineer are all in agreement that the crew has mastered the technique of installing the system successfully.

The manufacturer's field representative must be fully qualified to perform the work and shall be subject to the approval of the Engineer.

Immediately prior to the installation of the seal element, the steel or concrete contact surface shall be prepared per the manufacturer's requirements and to the satisfaction of the manufacturer's field representative.

Any protruding roughness of the surfaces shall be removed to ensure joint sides are smooth. The Contractor shall ensure that there is sufficient depth to receive the full depth of the size of the seal being installed. The joint gap shall be inspected for cleanliness by the Resident. Should any contaminates remain, the joint must be re-cleaned.

The joint seal shall be protected by the Contractor to prevent any damage by any site equipment or other matters throughout the on-going construction process.

520.06 Method of Measurement

Expansion Device – Silicone Coated and Pre-compressed Seal will be premeasured by the linear foot, as measured along the joint centerline complete in place.

520.07 Basis of Payment

Expansion Device – Silicone Coated and Pre-compressed Seal will be paid for at the contract unit price per linear foot, which shall be payment in full for furnishing all materials, labor and equipment, including the manufacturer's field representative, removal and disposal of existing joint seals, and preparation of the steel or concrete surfaces of the joint in accordance with the manufacturer's recommendations, and all incidentals necessary to provide a complete watertight joint seal.

Payment will be made under:

Pay Item	Pay Unit

520.234	Expansion Device – Silicone Coated and Pre-compressed Seal	LF
520.234	Expansion Device – Silicone Coated and Pre-compressed Seal (Gray Rd.)	LF

SPECIAL PROVISION

SECTION 520

EXPANSION DEVICES – NON-MODULAR

(Bridge Joint Modification (St. Lawrence & Atlantic))

520.01 Description

This work consists of modifying both of the bridge joints at Abutment 2 at the St. Lawrence & Atlantic Overpass as shown on the Plans, in accordance with these Specifications or as directed by the Resident. The work generally includes removal of the existing compression seal, supplying and installing a backer rod, and supplying and placing a pourable sealant.

520.02 Materials

The bridge joint modification shall consist of a system including a backer rod and pourable sealant as shown on the Plans, in accordance with these Specifications and as directed by the Resident.

Material requirements are as follows:

(a) Backer Rod:

Backer rod shall be a cylindrical closed cell expanded polyethylene foam rod, with a diameter of 150 percent of joint opening width that is compatible with the pourable sealant manufacturer's specifications.

(b) Pourable Sealant:

The pourable sealant shall be a product selected from the MaineDOT Qualified Products List for Silicone & Polyurethane Joint Sealants

520.04 Installations

The pourable sealant shall be placed in accordance with the manufacturer's recommendations.

520.05 Method of Measurement

Bridge Joint Modification (St. Lawrence & Atlantic) will be measured by the unit each as shown on the Plan.

520.06 Basis of Payment

Bridge Joint Modification (St. Lawrence & Atlantic) will be paid for at the Contract unit price per each, which price shall be full compensation for all labor, materials, equipment, and

incidentals required to complete the work as shown on the Contract Plans, in accordance with these Specifications, and as directed by the Resident, including removal and disposal of the existing compression seal, and supplying and installing the proposed backer road and pourable joint sealant.

Payment will be made under:

Pay Item		Pay Unit
520.921	Bridge Joint Modification (St. Lawrence & Atlantic)	Each

SPECIAL PROVISION

SECTION 520

EXPANSION DEVICES – NON-MODULAR

(Bridge Joint Modification (Gray Road – Abutment 2))

520.01 Description

This work consists of modifying the bridge joints at Abutment 2 at the Gray Road (Route 26 & 100) Underpass as shown on the Plans, in accordance with these Specifications or as directed by the Resident. The work generally includes selective removal and disposal of the existing backwall and deck end concrete, removal and disposal of the steel joint armoring and anchorage, supplying and placing new concrete, and supplying and installing a new joint seal.

The work shall also include placing and securing steel plates over the joint after the existing pavement and concrete have been removed and before the proposed elastomeric concrete has been placed, including pavement ramps to/from the steel plates.

520.02 Submittals

Prior to construction, the Contractor shall submit a Joint Modification Plan to the Resident to for review and approval. At a minimum, the submittal shall include:

A. The proposed construction sequence and schedule, including removal of existing concrete/joint armoring and anchorage, placement of new concrete, placement of new elastomeric concrete, and installation of the new joint seal.
B. Details of the steel plates, including how they will be secured and pavement ramps to/from the steel plates. At the conclusion of each night's lane closures, the Contractor shall install and secure steel plates to allow all lanes of traffic to reopen. The steel plates shall be secured in such a way as to not negatively impact the curing of the Class AAA concrete.
C. Joint seal information, including:
    - Typical joint seal system drawing(s) indicating pertinent dimensions, general construction, and expansion joint opening dimensions. Directional changes and terminations into horizontal plane surfaces shall be shown in the drawings.
    - Joint seal system product information, including complete installation instructions.
    - Samples of the materials comprising the joint seal system.
D. Concrete mix design in accordance with Supplemental Specification Section 502.

520.03 Materials

New concrete shall be Class AAA concrete in accordance with Supplemental Specification Section 502 except that the concrete shall include an accelerating admixture allowing it to reach 80% of the design compression strength within 7 days of placement.

The new joint seal shall be a Silicone Coated and Pre-compressed Seal in accordance with Special Provision Section 520 - Silicone Coated and Pre-compressed Seal.

520.04 Installations

New concrete shall be placed in accordance with Supplemental Specification Section 502.

The new joint seal shall be fabricated, delivered, and installed in accordance with Special Provision Section 520 - Silicone Coated and Pre-compressed Seal.

520.05 Method of Measurement

Bridge Joint Modification (Gray Road – Abutment 2) will be measured by the unit each as shown on the Plan.

520.06 Basis of Payment

Bridge Joint Modification (Gray Road – Abutment 2) will be paid for at the Contract unit price per each, which price shall be full compensation for all labor, materials, equipment, professional services, and incidentals required to complete the work as shown on the Contract Plans, in accordance with these Specifications, and as directed by the Resident, including removing and disposing of the existing backwall and deck end concrete, removing and disposing of the steel joint armoring and anchorage, supplying and placing new concrete, and supplying and installing a new joint seal. Steel plates shall be incidental to Bridge Joint Modification (Gray Road – Abutment 2). The elastomeric concrete header at Abutment 2 shall be paid as Item 518.864, Elastomeric Concrete Header Repair.

Payment will be made under:

Pay Item		Pay Unit
520.922	Bridge Joint Modification (Gray Road – Abutment 2)	Each

SPECIAL PROVISION

SECTION 526

CONCRETE BARRIER

(Temporary Barrier Markers)

526.1 Description

The following paragraphs are added:

This work shall consist of furnishing, installing and maintaining temporary barrier markers on all temporary barrier supplied by the Contractor and the Authority.

526.2 Materials

The following paragraphs are added:

Temporary barrier markers shall be "Big Dog" barrier markers manufactured by Custom Products Corporation, or approved equal. Markers shall be bi-directional with a minimum effective reflective area of 96 square inches (48 square inches each side) as approved by the Resident. The reflectors shall meet MUTCD reflectivity requirements and shall be orange in color.

526.3 Construction Requirements

The following paragraphs are added:

Temporary barrier markers shall be mounted as follows:

1. One on every fourth barrier in tangents and one on every two barriers in tapers, including all barrier furnished by the Contractor.

2. Delineators shall be physically adhered so as to withstand the force of throw from a snow plow.

3. If more than 25% of delineators in any 50 foot section of barrier fall off for any reason, the Contractor will be responsible for reinstalling all the delineators in that run at that their own cost.

4. Contractor is required to submit the installation method for review and approval to the Resident.

526.4 Method of Measurement

The following paragraphs are added:

Temporary barrier markers shall not be measured for payment separately but shall be incidental to the temporary barrier item.

526.5 Basis of Payment

The following paragraphs are added:

Temporary barrier markers shall not be paid for separately but shall be incidental to the temporary barrier item.

SPECIAL PROVISION

SECTION 526

CONCRETE BARRIER

(Temporary Concrete Barrier Type I - Supplied by Authority)

526.01 Description

The following paragraphs are added:

This work shall consist of loading, transporting, setting, resetting, removing, transporting and stacking Temporary Concrete Barrier Type I – Supplied by Authority. The barrier shall have attachments allowing individual sections to be connected into a continuous barrier.

The work also includes supplying connecting pins and furnishing and mounting retro-reflective delineators, per Subsection 526.02 and 526.03.

Concrete barriers supplied by Authority shall be available at the following location(s):

Maintenance Area	Linear Feet of Barrier
Crosby Maintenance Area Mile 45.8 Southbound	2,500

Upon substantial completion of work, the Contractor shall remove and transport the barrier back to its maintenance area of origin. All barrier shall be returned, sorted and stacked according to type in locations directed by the project Resident or maintenance area foreman.

526.02 Materials

The following paragraphs are added:

e. Delineators shall be bi-directional with a minimum effective reflective area of eight square inches as approved by the Resident. The reflectors shall be methyl methacrylate and the housing of acrylonitrile butadiene styrene. Color shall be in accordance with the MUTCD.

526.021 Acceptance

The Resident shall have the authority to accept or reject all Temporary Concrete Barrier Type I – Supplied by Authority used on the Project that does not meet the requirements of this specification

526.03 Construction Requirements

The following paragraphs are added:

The Contractor shall notify the Resident prior to the scheduled pick-up and delivery of concrete barrier. No barrier shall be removed from or stacked at the Turnpike Maintenance Area without approval of the Resident.

The Contractor shall move and place barrier-utilizing methods that will not damage the barrier. Barrier that is damaged by the Contractor by failing to use proper methods shall be replaced by the Contractor at no additional cost to the Maine Turnpike Authority.

Concrete barrier supplied by the Authority consists of several different styles. Not all barriers may be compatible. The Contractor shall utilize caution when setting barrier to use identical barrier types as adjacent barrier. Non-compatible barrier that cannot be attached together shall be overlapped by a minimum of 10 feet with the blunt end on the non-traffic side of the barrier. This work will not be measured separately for payment, but shall be incidental to the concrete barrier.

Concrete barrier placed at roadway low points shall be shimmed on 1" by 2" by 2' long wood planks to allow drainage to pass under the barrier. In addition, the Resident may direct the Contractor to shim the concrete barrier at other locations to provide for proper roadway drainage. All labor, material, and equipment necessary to shim the barrier will not be measured separately for payment, but shall be incidental to the Concrete Barrier.

The removal of concrete barrier from adjacent to the travel lane may be conducted without a lane closure if it is accomplished in accordance with the following requirements:

1. Barrier is removed from the trailing end and the workmen and equipment involved in the operation are always behind the barrier. No workmen or equipment shall enter the travel lane.
2. Barrier shall be dragged away from the travel lane to at least a 30-degree angle by the use of a cable.
3. Barrier shall be lifted no more than six inches while within 10 feet of the travel lane.

Retro-Reflective Delineators shall be mounted as follows:

4. One on top of each barrier.
5. One on the traffic side of every barrier used in a taper.
6. One on the traffic side of every other barrier at regularly spaced intervals and locations.
7. Delineators shall be installed on both sides of the barrier if barrier is used to separate opposing traffic.
8. Delineators shall be physically adhered so as to withstand the force of throw from a snow plow.
9. If more than 25% of delineators in any 50 foot section of barrier fall off for any reason, the Contractor will be responsible for reinstalling all the delineators in that run at that their own cost.
10. Contractor is required to submit the installation method for review and approval to the Resident.

526.04 Method of Measurement

The following paragraphs are added:

Temporary Concrete Barrier Type I – Supplied by Authority shall be measured for payment by the lump sum.

The loading, transporting, setting, resetting, removing, transporting, sorting and stacking of the barrier, the furnishing, installation and maintenance of the barrier delineators, and furnishing and installing connector pins will not be measured separately for payment, but shall be incidental to the cost of the Barrier. Temporary storage of Concrete Barrier between construction phases, if required, will not be measured separately for payment, but shall be incidental to the cost of the Barrier. All equipment required to load, unload, transport and stack Concrete Barrier shall be supplied by the Contractor.

Any Barrier lost or damaged by the Contractor shall be replaced by the Contractor at no additional cost to the Authority.

526.05 Basis of Payment

The fifth paragraph is deleted and not replaced.

The following paragraphs are added:

Temporary Concrete Barrier Type I – Supplied by Authority will be paid for at the Contract lump sum price, complete in place. Such payment shall be full compensation for loading, transporting, setting, resetting, temporary storage, removing, transporting and stacking at the area designated, furnishing all materials, and all other incidentals necessary to complete the work. Temporary Concrete Barrier Type I – Supplied by Authority and all connecting pins shall remain the property of the Authority, and shall be returned to the Turnpike Maintenance Area as designated in Subsection 526.01.

Payment of Concrete Barrier shall be based on a percentage of the work accomplished during that pay period.

Payment will be made under:

Pay Item		Pay Unit
526.306	Temporary Concrete Barrier, Type I – Supplied by Authority	Lump Sum

SPECIAL PROVISION

SECTION 527

ENERGY ABSORBING UNIT

(Center Barrier Crash Attenuator (Smart Cushion))

527.01 Description

The following sentences are added:

This work shall include furnishing, installing and securing the energy absorbing units as described in the Plan drawings and detailed by the manufacturer. Drawings and general provisions of this Contract, including General Provisions and Special Conditions, apply to work of this section.

527.02 Materials

The energy absorbing system shall be the Smart Cushion as manufactured by Hill & Smith Inc. or an approved equal. Units must be a re-directive, non-gating crash cushion and suitable for installation on a concrete surface. Units shall have the ability to mount to a 2' wide concrete barrier. The energy absorbing units shall be as approved, and crash tested by the Federal Highway Administration. The units shall conform to the MASH Test Level 3 requirements and must be approved by the Resident.

527.03 Construction Requirements

The Contractor shall submit a set of installation drawings to the Resident for approval. The system shall be installed in accordance with the manufacturer's recommendation and the installation drawings.

The Smart Cushion shall be placed on a concrete pad meeting the requirements of the manufacturer's installation drawings. The pavement shall be sawcut to the limits of the concrete pad dimensions prior to installation to ensure the concrete surface matches the adjacent pavement.

One spare unit will be paid for at the Contract unit price which shall include delivery and stacking at the Crosby Maintenance Facility at Mile Marker 45.8 Southbound.

527.04 Method of Measurement

Center Barrier Crash Attenuator (Smart Cushion) will be measured by each unit complete, in place and accepted.

527.05 Basis of Payment

Center Barrier Crash Attenuator (Smart Cushion) will be paid for at the Contract unit price, complete in place and accepted. Payment shall be full compensation for furnishing all labor, equipment, materials and incidentals necessary to complete the work.

All work associated with pavement removal and installation of the concrete pad, including reinforcing steel, shall be considered incidental to Item 527.307.

Connection of the Smart Cushion to the concrete center barrier will not be paid for separately but shall be incidental to Item 527.307.

Payment will be made under:

Pay Item		Pay Unit
527.307	Center Barrier Crash Attenuator (Smart Cushion)	Each

SPECIAL PROVISION

SECTION 527

ENERGY ABSORBING UNIT

(Energy Absorbing System (CAT) – New)
(Energy Absorbing System (CAT) – Remove and Reset)

527.01 Description

The following sentences are added:

This work consists of installing new and/or removing and resetting existing Crash-cushion Attenuating Terminal (CAT) System as shown on the plans, backfilling post holes, and repairing pavements as required.

527.02 Materials

The energy absorbing system shall be the SYRO® CAT-350 (SS-546) as manufactured by Trinity Industries, Inc. as approved and crash tested by the Federal Highway Administration. The units shall conform to the Federal NCHRP Report 350 Standard of Testing. Existing units shall be removed and reset as noted on the plans.

Reflective sheeting shall meet the requirements of Subsection 719.01, Reflective Sheeting - High Intensity Reflective Sheeting, Type III. Reflective sheeting shall be provided by the Authority.

Any parts and/or components of the Crash-cushion Attenuating Terminal (CAT) that are found to be deficient, damaged, or otherwise in unsatisfactory condition prior to removal shall be replaced by the contractor with parts and components furnished by the Authority.

Any parts and/or components of the Crash-cushion Attenuating Terminal (CAT) that are damaged by the contractor during removal and resetting of the units shall be replaced with new parts and/or components at no cost to the Authority.

527.03 Construction Requirements

The Contractor shall submit a set of installation drawings to the Resident for approval. The system shall be installed in accordance with the manufacturer's recommendation and the installation drawings.

A 12" x 36" reflective adhesive sheeting shall be applied to the nose of the CAT System after fabrication. The color of the reflective sheeting shall be amber (yellow) when installed on the inside shoulder (median). Sheeting shall be provided by the Authority.

527.04 Method of Measurement

Energy Absorbing System (CAT) – New and Energy Absorbing System (CAT) – Remove and Reset will be measured by each unit complete, in place and accepted.

527.05 Basis of Payment

Energy Absorbing System (CAT) – New will be paid for at the Contract unit price, complete in place and accepted. Payment shall be full compensation for furnishing all labor, equipment, materials and incidentals necessary to complete the work.

Energy Absorbing System (CAT) – Remove and Reset will be paid for at the Contract unit price, complete in place and accepted. Payment shall be full compensation for furnishing all labor, equipment, materials and incidentals necessary to complete the work.

Connection of the CAT Systems to the existing median guardrail will not be paid for separately, but shall be incidental to Items 527.301 and/or 527.303 as appropriate.

Payment will be made under:

Pay Item		Pay Unit
527.301	Energy Absorbing System (CAT) – New	Each
527.303	Energy Absorbing System (CAT) – Remove and Reset	Each

SPECIAL PROVISION

SECTION 527

ENERGY ABSORBING UNIT

(Work Zone Crash Cushion)
(Resetting Existing Work Zone Crash Cushions)

527.01 Description

The first paragraph is deleted in its entirety and replaced with the following:

The Contractor shall furnish and install, or reset work zone crash cushions where shown on the Plans, as specified herein, in Special Provision 652, or as approved by the Resident. Work zone crash cushions are required at each exposed end of temporary concrete barrier or guardrail.

The exposed end of the concrete barrier within 30 feet of the mainline travel lane shall be protected at all times. Barrier shall not be reset until after the work zone crash cushion(s) has been set to protect the exposed end of the barrier.

527.02 Materials

The following paragraph is added:

Work zone crash cushions fabricated prior to December 31, 2019 in serviceable condition shall meet the requirements of NCHRP 350 TL-3 crash test requirements and work zone crash cushions fabricated after December 31, 2019 shall meet the MASH TL-3 crash test requirements for use on the turnpike and local roadways with posted speeds of 45 MPH or greater. Work zone crash cushions fabricated prior to December 31, 2019 shall meet in serviceable condition shall meet the requirements of NCHRP 350 TL-2 crash test requirements and work zone crash cushions fabricated after December 31, 2019 shall meet the MASH TL-2 crash test requirements for use on local roadways with posted speeds of 40 MPH or less. The Contractor shall provide the Resident with documentation of the proposed work zone crash cushion's MASH Crash Test Results prior to installation at the jobsite.

527.03 Construction Requirements

The following is added to the end of the first paragraph:

The design speeds for work zone crash cushions shall be 45 mph for local road and 70 mph for turnpike roadways unless otherwise noted on the Plans.

527.04 Method of Measurement

Work Zone Crash Cushions used to protect exposed ends of guardrail for steel girder erection will not be measured separately for payment but shall be included under the Maintenance of Traffic for Steel Girder Erection item.

Replacement barrels, after collisions, will be paid for as a percentage of the individual barrels damaged to the total barrels in the complete system. The removal of impacted barrels and debris will be considered incidental to the replacement barrels. Barrels on hand, but unused will not be paid for directly.

Resetting Existing Work Zone Crash Cushion will be measured by the Unit, complete in place and accepted.

527.05 Basis of Payment

Resetting Existing Work Zone Crash Cushion will be measured by the Unit, complete in place and accepted.

Payment will be made under:

Pay Item		Pay Unit
527.341	Work Zone Crash Cushions – TL-3	Unit
527.342	Work Zone Crash Cushions – TL-2	Unit
527.343	Resetting Existing Work Zone Crash Cushion	Unit

SPECIAL PROVISION

SECTION 627

PAVEMENT MARKINGS

(Temporary Raised Pavement Markers)

627.01 Description

The following sentence is added:

This work shall consist of furnishing, placing and removing temporary raised pavement markers at locations as shown on the Plans or as directed by the Resident.

627.02 Materials

The second paragraph is deleted and replaced with the following:

The temporary raised pavement markers shall be white or yellow one way markers (Type Tom W-1, Y-1, Grade WZ) as distributed by Davidson Plastics Co. (DAPCO), Kent, WA, or an approved equal. Colors shall conform to 2009 MUTCD requirements.

627.04 General

The following sentences are added:

Temporary raised pavement markers shall be used to delineate travel lanes (BWLL) after placement of the surface course (HMA 12.5 mm).

Temporary raised pavement marker that lose reflectivity, becomes broken, dislodged or missing during the life of the Contract shall be replaced by the Contractor at no additional cost to the Authority.

The spacing and number of temporary pavement markers installed as edge lines shall be the same as shown for the BWLL on the Plans for Temporary Pavement Marking.

627.09 Method of Measurement

The following sentence is added:

Temporary Raised Pavement Markers will be measured by each unit, complete in place, maintained and accepted.

627.10 Basis of Payment

The following paragraphs are added:

The accepted quantity of Temporary Raised Pavement Markers white and/or yellow will be paid for at the Contract price each. This price shall include all labor and materials to furnish, install, maintain, and remove the markers.

Payment will be made under:

Pay Item		Pay Unit
627.812	Temporary Raised Pavement Markers	Each

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC
(September 2023)

MaineDOT Standard Specification 2014 Edition Section 652 – Maintenance of Traffic and the Maine Turnpike Authority 2016 Supplemental Specification Section 652 – Maintenance of Traffic are deleted in their entirety and replaced with the following:

652.1 Description

This work shall consist of furnishing, installing, maintaining and removing traffic control devices necessary to provide reasonable protection for motorists, pedestrians and construction workers in accordance with these Specifications, the applicable provisions of Section 105.4.5 - Special Detours, and the plans.

Traffic control devices include signs, signals, lighting devices, markings, barricades, channelizing, and hand signaling devices, portable light towers, truck mounted impact attenuators, portable rumble strips, portable speed trailers, sequential warning lights, traffic officers, and flaggers.

652.2 Materials

All maintenance of traffic control devices shall conform to the requirements of the latest edition of the MUTCD, NCHRP 350 guidelines and all Traffic control devices shall meet Manual for Assessing Safety Hardware (MASH) 16 guidelines if date of manufacture was after December 31, 2019.

All signs shall be fabricated with high intensity fluorescent retroreflective sheeting conforming to ASTM D 4956 - Type VIII, or Type IX (prismatic). All barricades, drums, and vertical panel markers shall be fabricated with high intensity orange and white fluorescent retroreflective sheeting conforming ASTM D 4956 - Type VII, Type VIII, or Type IX (prismatic).

Construction signs shall be fabricated from materials that are flat, free from defects, retroreflectorized, and of sufficient strength to withstand deflections using a wind speed of 80 miles/hr.

652.2.2 Signs

Only signs with symbol messages conforming to the design of the Manual of Uniform Traffic Control Devices (MUTCD) shall be used unless the Resident approves the substitution of word messages.

Any proposed use of temporary plaques to cover text or to change text shall be approved by the resident. All signs or proposed plaques shall have a uniform face and be constructed from similar sheeting.

All signs shall be new, or in like new condition and maintained in like new condition throughout the project duration. Signs shall be cleaned just prior to installation and throughout the project utilizing a method that will not damage the reflective sign sheeting.

652.2.3 Flashing Arrow Board

Flashing Arrow Boards must be of a type that has been submitted to AASHTO's National Transportation Product Evaluation Program (NTPEP) for evaluation and placed on the Maine Department of Transportations' Approved Products List of Portable Changeable Message Signs & Flashing Arrow Boards.

Flashing Arrow Boards units shall meet requirements of the current Manual on Uniform Traffic Control Devices (MUTCD) for Type "C" panels as described in Section 6F.56 - Temporary Traffic Control Devices. Flashing Arrow Boards shall have matrix of a minimum of 15 low-glare, sealed beam, Par 46 elements capable of either flashing or sequential displays as well as the various operating modes as described in the MUTCD, Chapter 6-F. If a Flashing Arrow Board consisting of a bulb matrix is used, each element should be recess-mounted or equipped with an upper hood of not less than 180 degrees. The color presented by the elements shall be yellow.

Flashing Arrow Board elements shall be capable of at least a 50 percent dimming from full brilliance. Full brilliance should be used for daytime operation and the dimmed mode shall be used for nighttime operation. Flashing Arrow Board shall be at least 96 inches x 48 inches and finished in non-reflective black. The Flashing Arrow Board shall be interpretable for a distance not less than 1 mile.

Operating modes shall include, flashing arrow, sequential arrow, sequential chevron, flashing double arrow, and flashing caution. In the three arrow signals, the second light from the arrow point shall not operate.

The minimum element on-time shall be 50 percent for the flashing mode, with equal intervals of 25 percent for each sequential phase. The flashing rate shall be not less than 25 nor more than 40 flashes per minute. All on-board circuitry shall be solid state.

Primary power source shall be 12 volt solar with a battery back-up to provide continuous operation when failure of the primary power source occurs, up to 30 days with fully charged batteries. Batteries must be capable of being charged from an onboard 110 volt AC power source and the unit shall be equipped with a cable for this purpose.

Controller and battery compartments shall be enclosed in lockable, weather-tight boxes.

The Flashing Arrow Board shall be mounted on a pneumatic-tired trailer or other suitable support for hauling to various locations, as directed. The minimum mounting height of an arrow panel should be 7 feet from the roadway to the bottom of the panel.

The face of the trailer shall be delineated on a permanent basis by affixing retro-reflective material, known as conspicuity material, in a continuous line as seen by oncoming drivers.

A portable changeable message sign may be used to simulate an arrow panel display.

652.2.4 Other Devices

Vertical panel markers shall be orange and white striped, 8 inches wide by 24 inches high. On the Interstate System, vertical panel markers shall be orange and white striped, 12 inches wide by 36 inches high.

Cones shall be orange in color, a minimum of 28 inches high, and retro-reflectorized. Retro- reflection shall be provided by a white bands of retro-reflective sheeting conforming to the MUTCD. All cones utilized on the project shall be new or in like new condition and shall have a consistent design/appearance.

Drums shall be of plastic or other yielding material and shall be a minimum of 36 inches high and a minimum of 18 inches in diameter. There shall be at least two retro-reflectorized orange and at least two retro-reflectorized white stripes a minimum of 4 inches wide on each drum. All drums utilized on the project shall be new or in like new condition and shall have a consistent design/appearance.

Flaggers shall use a STOP / SLOW handheld paddle as the primary and preferred hand signaling device. Flags shall only be limited to emergencies. STOP / SLOW paddles shall have high intensity prismatic retro reflective sheeting, have an octagonal shape on a rigid handle and shall be at least 18 inches wide with letters at least 6 inches high and shall be constructed from light semi-rigid material. The STOP (R1-1) face shall have white letters and a white border on a red background. The SLOW (W20-8) face shall have black letters and a black border on an orange background.

STOP / SLOW paddles shall also incorporate either white or red flashing lights on the STOP face and white or yellow flashing lights on the SLOW face of the paddle and always be in use.

Paddles must conform to one of the following patterns:

A. Two white or red lights (colors shall be all white or all red), one centered vertically above and one centered vertically below the STOP legend; and/or two white or yellow lights (colors shall be all white or all yellow), one centered vertically above and one centered vertically below the SLOW legend.

B. Two white or red lights (colors shall be all white or all red), one centered horizontally on each side of the STOP legend; and/or two white or yellow lights (colors shall be all white or all yellow), one centered horizontally on each side of the SLOW legend.

C. One white or red light centered below the STOP legend; and/or one white or yellow light centered below the SLOW legend.

D. A series of eight or more small all white or all red lights no larger than 1/4 inch in diameter along the outer edge of the paddle, arranged in an octagonal pattern at the eight corners of the border of the STOP face; and/or a series of eight or more small all white or all yellow lights no larger than 1/4 inch in diameter along the outer edge of the paddle, arranged in a diamond pattern along the border of the SLOW face; or

E. A series of white lights forming the shapes of the letters in the legend. Flashing light patterns shall be compliant with Section 6E.03 Hand Signaling Devices in the most current version of the Manual on Uniform Traffic Control Devices.

All flashing light patterns on the STOP / SLOW paddle shall be visible from a minimum distance of 1000 feet.

Type I barricades shall be 2 feet minimum, 8 feet maximum in length with an 8 inch wide rail mounted 3 feet minimum above the ground. Type II barricades shall be 2 feet in length with two 8 inch wide rails, and the top rail shall be mounted 3 feet minimum above the roadway. Type III barricades shall be 8 feet in length with three 8 inch wide rails, and the top rail shall be mounted 5 feet minimum above the roadway. The cross members of all barricades shall be of ½ or ⅝ inch thick plywood or other lightweight rigid material such as plastic, fiberglass or fiber wood as approved by the Resident. The predominant color for supports and other barricade components shall be white, except that unpainted galvanized metal or aluminum components may be used.

652.2.5 Portable Changeable Message Sign

Portable-Changeable Message Signs (PCMS) will be furnished by the Contractor and shall be Ver-Mac PCMS-1210 or an approved equal. The face of the PCMS trailer shall be delineated on a permanent basis by affixing retro-reflective material, known as conspicuity material, in a continuous line as seen by oncoming drivers. PCMS's shall be located and relocated to locations approved by the Resident within the Project limits for the duration of the Project.

Features to the Ver-Mac PCMS shall include:

- An all-LED display.
- Be legible from a distance of 1,000 feet.
- Have three (3) lines available for messages.
- Be NTCIP compliant (NTCIP 1203 & 1204).
- Be capable of being programmed by a remote computer via a data (IP over Cell) cellular modem connection.
- Have GPS location capability by adding on a GPS device capable of providing GPS location remotely to the MTA Communications' Center.
- Be programmable by Vanguard Software by Daktronics.

The Contractor shall complete and/or provide the following:

- Submit a catalog cut shop drawing to the Resident of all proposed equipment for review and approval.
- Establish and pay for a data cellular account so that PCMS may be remotely programmed and operated from the MTA Communications' Center.

- Provide to the Authority technical support from the PCMS manufacturer that may be necessary to integrate the PCMS into the MTA software platform (Vanguard Software by Daktronics).

- Provide the manufacturer's software necessary to change the PCMS messages remotely from the MTA Communications' Center and the Resident's computer if necessary or requested.

- Provide training on the operation of the PCMS to the Resident and the MTA Communications' Center representative.

- Make all PCMS on the Project work site available to the MTA for any/all emergency situations as defined by the MTA. This shall include the preemption of any messages running at the time of need as approved by the MTA and the Resident.

The Contractor shall also:

- Furnish, operate, relocate and maintain the PCMS as approved or requested by the Resident.

- Be responsible for the day-to-day programming and operation of the PCMS for Project purposes.

The PCMS(s) shall be on-site, with data cellular account established, GPS location capable, and all training required complete within one month after mobilization or seven days prior to implementing traffic shifts, detours or stoppages, whichever is sooner. Implementation of traffic shifts, detours, or stoppages of traffic will not be allowed without PCMS boards on-site with the specified MTA Communications' Center Software Platform integration and training.

652.2.6 Truck Mounted Attenuator

The truck mounted attenuator system shall conform to the following requirements:

- Truck and attached attenuator shall conform to the NCHRP Report 350, Test Level 3 criteria or MASH if manufactured after 2019.
- Amber, Green, white or any variation of those colors strobe lights with 360-degree visibility.
- An arrow light bar fixed to the vehicle.
- The attenuator shall be mounted to a vehicle with a minimum weight of 24,000

lbs. unless otherwise specified.

Installation: **The TMA shall be located in the closed lane adjacent to active traffic; for double lane closures, only the outer closed lane requires the TMA**. If a buffer zone is required the TMA shall not be located in the buffer zone. The shadow vehicle shall have its front wheels turned away from the work area and from traffic, have parking brake set, and be put in park if an automatic transmission; or if a manual transmission it shall have its front wheels turned away from the work area and from traffic, have parking brake set and should be placed in gear and shut off if possible while still maintaining warning lights. If length of time or weather are a concern for the battery since the warning lights must be maintained the engine should be started and run periodically for battery recharging. No other vehicles or equipment shall park in front of the shadow vehicle or within the buffer space behind the shadow vehicle. For placement details, reference the Manual on Uniform Traffic Control Devices (MUTCD).

A Truck Mounted Attenuator **shall** be utilized in all lane closures, and shoulder closures, where workers are not protected by other positive means (i.e., closures that do not include temporary concrete barrier). If work is being completed behind guardrail a TMA shall be required for all work that is being completed within the deflection zone of the guardrail (minimum of four feet behind the guardrail post).

The placement and positioning of the vehicle shall be in accordance with the Manual on Uniform Traffic Control Devices and the manufacturer's recommendation. TMAs used on the Turnpike mainline shall have a minimum weight of 24,000 lbs and shall provide a 200 foot shadow distance from vehicles or the work zone. **For lane and shoulder closures in excess of 3,000 feet containing multiple work zones a TMA shall be used at each work zone.**

If a Truck Mounted Attenuator is not used as described above, then it will be considered a Traffic Control Plan violation and result in a reduction of payment as outlined in Section 652.

652.2.7 Sequential Flashing Warning Lights

When included in contracts as a bid item Sequential Flashing Warning Lights on drums used for merging tapers and shifting tapers during nighttime operation for project use. The purpose of these lights is to assist the motorist in determining which direction to merge or shift and to reduce the number of late merges resulting in devices being struck and having to be reset to maintain positive guidance at the merge point. The successive flashing of the lights shall occur from the upstream end of the taper to the downstream end of the taper in order to identify the desired vehicle path.

The Sequential Flashing Warning Lights shall meet all of the requirements for warning lights within the current edition of the MUTCD. Each light unit shall be capable of operating fully and continuously for a minimum of 500 hours when equipped with a standard battery set. Each light in sequence shall be flashed at a rate of not less than 55 times per minutes and not more than 75 times per minute. The flash rate and flash duration shall be consistent throughout the sequence.

Sequential Flashing Warning Lights shall be "Pi-Lit" Sequential Barricade Warning Lamps or an approved equal.

Sequential Flashing Warning lights are to be used for merging and shifting tapers that are in place during the nighttime hours (12-hours when ambient light is dimmed). These lights shall flash sequentially beginning with the first light and continuing until the final light at the beginning of a tangent section.

The Sequential Flashing Warning Lights shall automatically flash in sequence when placed on the drums that form the merging or shifting tapers.

The number of lights used in the drum taper shall equal one half the number of drums used in the taper.

Drums are the only channelizing device permitted for mounting the Sequential Flashing Warning Lights.

The Sequential Flashing Warning Lights shall be weather independent and visual obstruction shall not interfere with the operation of the lights.

The Sequential Flashing Warning Lights shall automatically sequence when placed in line in an open area with a distance between lights of 25 to 150 feet. A 10-foot stagger in the line of lights shall have no adverse effect on the operation of the lights.

If one light fails, the flashing sequence shall continue. Non-sequential flashing is prohibited.

652.2.8 Automated Trailer Mounted Speed Sign

The Contract will furnish, operate, and maintain Automated Trailer Mounted Speed Limit Sign(s) for project use. The automated speed sign shall be required when there is a Work Zone Speed Limit in place. The Contractor shall furnish, operate, and maintain the Automated Trailer Mounted Radar Speed Limit Signs during the project operations

Trailer mounted speed limit signs shall be self-contained units including sign assembly, flashing lights, directional radar to measure speed limits, a regulatory speed limit sign, andpower supply specifically constructed to operate as a trailer-mounted sign. The preferred color of the unit shall be “construction orange”.

Base material for the regulatory speed limit signs shall be weatherproof, rigid substrate specifically manufactured for highway signing and meet the retro-reflective sheeting application requirements of the sheeting manufacturer.

Sign text shall consist of the letters, digits and symbols either applied by stick-on or silk screen, to conform to the dimensions and designs indicated in the Contract, MUTCD and/or FHWA Standard Highway Signs. The materials and methods shall be in accordance with standard commercial processes.

“Work Zone” construction signs shall be mounted on the trailer unit above the regulatory speed limit sign. (see attached graphic details).

Signs and secondary signs shall follow the MUTCD for minimum mounting heights.

The power supply shall be either full battery power with solar panel charging (capable of maintaining a charged battery level) and 135 amperes, 12-volt deep cycle batteries, or diesel powered generator with a fuel capacity sufficient for 10 hours of continuous operation.

Each unit shall be equipped with two mono-directional flashing lights, placed in accordance with the MUTCD, with amber lenses and reflectors, which are visible through a range of 120 degrees when viewed facing the sign. The lights shall be a minimum of 8-inch diameter, either LED, halogen, or incandescent lamps, and shall be visible for a minimum distance of one mile under daylight conditions and shall have a minimum flash rate of 40 flashes per minute. An "On" indicator light shall be mounted on the back of the signs, which is visible for at least 500 feet to provide confirmation that the flashing lights are operating.

The directional radar shall monitor approaching traffic only. The radar shall be capable of measuring speeds from 5 to 70 MPH at a distance of up to 1500 feet and shall have a high speed cut off thresh hold. Speed data shall be recorded and stored on the sign and must be made available to the Authority as requested.

All existing speed limit signs, which conflict with the construction zone trailer mounted speed limit signs shall be covered completely when the work zone speed limit is in place.

Automated Trailer Mounted Speed Limit Signs shall only be used when a work zone speed limit is in place **and shall be required when the work zone speed limit is active**. The Contractor shall manage the utilization and operation of the Automated Trailer Mounted Speed Limit Signs and if at least one is not used when work zone speed limits are in place then it will be considered a Traffic Control Plan violation and result in a reduction of payment as outlined in Section 652.

The Resident will record the actual time and location for the signs on a daily basis when the Automated Trailer Mounted Speed Limit Signs are in use.

The Automated Trailer Mounted Radar Speed Limit Sign may be placed as shown on the plans, or may replace the posted regulatory speed limit signs, or may be placed at a location within the closed lane that has a reduced speed limit.

Automated Trailer Mounted Speed Limit Signs shall be delineated with retro-reflective temporary traffic control devices while in use and shall also be delineated by affixing a retro-reflective material directly on the trailer.

Upon delivery of the Automated Trailer Mounted Speed Limit Sign and before acceptance by the Authority, the Contractor shall have a representative of the manufacturer review the condition and notify the Resident in writing, of all deficiencies noted.

The Contractor shall arrange to have all necessary repairs performed at no cost to the Authority.

To avoid impairing driver vision, the Contractor shall dim the lighted speed limit readings by 50 percent during nighttime use and restore full power lighting during daytime operation.

652.2.9 Temporary Portable Rumble Strips

If a pay item is included in the contract or the Contract desires to utilize Temporary Portable Rumble Strips this work consists of furnishing and placing temporary portable rumble strips RoadQuake 2F TPRS or an approved equal. Furnishing a temporary portable rumble strip system includes a method to transport and move these to on-site locations where they will be used. The Contractor shall submit for approval, literature and all necessary certifications to the Maine Turnpike prior to procurement of the product.

If used, Temporary Portable Rumble Strips may not be practicable in areas where the roadway has more than two travel lanes, where volume windows do not allow for breaks in traffic to set up and monitor and adjust, or during nighttime lane closures.

Provide rumble strips where the plans show or as directed by the Resident as follows:

Prior to placing rumble strips, clean the roadway of sand and other materials, that may cause slippage.

Place one end of the rumble strips 6 inches from the roadway centerline. Extend the strips perpendicular to the direction of travel. Ensure strips lay flat on the roadway surface.

Only one series of rumble strips, placed before the first work zone, is required per direction of travel for multiple work zones spaced 1 mile or less apart. Work zones spaced greater than 1 mile apart require a separate series of rumble strips. Each lane shall use one group of temporary rumble strips.

Bracketed “Rumble Strip Ahead” and “Bump” signs shall be utilized and will be paid for under the respective construction sign pay items.

Maintain rumble strips as follows:

If rumble strips slide, become out of alignment, or are no longer in the wheel path of approaching vehicles during the work period, thoroughly clean both sides of the rumble strips and reset on a clean roadway.

Repair or replace damaged rumble strips immediately.

652.2.10 Temporary Pavement Marking Tape

This work shall also consist of furnishing, placing, maintaining and removing temporary pavement marking tape at the locations shown on the Plans or as directed by the Resident.

Temporary pavement marking tape shall be Stamark Wet Reflective Removable Pavement Marking Tape Series 710 as manufactured by 3M of St. Paul, Minnesota or an approved equal.

Temporary pavement marking tape shall be Stamark Removable Black Line Mask Tape Series 715 as manufactured by 3M of St. Paul, Minnesota or an approved equal.

Temporary pavement markings shall be in accordance with the manufacturer's recommendations. A factory representative from 3M shall be present for the first application of all temporary pavement marking tape to insure proper application and product performance.

The pavement markings shall be applied mechanically to clean dry pavement as recommended by the manufacturer and approved by the Resident.

Temporary pavement markings shall consist of applying six inch solid white, six inch broken white, and six inch yellow reflectorized pavement marking tape for traffic maintenance during construction as shown on the Plans or as directed by the Resident.

Temporary pavement marking tape that loses reflectivity, becomes broken, dislodged or missing during the life of the Contract shall be replaced by the Contractor at no additional cost to the Authority.

For application of the tape, when the pavement temperature is below 50^{o}F, heat shall be applied to the pavement surface, if deemed necessary by the factory representative or as directed by the Resident, at no additional cost to the Authority. Proper primer for the temperatures shall be used as directed by the manufacture.

The pavement mark tape shall be rolled over with a vehicle once application is complete and then scored every 20 feet when placed in long runs to prevent full length unraveling.

Removal of temporary pavement marking tape shall be accomplished without the use of heat, solvents, grinding or sandblasting and in such a manner that no damage to the pavement results.

652.3.1 Responsibility of the Authority

The Authority will provide Project specific traffic control requirements and traffic control plans for use by the Contractor. The specific traffic control requirements for the Project are identified in Special Provision Section 652, Maintenance of Traffic (Specific Project Maintenance of Traffic Requirements). No revisions to these requirements or Plans will be permitted unless the
Contractor can thoroughly demonstrate an overall benefit to the public and a Contract Modification is approved.

The Maine Turnpike Authority may erect lane closures on the mainline within the Project area to collect survey, provide layout, and for any other reasons deemed necessary by the Authority.

652.3.2 Responsibility of the Contractor

The Contractor shall provide continuous and effective traffic control and management for the Project that is appropriate to the construction means, methods, and sequencing allowed by the Contract and selected by the Contractor:

The Contractor shall ensure all jobsite personnel shall wear a safety vest labeled as ANSI 107-2004 standard performance for Class 3 risk exposures at all times. This requirement also applies to truck drivers and equipment operators when out of an enclosed cab.

652.3.3 Submittal of Traffic Control Plan

The Contractor shall provide continuous and effective traffic control and management for the Project that is appropriate to the means, methods and sequencing allowed by the Contract; and consistent with the Traffic Control Plans and Maintenance of Traffic Specifications. The Contractor is responsible for ensuring a safe environment for the Contract workforce, local road users, and turnpike users; and maintaining the safe efficient flow of traffic through the construction zone at all times during the Contract. The protocols and requirements outlined in the Contract shall be strictly enforced. The Contractor shall submit, at or before the Preconstruction Meeting, a Traffic Control Plan (TCP) that provides the following information to the Authority:

a. The name, telephone number, and other contact numbers (cellular phone, pager, if any) of the Contractor's Traffic Control Supervisor (TCS). The TCS is the person with overall responsibility for ensuring the contractor follows the TCP, and who has received Work Zone Traffic Control Training commensurate with the level of responsibility shown in the requirements of the Contract, and who is empowered to immediately resolve any work zone traffic control deficiencies or issues. Provide documentation that the Traffic Control Supervisor has completed a Work Zone Traffic Control Training Course (AGC, ATSSA, or other industry- recognized training), and a Supervisory refresher training every 5 years thereafter. Submit training certificates or attendance roster that includes the course name, training entity, and date of training. **State how the traffic control devices will be maintained including a frequency of inspection for both temporary and permanent traffic control devices.**

Traffic Control Training Course curriculum must be based on the standards and guidelines of the MUTCD and must include, at a minimum, the following:

1. Parts of Temporary Traffic Control Zone
2. Appropriate use and spacing of signs
3. Use and spacing of channelizing devices
4. Flagging basics
5. Typical examples and applications

The Traffic Control Supervisor, or designee directly overseeing physical installation, adjustment, and dismantling of work zone traffic control, will ensure all personnel performing those activities are trained to execute the work in a safe and proper manner, in accordance with their level of decision-making and responsibility. The emergency contact list shall contain a listing of individuals who may be contacted during non-work hours and shall adequately respond to the request.

b. Proposed revisions to the construction phasing or sequencing that reasonably minimizes traffic impacts.

c. A written narrative and/or plan explaining how traffic and pedestrians will be moved through the Project Limits, including transitions during the change from one phase of construction to the next, as applicable.

d. Temporary traffic control treatments at all intersections with roads, rail crossings, businesses, parking lots, pedestrian ways, bike paths, trails, residences, garages, farms, and other access points, as applicable.

e. A list of all Contractor or Subcontractor certified flaggers to be used on the Project, together with the number of flaggers which will be used for each type of operation that flagging is needed. If the Contractor is using a flagging Subcontractor, then the name and address of the Subcontractor may be provided instead of a list of flaggers.

f. A procedure for notifying the Resident of the need to change the traffic control plan or the need to remove a lane restriction.

g. A description of any special detours including provisions for constructing, maintaining, signing, and removing the detour or detours, including all temporary bridges and accessory features and complete restoration of the impacted land.

h. The maximum length of requested contiguous lane closure. The Contractor shall not close excessive lengths of traffic lane to avoid moving traffic control devices.

i. The proposed temporary roadway surface conditions and treatments. The Contractor shall provide an adequate roadway surface at all times; taking into account traffic speed, volume, and duration.

j. The coordination of appropriate temporary items (drainage, concrete barriers, barrier end treatments, impact attenuators, and traffic signals) with the TCP.

k. The plan for unexpected nighttime work, the contractor shall provide a list of emergency nighttime lighting equipment and safety personnel available on-site or have the ability to have them on site within an hour of the time of need.

l. The plan for meeting any project specific requirements contained in special provision 105 and/or 107, and/or Section 656

m. The lighting plan if night work is anticipated.

The Authority will review the TCP for completeness and conformity with Contract provisions, the current edition of the MUTCD, and Authority policy and procedures. The Authority will review and provide comments to the Contractor within 14 days of receipt of the TCP. No review or comment by the Authority, or any failure to review or comment, shall operate to absolve the contractor of its responsibility to design and implement the plan in accordance with the Contract, or to shift any responsibility to the Authority. If the TCP is determined by the Authority

to be operationally ineffective, the Contractor shall submit modifications of the TCP to the Authority for review and shall implement these changes at no additional cost to the Contract. Nothing in this Section shall negate the Contractor's obligations set forth in Section 110 - Indemnification, Bonding, and Insurance. The creation and modification of the TCP will be considered incidental to the related 652 items.

652.3.4 General

Prior to starting any work on any part of the project adjacent to or being used by the traveling public, the Contractor shall install the appropriate traffic control devices in accordance with the plans, specifications and the latest edition of Manual of Uniform Traffic Control Devices, Part VI. The Contractor shall continuously maintain the traffic control devices in their proper position, and they shall be kept clean, legible and in good repair throughout the duration of the work. If notified that the traffic control devices are not in place or not properly maintained, the Contractor may be ordered to immediately suspend work until all deficiencies are corrected.

No equipment or vehicles of the Contractor, their subcontractors, or employees engaged in work on this contract shall be parked or stopped on lanes carrying traffic, or on lanes or shoulders adjacent to lanes carrying traffic, at any time, except as required by ongoing work operations. Contractor equipment or vehicles shall never be used to stop, block, or channelize traffic.

Vehicles parked on the shoulder shall be located so all portions of the vehicle(s) are a minimum of one foot from the traveled way. No operation shall be conducted on or near the traveled lanes or shoulders without first setting up the proper lane closure and traffic control devices. These precautions shall be maintained at all times while this Work is being performed. The Contractor shall keep all paved areas of the highway as clear as possible at all times. No materials shall be stored on any paved area of the highway or within 30 feet of the traveled way (unless protected by concrete barriers and specifically approved by the Resident). Private vehicles owned by Contractor's employees shall be parked close together in a group no closer than 30 feet from the traveled way in pre-approved areas.

Channelization devices shall include Vertical Panel Markers, Barricades, Cones, and Drums shall be in accordance with the MUTCD. These devices shall be installed and maintained at the spacing determined by the MUTCD through the work area.

The Contractor shall maintain existing guardrails and/or barriers until removal is necessary for construction. The Contractor shall use a temporary barrier or appropriate channelizing devices,
as approved by the Resident, while the guardrails and/or barriers are absent. Permanent guardrails and barriers shall be installed as soon as possible to minimize risk to the public.

When Contractor operations or shoulder grading leave a continuous 3 inch or less exposed vertical face at the edge of the traveled way, including the shoulder, or when traffic is shifted into the shoulder adjacent to the edge of pavement where an existing 3 inch or less exposed vertical face creates a safety hazard, channelization devices should be placed 2 feet outside the edge of the pavement at intervals not exceeding 600 feet and, depending on type and location of the exposed vertical face, a 48 inch by 48 inch W8-9 Low Shoulder, or W8-11 Uneven Lane, and/or

a W8-17P Shoulder Drop-Off sign should be placed at a maximum spacing of ½ mile. When Contractor operations or shoulder grading leave greater than a 3-inch exposed continuous vertical face at the edge of the traveled way, including the shoulder, or when an existing condition of an exposed vertical face of 3 inches or more is adjacent to active traffic shifted into shoulder, the Contractor shall place shoulder material at a slope not exceeding 3 horizontal to 1 vertical to meet the pavement grade, before the lane is opened to traffic.

Special Detours and temporary structures, if used, shall meet applicable AASHTO standards, including curve radii and grade.

Maine Turnpike Traffic Control Requirements

This Section outlines the minimum requirements that shall be maintained for working on, over, or adjacent to the Maine Turnpike roadway.

General

Two travel lanes in each direction (each direction being 24 feet wide including/excluding shoulder) in the two lane portion of the turnpike, and three travel lanes in each direction (each direction being 36 feet wide including/excluding shoulder) in the three lane portion of the turnpike (Mile 0.0 to mile 44.3) shall be maintained at all times except while performing work in a designated lane, directly over or adjacent to traffic, and during the placement and removal of traffic control devices.

Unless otherwise specified in the contract documents the minimum main line width for a single travel lane shall be 14 ft and minimum ramp widths of 16 ft which must be maintained at all times, from ½ hour before sunrise and ½ hour after sunset as indicated on the Sunrise/Sunset Table at: http://www.sunrisesunset.com/usa/Maine.asp . If the Project town is not listed, the closest town on the list will be used as agreed at the Preconstruction Meeting.

Shoulder closures, lane closures, and lane shifts meeting the MUTCD guidelines, other than those shown in the plans, must be submitted for approval from the MTA prior to use in the construction operations.

No lane closures will be allowed during non-working hours, weekends and/or holiday periods unless included in the Contract as long-term traffic control requirement as outlined in Section 652 – Specific Project Maintenance of Traffic Requirements **unless written permission is obtained from the Authority.**

Any special signs, barricades or other devices deemed necessary by the Resident shall be furnished and maintained by the Contractor. Extra care shall be taken so that the traffic flow will not be disturbed. The use of construction signs and warning devices not shown on the Plans or in the MUTCD is prohibited unless approved by the Resident

The Contractor's personnel and equipment shall avoid crossing traffic whenever possible. No Contractor's vehicle may slow down or stop in a traffic lane unless said lane has previously been made safe with signs and barricades as required by the Resident.

No vehicle will move onto the traveled way at such a time or in such a manner so as to cause undue concern or danger to traffic approaching from either direction. The Contractor or his employees are not empowered to stop traffic.

The Contractor shall take necessary care at all times, in all operations and use of his equipment, to protect and facilitate traffic. During periods of idleness, the equipment shall not be left in a way to obstruct the traffic artery or to interfere with traffic.

The Contractor shall furnish approved signs reading "Construction Vehicle - Keep Back" to be used on trucks hauling to the Project. The signs shall be a minimum of 30-inch by 60-inch, Black and Orange, and meet construction sign retro reflectivity requirements

All vehicles used on the Project shall be equipped with amber flashing lights, by means of a single or multiple, flashing LED or strobe lights mounted so as to be visible 360 degrees. **In addition, vehicles operating under direction of the Maine Turnpike Authority may be equipped with auxiliary lights that are green, white or amber or any combination of green, white or amber.** Auxiliary lighting shall have sufficient intensity to be visible at 500 feet in normal daylight and a flash rate between 1Hz and 4Hz. The vehicle flashing system shall be in continuous operation while the vehicle is on any part of the project and positioned or mounted in such a way to not be obstructed by vehicle mounted or other equipment. Dump trucks, **concrete trucks** and utility trucks **at a minimum** shall have a strobe light mounted on each side of the vehicle. **The use of motorcycles is not permitted within a construction site or as a means to arrive at or leave a work zone**.

Where space is available pavement striping for all tapers shall create a minimum buffer of 250 feet to the point where the temporary concrete barrier taper ends and becomes parallel to the travelway. Temporary concrete barrier shall be tapered at a minimum 8:1 unless space is available and then it should be tapered at 15:1 or 100 feet whichever is longest.

Milling and paving of interchange ramps shall be done between 9:00 p.m. and 5:00 AM, unless otherwise shown on the Maintenance of Traffic Phasing Plans or as directed by the MTA. Only a single ramp at an interchange may be closed at once. Ramp closures will not be permitted the day before or after holidays, on holidays, or on Saturdays or Sundays. The Contractor shall request approval from the Resident/Authority two weeks prior for all ramp closures. Portable changeable message signs shall be used to provide advance notice and warning of the ramp closure. PCMS's shall be operational a minimum of 1 week prior to ramp closure to notify Patrons. The contractor shall coordinate PCMS locations with the Resident and the MTA.

Access to, and egress from, the construction area shall be with the direction of travel without crossing traffic. Construction vehicles are prohibited from merging with mainline traffic during the AM and PM peak traffic hours unless approved in writing from the MTA. The contractor shall develop work zone access/egress with acceleration and deacceleration areas and should utilize interchange ramp areas whenever feasible.

Temporary Mainline Lane Closures

A lane closure may be required whenever personnel will be actively working within four feet of a travel lane.

Loading/unloading trucks shall not be closer than six feet from an open travel lane. Temporary lane closures will only be allowed at the times outlined in Special Provision, Section 652, Specific Project Maintenance of Traffic Requirements. These hours may be adjusted based on the traffic volume each day by the Resident.

A lane closure is required when a danger to the traveling public may exist. The following is a partial list of activities requiring lane closures. Lane closures may be required for other activities as well:

- Milling and Paving Operations
- Bridge work
- Drainage Installation and/or Adjustment
- Clear Zone Improvements
- Pavement Markings Layout and Placement
- Work directly over traffic within six feet of a travel lane as measured from the painted pavement marking line or traffic control device will require a lane closure. This work includes but is not limited to the following:

    1. **Unbolting structural steel**
    2. **Removing structural steel**
    3. **Erecting structural steel**
    4. **Erecting or moving sign panels on bridges or sign structures**
    5. **Bolting structural steel**
    6. **Loading and unloading trucks**
    7. **Light pole removal or installation**
    8. **Snow fence installation**

Lane closures shall be removed if work requiring the lane closure is not ongoing unless included in the Contract as a long-term traffic control requirement or approved by the Resident.

During adverse weather condition when the speed limit on the Maine Turnpike has been reduced to 45 MPH, or during fog or when there is less than ½ mile of visibility,
shoulder/lane closures cannot be set up and any currently in place shall be removed. Only work on the turnpike mainline that is behind temporary concrete barrier will be allowed when speed is reduced to 45 MPH or fog/visibility conditions exist.

Daytime lane closures shall be a maximum of three (3) miles. Only one daytime lane closure will be permitted per direction. Nighttime lane closures may extend through the entire length of the Project.

Temporary single lane closures are allowed upon approval of the Resident. **Lane and/or ramp** closure setup may not begin until the beginning time specified. Closures that are setup early or that remain in place outside of the approved time period shall be subject to a lane rental fee of **$1,000** per five minutes for every five minutes outside of the approved time. The installation of the construction signs will be considered setting up the lane closure. Removal of the last construction sign will be considered removal of the closure. Construction signs shall be installed immediately prior to the start of the closure and shall be promptly removed when no longer required. The installation and removal of a closure, including signs, channelizing devices, and arrow boards shall be a continuous operation. The Authority reserves the right to order the removal of an approved closure.

The Authority desires to minimize the number of daytime lane closures and the number of times that a complete stoppage of traffic is required. The Contractor is encouraged to schedule work so that the interference with the flow of traffic will be minimized. Lane closures will not be allowed until traffic associated with complete stoppages of traffic has cleared. Complete stoppages of traffic or lane closures may not be allowed on a particular day if another complete stoppage of traffic has been previously approved for another project.

The Resident is required to receive approval from the Maine Turnpike Authority for all lane closures. **The Resident is required to submit a request for lane closures by noon on Thursday for any lane closures needed for the following week.** The Contractor shall plan the work accordingly.

Temporary Mainline Shoulder Closures

Shoulder closures are anticipated at locations where Contractor access to the mainline is required.

Shoulder closures with plastic drums shall be removed at the end of the workday. Temporary shoulder closures with plastic drums will not be allowed during periods of inclement weather as determined by the Authority.

The location (limits) of shoulder closures with concrete barrier are shown on the Plans. The barrier must be placed prior to the start of the work requiring concrete barrier and shall remain in place until the work activity is complete.

Equipment Moves

The complete stoppage of traffic for an equipment move (including delivery of materials to the median) will be considered for approval if the action cannot reasonably be completed with the erection of a lane closure. Contractor shall be responsible for the installation of Signs CS-3, “Expect Stopped Traffic” and Signs W3-4 “Be Prepared to Stop”, in accordance with the Single Lane Closure Detail immediately prior to the equipment move. **Signs will be required on any adjacent ramps within proximity to the stoppage**. These signs shall be covered when not applicable.

State Police will be used to stop traffic. Cost for State Police will be the responsibility of the Authority. The times requested for trooper assisted equipment moves by on-duty troopers

cannot be guaranteed. The MTA will not be held responsible for any delays or costs associated with the delay, postponement or cancellation of an on-duty trooper assisted equipment move.

The maximum time for which traffic may be stopped and held for an equipment move across mainline or ramp at any single time shall be five (5) minutes. The duration shall be measured as the time betweenthe time the last car passes the Resident until the time the Resident determines that all travel lanes are clear. The traffic shall only be stopped for the minimum period of time required to complete the approved activity. The Contractor shall reimburse the Authority at a rate of $500 per minute for each minute in excess of the five-minute allowance.

Unapproved movement of equipment or materials across the travel lanes shall be considered a violation of the Maintenance of Traffic Requirements and is subject to a minimum fine of $500 per occurrence with an additional $500 per minute thereafter.

Request for Complete Stoppage of Traffic

A request for a complete stoppage of traffic must be submitted to the Resident for approval. The Resident is required to receive approval from the Maine Turnpike Authority for all stoppages. The request shall be submitted to the Authority by the Resident at least five (5) working days prior to the day of the requested stoppage of traffic and two (2) days for a stoppage less than five minutes. All requests must be received by 12:00 p.m. noon to be considered as received on that day. Requests received after 12:00 p.m. shall be considered as received the following day. The Contractor shall plan the work accordingly.

During the erection or removal of overhead structures or signs traffic shall be stopped and may be held for periods of up to 25 minutes during these operations. Before the roadway is reopened, all materials shall be secured so they will not endanger traffic passing underneath. The Contractor will reimburse the Authority at the rate of $2,500.00 per five-minute period for each roadway not reopened (northbound and southbound), in excess of the 25-minute limit. Total penalty shall be deducted from the next pay estimate.

Blasting of Ledge, The maximum time for which traffic may be stopped at any single time shall be six (6) minutes. This duration shall be measured as the time between the time that the last car passes the Resident, until the time the Resident determines that all travel lanes are cleared of blast debris. The Contractor shall reduce the size of the blast, change the design and method of the blast, use more mats, or otherwise alter the blasting so that the traffic is not stopped for more than six minutes. If, due to the throw of rock onto the highway or other blasting related activities, traffic is stopped for more than six minutes, the Contractor shall pay a penalty of $1,000.00 per minute for every minute traffic is stopped in excess of the six-minute limit. The penalty shall be measured separately on the northbound and southbound roadway (or eastbound and westbound roadway). Total penalties will be deducted from the next pay estimate. Whenever the volume of traffic is excessive such that a six-minute interruption would cause objectionable congestion, in the opinion of the Authority, the hours during which blasting may occur may be further restricted. A detailed blasting plan shall be submitted as required in Supplemental Specific or Special Provision Sections 105 or 107.

652.3.5 Installation of Traffic Control Devices

All traffic control devices shall be in conformance with NCHRP 350 requirements and MASH 16 requirements if manufactured after December 31, 2019 and installed as per manufactures recommendations.

Portable signs shall be erected on temporary sign supports approved crashworthy devices so that the bottom of the sign is either 1) 12 inches or 2) greater than 5 feet above the traveled way. The bottom of all regulatory signs and ramp exit signs shall be a minimum of 5 feet above the traveled way. The contractor is responsible for maintaining the temporary sign structures so that the sign face remains in a vertical position. Temporary signs supports shall not be used for signs that will remain in place at a single location for more than one month.

No signs on easels shall be placed on 4 foot shoulders with guardrail, signs required at these location shall be placed on taller easels on the median side of the guardrail.

Post-mounted signs shall be erected so the bottom of the sign is no less than 5 feet above the traveled way, and 7 feet above the traveled way in business, commercial, and residential areas. Post-mounted signs must be erected so that the sign face is in a true vertical position. All signs shall be placed so that they are not obstructed in any manner and immediately modified to ensure proper visibility if obstructed.

The bottom of mainline and ramp traffic control signs intending to remain longer than 3 days, except as provided in 2009 MUTCD Section 6F.03 paragraph 12, shall be mounted 5 feet or greater above the edge of pavement on posts or portable sign supports.

The Resident will verify the exact locations of the construction signs in the field.

Construction signs behind guardrail shall be mounted high enough to be visible to traffic.

Vertical panel markers shall be mounted with the top at least 4 feet above the traveled way.

Drums placed along the Turnpike mainline shall have a minimum of one drum weight. Drums that will remain in the same location for more than three days shall have double drum weights. (i.e. a minimum of 40 lbs of drum tire rings). Drums shall not be weighted on the top. Drain holes shall be provided to prevent water from accumulating in the drums During winter periods, drums shall be placed on the grass shoulder or removed from the roadway so winter maintenance operations will not be impacted. This requires the placement of drums behind the median guardrail. Drums shall not be placed on snowbanks.

The Contractor shall operate and maintain the flashing arrow board unit and for dependable service during the life of the contract. The units shall remain in continuous night and day service at locations designated until the Resident designates a new location or discontinuance of service.

The Contractor shall maintain the devices in proper position and clean them as necessary. Maintenance shall include the covering and uncovering of all signs when no longer applicable (even if for a very short duration). The sign shall be considered adequately covered when no part of the sign face is visible either around or through the covering.

The Contractor shall replace damaged traffic control devices with devices of acceptable quality, as directed by the Resident.

The Contractor is required to cover all existing signs, including regulatory and warning signs, within the Work zone which may conflict with the proposed construction signs. The Contractor is also required to cover all permanent construction signs when they conflict with a daily traffic control setup. The method of covering existing signs must be approved by the Resident. The use of adhesives on the sign face is prohibited.

Work Zone Speed Limits

Work Zone Speed (Fines Doubled) is a regulatory speed limit that indicates themaximum legal speed through a work zone which is lower than the normal posted speed. The speed limit shall be displayed by black on white speed limit signs in conjunction with a black on orange "Work Zone" plate. Speed limit signs shall be installed at each mile within the work zone. Any existing regulatory speed limit signs within the reduced speed zone shall be covered once the reduced speed signs have been erected.

Two orange fluorescent flags shall be attached to all speed limit signs that are uncovered for a period of time exceeding one week. This work shall be incidental. Signs that are covered and uncovered on a regular basis are not required to have the supplemental flags.

The reduced speed limit signs shall be used when workers are adjacent to traffic, when travel lane(s) are closed, when indicated on Maintenance of Traffic Control Plans provided or other times as approved by the Resident:

The signs shall be covered or removed when not applicable. The covering and uncovering of signs shall be included for payment under Maintenance of Traffic. Signs relating to reduced speed shall be installed in accordance with the details. The Contractor shall note that all signs including those behind concrete barrier or guardrail are required to be clearly visible to all drivers at all times.

Lane Closure Installation and Removal Procedure

The Contractor will follow the following procedures when closing any travel lanes on the turnpike roadways:

1. The sign package shall be erected starting with the first sign and proceeding to the start of the taper. The sign crew shall erect signs with the vehicle within the outside shoulder.

2. Position the arrow board with the proper arrow at the beginning of the taper; and,

3. When arrow board is in place, continue with the drums/cones to secure the work area.

To dismantle the lane closure, start with last drums/cone placed and work in reverse order until all the drums are removed. The arrow board which was installed first shall be the final traffic control

device removed, excluding the sign package. The remaining sign package shall be picked-up starting with the first sign placed and continuing in the direction of traffic and with the vehicle in the outside shoulder.

Trucking Plan

The Contractor shall submit a trucking plan to the Resident within 10 working days of the award of the Contract. The trucking plan shall consist of at least the following:

- Date of anticipated start of work per each location.
- Haul routes from plant/pit to work area and return.
- Haul routes from work area to disposal area and return.
- Entering / exiting the work area.
- Vehicle safety equipment and Vehicle inspection.
- Personal safety equipment.
- Communications equipment and plan.

The trucking plan will not be paid for separately but shall be incidental to the Contract.

652.3.6 Traffic Control

The existing travel way width shall be maintained to the maximum extent practical.

Vertical panel markers, drums, cones, or striping shall be used to clearly delineate the roadway through the construction area. Two-way traffic operation shall be provided at all times that the Contractor is not working on the project. One- way traffic shall be controlled through work areas by flaggers, utilizing radios, field telephones, or other means of direct communication.

The traffic control devices shall be moved or removed as the work progresses to assure compatibility between the uses of the traffic control devices and the traffic flow.

Pavement markings shall be altered as required to conform to the existing traffic flow pattern. Repainting of pavement marking lines, if required to maintain the effectiveness of the line, shall be considered **incidental to the** maintenance of traffic control devices, no separate payment will be made. Inappropriate pavement markings shall be removed whenever traffic is rerouted, and temporary construction pavement markings shall be placed. Removal of non-applicable markings and **initial** placement of temporary construction pavement markings will be paid for under the appropriate Contract items. Traffic changes shall not be made unless there is sufficient time, equipment, materials, and personnel available to complete the change properly before the end of the workday. This provision will not be required when traffic is rerouted for brief periods and the route can be clearly defined by channelizing devices, or flaggers, or both.

All vehicles used during the installation and removal of traffic control devices, including lane closures, shall be equipped with a vehicle-mounted lighted arrow board **or high intensity LED full width light bar** acceptable to the Resident. The arrow board **or full width light bar** shall be capable of displaying a left arrow, right arrow, double arrow, and light bar **patterns**.

652.4 Flaggers

The Contractor shall furnish flaggers as required by contract documents or as otherwise specified by the Resident. **Flaggers shall not stop traffic on Turnpike mainline or interchange ramps. Only State Police are allowed to stop traffic on mainline or interchange ramps.**

All flaggers must have successfully completed a flagger test approved by the Maine Department of Transportation and administered by a Maine Department of Transportation approved Flagger-Certifier. All flaggers must carry an official certification card with them at all times while flagging.

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

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

Flagger stations shall be located far enough in advance of the workspace so that approaching road users will have sufficient distance to stop at the intended stopping point. While flagging, the flagger should stand either on the shoulder adjacent to the traffic being controlled, or in the closed lane. At a spot obstruction with adequate sight distance, the flagger may stand on the shoulder opposite the closed sections to operate effectively. Under no circumstances shall the flagger stand in the lane being used by moving traffic or have their back to oncoming traffic. The flagger should be clearly visible to approaching traffic at all times and should have a clear escape route.

When conditions do not allow for proper approach sight distance of a flagger or storage space for waiting vehicles, additional flaggers shall be used at the rear of the backlogged traffic or at a point where approaching vehicles have adequate stopping sight distance to the rear of the backlogged traffic. All flagger stations shall be signed, even when in close proximity. The signs shall be removed or covered when flagger operations are not in place, even if it is for a very short duration.

Flaggers shall be provided as a minimum, a 10-minute break, every 2 hours and a 30 minute or longer lunch period away from the workstation. Flaggers may only receive 1 unpaid break per day; all other breaks must be paid. Sufficient certified flaggers shall be available onsite to provide for continuous flagging operations during break periods. If the flaggers are receiving the appropriate breaks, breaker flagger(s) shall be paid starting 2 hours after the work begins and

ending 2 hours before the work ends. A maximum of 1 breaker per 6 flaggers will be paid. (1 breaker flagger for 2 to 6 flaggers, 2 breaker flaggers for 7 to 12 flaggers, etc.). If a flagger station is manned for 10 hours or more, then ½ hour for lunch will be deducted from billable breaker flagger hours.

652.41 Traffic Officers

Local road traffic officers, if required, shall be uniformed police officers. State Police officers and vehicles shall be used to warn and stop traffic on the Maine Turnpike. All State Police shall be scheduled through the Maine Turnpike Authority. The Authority will make payment for the State Police officers and vehicles directly to the State Police.

The Contractor will not be entitled to additional compensation if scheduled Work is not completed due to the unavailability of State Police.

652.5.1 Rumble Strip Crossing

When lane shifts or lane closures require traffic to cross a permanent longitudinal rumble strip for 7 calendar days or less, the Contractor shall install warning signs that read "RUMBLE STRIP CROSSING" with a supplemental Motorcycle Plaque, (W8-15P).

When lane shifts or lane closures require traffic to cross a permanent longitudinal rumble strip for more than 7 calendar days, the Contractor shall pave in the rumble strips in the area that traffic will cross, unless otherwise directed by the Resident. Rumble strips shall be replaced prior to the end of the project, when it is no longer necessary to cross them.

652.6.1 Daylight Work Times

Unless otherwise described in the Contract, the Contractor is allowed to commence work and end work daily according to the Sunrise/Sunset Table at: http://www.sunrisesunset.com/usa/Maine.asp . If the Project town is not listed, the closest town on the list will be used as agreed at the Preconstruction Meeting. Any work conducted before sunrise or after sunset will be considered Night Work.

652.6.2 Night work

When Night Work occurs (either scheduled or unscheduled), the Contractor shall provide and maintain lighting on all equipment, at all workstations, and all flagger stations.

The lighting facilities shall be capable of providing light of sufficient intensity to permit good workmanship, safety, and proper inspection at all times. The lighting shall be cut off and arranged on stanchions at a height that will provide perimeter lighting for each piece of equipment and will not interfere with traffic, including commercial vehicles, approaching the work site from either direction.

The Contractor shall have available portable floodlights for special areas.

The Contractor shall utilize padding, shielding or other insulation of mechanical and electrical equipment, if necessary, to minimize noise, and shall provide sufficient fuel, spare lamps, generators, etc. to maintain lighting of the work site.

The Contractor shall submit a lighting plan prior to any night work for review showing the type and location of lights to be used for night work. The Resident may require modifications be made to the lighting set up in actual field conditions.

Prior to beginning any Night Work, the Contractor shall furnish a light meter for the Residents use that is capable of measuring the range of light levels from 5 to 20 foot-candles.

Horizontal illumination, for activities on the ground, shall be measured with the photometer parallel to the road surface. For purposes of roadway lighting, the photometer is placed on the pavement. Vertical illumination, for overhead activities, shall be measured with the photometer perpendicular to the road surface. Measurements shall be taken at the height and location of the overhead activity.

Night Work lighting requirements:

Mobile Operations: For mobile-type operations, each piece of equipment (paver, roller, milling machine, etc.) will carry indirect (i.e. balloon type) lights capable of producing at least 10 foot- candles of lighting around the work area of the equipment.

Fixed Operations: For fixed-type operations (flaggers, curb, bridge, pipes, etc.), direct (i.e. tower) lighting will be utilized capable of illuminating the work area with at least 10 foot- candles of light.

Hybrid Operations: For hybrid-type operations (guardrail, sweeping, In-slope excavation, etc.), either direct or indirect lighting may be utilized. The chosen lights must be capable of producing at least 10 foot-candles of light around the work area of the equipment

Inspection Operations: Areas required to be inspected by the Authority will require a minimum of 5 foot-candles of lighting. This may be accomplished through direct or indirect means.

The Contractor shall apply 2- inch wide retro-reflective tape, with alternating red and white segments, to outline the front back and sides of construction vehicles and equipment, to define their shape and size to the extent practicable. Pickup trucks and personal vehicles are exempt from this requirement.

The Resident or any other representative of the Authority reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Authority shall not be held responsible for any delay in the work due to any suspension under this item.

Failure to follow the approved Lighting Plan will result in a Traffic Control violation.

Payment for lighting, vehicle mounted signs and other costs accrued because of night work will not be made directly but will be considered incidental to the related contract items.

652.6.3 Traffic Coordinator and Personnel

The Contractor shall submit to the Resident for approval a list of traffic control personnel assigned to the Project including qualifications, certifications and experience.

The Traffic Coordinator duties shall include, but are not necessarily limited to:

a. Developing, in conjunction with the Resident and Project superintendent, a traffic control program for the days' work activities which will facilitate traffic in a safe and efficient manner.

b. Ensure that all traffic control implements (signs, arrow boards, barrels, etc.) are on-site so the traffic program can be implemented effectively.

c. Ensure a safe and effective setup or take-down of all signing implements to least impact the traveling motorist; and,

d. Working knowledge of construction signing/traffic control requirements in conformance with the latest issued Manual on Uniform Traffic Control Devices.

e. The Contractor shall supplement the traffic control plan with a daily plan, which includes schedules for utilizing traffic coordinators and flaggers. This plan shall be submitted daily and agreed upon cooperatively with the Resident.

652.7 Method of Measurement

Signs, signs supplied by the Authority, and panel markers will be measured by the square foot for all signs authorized and installed. Flashing arrow boards, portable-changeable message signs, and flashing and steady burn lights, will be measured by each unit authorized and installed on the project. Barricades and cones will be measured by each unit authorized. Drums will be measured by each or as a lump sum authorized and installed, as indicated on the plans and specifications. No additional payment will be made for devices that require replacement due to poor condition or inadequate retroreflectivity.

Flaggers or traffic officers used during the Contract, for the convenience of the Contractor, will not be measured separately for payment, but shall be incidental to the various pay items. **This includes use of Flaggers for the delivery of materials and equipment to the project or other Flagger use that is for the Contractor's convenience, as determined by the Resident Engineer. If flaggers are required to maintain traffic and there is not a pay item in the contractor for flaggers, then flaggers shall be incidental to the other Section 652 contract items and no separate payment shall be made.**

The accepted quantity of traffic officer and flagger time will be the number of hours the designated station is occupied. The number of hours authorized for payment, **if any**, will be measured to the nearest ¼ hour.

The Authority will make payment for the State Police officers and vehicles directly to the State Police when utilized for mainline traffic control activities. State Police escorts, if required

to move oversize material or equipment loads to the jobsite, will not be paid separately, but shall be incidental to the various pay items.

Maintenance of traffic control devices, including Truck mounted impact attenuators and Automated trailer mounted speed limit signs required for the project will be measured by the calendar day or as one lump sum, as indicated in the plans and specifications, for all authorized and installed traffic control devices. Traffic control devices will only be measured for payment the first time used. Subsequent uses shall be incidental to Item 652.36 or 652.361.

The vehicle mounted arrow board, mounted on trucks used for installation and removal of lane closures, will not be measured separately for payment, but shall be incidental to Item 652.36 or 652.361.

The traffic coordinator(s) will not be measured separately for payment but shall be incidental to Item 652.36 or 652.361.

Portable light towers, lighting on equipment and lighting plan will not be measured separately for payment but shall be incidental to the related Contract items.

Sequential Flashing Warning Lights shall be measured for payment by the maximum number of sequential flashing warning lights satisfactorily installed and properly functioning at any one time during the life of the project. Payment shall include all materials and labor to install, maintain and remove all Sequential Flashing Warning Lights.

Automated Trailer Mounted Speed Limit Sign shall incidental to the Maintenance of Traffic Control device item Payment shall include the Trailer, Radar Speed Limit Sign, flashing beacon amber lights, regulatory speed limit sign, fuel, necessary maintenance, and all checking of Radar Speed Limit Signs by manufacturer and all project moves including the transporting and delivery of the unit.

The accepted quantity of temporary portable rumble strips shall be measured by the unit complete in place, per lane closure application. A unit shall consist of 1 group of 3 full-lane width of rumble strips. As shown in the plans, a maximum of 3 units may be used at each lane closure. A unit shall be measured for each group of rumble strips, each time they are used for a lane closure.

Temporary pavement marking tape and temporary black pavement marking tape will not be measured but shall be incidental to the Maintenance of Traffic Control device item.

652.8 Basis of Payment

The accepted quantity of signs, signs supplied by the Authority, and panel markers will be paid for at the contract unit price per square foot. Such payment will be full compensation for furnishing (or retrieving from the Authority) and installing all signs, sign supports, and all incidentals necessary to complete the installation of the signs.

The accepted quantity of flashing arrow boards, barricades, battery operated flashing and steady burn lights, and cones will be paid for at the contract unit price each for the actual number of devices authorized, furnished, and installed. Such payment shall be full compensation for all incidentals necessary to install and maintain the respective devices.

The Sequential Flashing Warning Lights will be paid for at the Contract unit price per each. This price shall include all costs associated with furnishing, installing, operating, maintaining, relocating, and removing the Sequential Flashing Warning Lights.

The Truck Mounted Attenuator(s) will be incidental to the Maintenance of Traffic Control device item . This price shall include all costs associated with the use of the vehicle. Payment shall include operator, fuel, truck, maintenance, flashing lights, arrow board and all other incidentals necessary to operate the vehicle.

The temporary pavement marking tape and temporary black pavement marking tape shall be incidental to the Maintenance of Traffic Control Devices item. The price shall include furnishing, installing, maintaining and removing the temporary tape and all materials, labor, equipment and incidentals necessary to accomplish the work.

Failure by the contractor to reinstall cones, barrels, signs, covered/uncovered signs, and similar traffic control devices within an hour of them being displaced, moved, knocked over, un-covered and etc. will result in a $150 fine per traffic control device if the issues is not resolved within 1 hour of notification by the resident. An additional $150 will be assessed for each additional hour that the device has not been corrected. If the traffic control device is critical to the maintenance of traffic creating an actual or potential safety issue with traffic and is not corrected immediately then it will result in a violation letter as described below.

Failure by the contractor to follow the Contracts 652 Supplemental Specifications, Special Provisions and Standard Specification and/or the Manual on Uniform Traffic Control Devices (MUTCD) and/or the Contractors own Traffic Control Plan, or failure to correct a violation, will result in a violation letter and result in a reduction in payment as shown in the schedule below. The Resident or any other representative of the Authority reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Authority shall not be held responsible for any delay in the work due to any suspension under this item. Any reduction in payment under this Special Provision will be in addition to forfeiting payment of maintenance of traffic control devices for that day.

Amount of Penalty Damages per Violation		
1st	2nd	3rd & Subsequent
$500	$1,000	$2,500

652.8.1 Maintenance of Traffic Control Devices

Maintenance of Traffic Control Devices will be paid at the contract unit price per calendar day or lump sum price, as indicated in the plans and specifications. Such payment will be full compensation for all days that the Contractor maintains traffic as specified herein, and for moving devices as many times as necessary; for replacing devices damaged, lost, or stolen; and for cleaning, maintaining, and removing all devices used for traffic control, including installing, replacing and removing temporary pavement marking lines.

The contract price for Maintenance of Traffic Control Devices shall be full compensation for all days for such maintenance, encompassing all areas of the contract, regardless of whether or not the work areas or projects are geographically separated.

652.8.2 Other Items

The accepted quantities of flagger hours will be paid for at the contract unit price per hour for each flagging station occupied excluding lunch breaks, and for each approved breaker flagger. Overtime hours, as reported on the certified payrolls, will be paid an additional 30% of the bid price for 652.38. The computation and additional payment for overtime hours will occur during the project close-out process and will be paid as additional hours of 652.38 to the nearest ¼ hour. The contract unit price shall be full compensation for hiring, transporting, equipping, supervising, and the payment of flaggers and all overhead and incidentals necessary to complete the work.

There will be no payment made under any 652 pay items after the expiration of the adjusted total contract time.

The accepted quantities of traffic officer hours will be paid for at the contract unit price per ¼ hour for each station occupied, with no additional payment for overtime. This price shall be full compensation for supplying uniformed officers with police cruisers, and all incidentals necessary to complete the work, including transportation, equipment, and supervision.

Payment for temporary traffic signals will be made under Section 643 - Traffic Signals.

The accepted quantity of Portable Changeable Message Signs will be paid for at the Contract unit price each. This price shall be full compensation for furnishing, relocating, maintaining and removing the PCMS. The price also includes all costs associated with setting-up and paying for a data cellular account, technical support, training and any costs associated with the GPS location device.

Progress payment of each PCMS shall be pro-rated over the duration of the Contract. Contract duration shall be from the specified Contract start date to substantial completion or Contract completion, whichever is sooner.

For a PCMS that fails to operate when required, the Contractor will be given 24-hours to repair or replace the PCMS. For periods longer than 24-hours, payment will be reduced based on the pro-rated time that the PCMS is out of service.

Drums will be paid for at the contract unit price each, or at the Contract lump sum price, as designated in the Plans and specifications. Such payment shall be full compensation for all drums as shown on the Plans or required to complete the work.

The accepted quantity of temporary portable rumble strips will be paid for at the contract unit price per unit which shall include the transport device. Payment is full compensation for providing, relocating, maintaining or replacing, and removing temporary portable rumble strips. If the pay item is not included in the contract quantities, then the Authority does not anticipate the use of this item on the contract. If contractor wishes to utilize temporary portable rumble

strips and the item is not in the contract, then the contractor may propose use of them to the Authority for consideration.

Payment will be made under:

Pay Item		Pay Unit
652.30	Flashing Arrow Board	Each
652.31	Type I Barricade	Each
652.311	Type II Barricade	Each
652.312	Type III Barricades	Each
652.32	Battery Operated Light	Each
652.33	Drum	Each
652.331	Drum	Lump Sum
652.34	Cone	Each
652.35	Construction Signs	Square Foot
652.351	Construction Signs-Supplied by Authority	Square Foot
652.36	Maintenance of Traffic Control Devices	Calendar Day
652.361	Maintenance of Traffic Control Devices	Lump Sum
652.38	Flaggers	Hour
652.381	Traffic Officers	Hour
652.41	Portable-Changeable Message Sign	Each
652.46	**Temporary Portable Rumble Strips**	**Unit**
652.47	**Sequential Flashing Warning Lights**	**Each**

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Specific Project Maintenance of Traffic Requirements)

This Specification describes the specific project maintenance of traffic requirements for this Project.

The following minimum traffic requirements shall be maintained. These requirements may be adjusted based on the traffic volume when authorized by the Authority.

Gray Road (Route 26 & 100) Underpass

Flaggers with alternating one lane, two-way traffic shall be used to maintain traffic along Gray Road (Route 26 & 100) during working hours (nighttime only). The Contractor shall maintain a minimum of one 12-foot travel lane along Gray Road (Route 26 & 100) throughout construction.

Maine Turnpike Traffic Control Requirements

Temporary lane closures that would restrict travel to one lane in each direction shall be conducted between the times presented in the table below. Equipment moves involving stoppages and shoulder closures shall be performed between the times listed in the table below as well.

Liquidated damages shall be assessed at $1,000/five (5) minutes for every five minutes that a temporary lane closure is in place outside the times presented in the table below.

Speed limits shall be reduced when work is being performed in accordance with the guidance below:

60 MPH Work Zone Speed Limit – For St. Lawrence & Atlantic Overpass operations
50 MPH Work Zone Speed Limit – For Gray Road Underpass operations
45 MPH Work Zone Speed Limit – For Blackstrap Road and MCRR Overpass operations

Temporary Concrete Barrier shall be required for the St. Lawrence & Atlantic overpass bridge work, for the Blackstrap Road overpass bridge work, and for the MCRR overpass bridge work. The plans show separate sections of temporary concrete barrier for the adjacent work zones at Blackstrap Road and MCRR. The Contractor may install a continuous run of barrier from the beginning of one bridge through the end of the second bridge. Set-up of the temporary concrete barrier shall occur just prior to the start of work on a particular bridge and shall be removed as soon as the work is completed or as otherwise approved by the Resident.

This Section outlines the minimum requirements that shall be maintained for work on, over, or adjacent to the Maine Turnpike roadway. Operations are allowed as outlined below:

Temporary Shoulder Closures and Lane Closures at Gray Road (Route 26 & 100) Underpass along Falmouth Spur	Sunday evening through Friday morning, 9:00 a.m. thru 3:00 p.m. or 8:00 p.m. thru 6:00 am
Temporary Shoulder Closures and Lane Closures at Gray Road (Route 26 & 100) Local Road	Sunday evening through Friday morning, 8:00 p.m. thru 6:00 a.m. nightwork only
Temporary Shoulder Closures and Lane Closures at Falmouth Spur (for Blackstrap and MCRR)	Sunday evening through Friday morning, 9:00 a.m. thru 3:00 p.m. or 8:00 p.m. thru 6:00 am
Long Term Lane Closure at Falmouth Spur	24 hours per day, seven days per week
Long Term Lane Closure at St. Lawrence & Atlantic Overpass	24 hours per day, seven days per week
Equipment Moves	During low traffic periods as approved by the Authority.

NOTE 1: Turnpike Lane Closures shall be removed if construction is not ongoing. Unattended lane closures are not allowed.

Construction vehicles are prohibited from merging with mainline traffic after noon on Fridays between June 21st and September 6th unless the merge occurs at an interchange. This requirement applies to the Turnpike mainline and not to the Falmouth Spur.

NOTE 2: There shall be no lane closures or ramp closures permitted along the Turnpike on Holidays as defined in Section 101.2 and 107.3.3.

SECTION 719

SIGNING MATERIAL

Section 719.01 Reflective Sheeting

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

Retroreflective sheeting for signs shall meet at a minimum the requirements for ASTM 4956 – Type XI (Prismatic) manufactured by 3M Company, for all signs.

Reflective sheeting, used in sign construction, shall have been manufactured within the six months immediately prior to the fabrication of each sign. Upon delivery at the job site of each shipment of signs, a letter of certification shall be provided that the reflective sheeting conforms to the requirements.

For Type 1 Guide Signs, all reflective sheeting shall be color matched on each sign unit.

All warning signs shall be fluorescent yellow except for Ramp Advisory Speed signs which shall be yellow.

All Construction Series signs that use orange backgrounds shall be fluorescent orange.

All Pedestrian Signs shall be fluorescent yellow-green.

EZ-PASS Purple shall conform to the FHWA Purple color box.

719.02 Demountable High Intensity Reflectorized Letters, Numerals, Symbols, and Borders

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

719.02 Letters, Numerals, Symbols, and Borders

All signs shall be manufactured utilizing Direct Applied letters, numerals, symbols and borders or be Digitally Printed meeting all sign sheeting manufacturer's (3M) requirements to ensure that the manufacturer's warranty will be in full effect.

All Type 1 overhead signs, Type 1 interchange signs and any other Type 1 signs over 100 square feet shall utilize Direct Applied letters, numerals, symbols and borders.

Direct Applied

Direct reflectorized applied letters, numerals, symbols and borders shall consist of cut out sheeting that shall meet at a minimum the requirements for ASTM 4956 – Type XI (Prismatic) sheeting. The sheeting material used for the direct applied legend shall be the same type as used for the background.

Digitally Printed

Digital printing methods may be used to produce the sign copy and borders on retroreflective sheeting. Retroreflective sheeting complying with ASTM D 4956 Type XI and designated by the manufacturer as suitable for digital printing traffic signs along with associated ink and premium overlay film. Digitally Printed signs shall meet all sign sheeting manufacturer's (3M) requirements to ensure that the manufacturer's warranty will be in full effect

Transparent and opaque durable inks used in digital printed sign copy and borders shall be as recommended by the sheeting manufacturer (3M). Digital printed traffic colors shall be properly applied and shall have a warranty life of the base retroreflective sign sheeting. Digitally printed signs shall present a flat surface, free from foreign material, and all copy and borders shall be clear and sharp. Digital printed signs shall conform to 70% of the retroreflective minimum values established for its type and color (applicable to traffic colors only), as required by ASTM D 4956. Digital printed signs shall meet the daytime color and luminance, and nighttime color requirements of ASTM D 4956. Printed traffic colors shall meet the accelerated weathering and colorfastness requirements of ASTM D 4956. Digitally printed black shall remain sufficiently opaque for its intended use for the warranty period of the base sheeting. No variations in color or overlapping of colors will be permitted.

Digitally printed traffic signs shall have an integrated engineered match component clear UV- premium protective overlay recommended by the sheeting manufacturer applied to the entire face of the sign.

All digitally printed traffic signs shall utilize an integrated engineered match component system for materials and printing process and equipment. The integrated engineered match component system shall consist of retroreflective sheeting, durable ink(s), and clear protective overlay film, as specified by the sheeting manufacturer, applied to aluminum substrate.

The sign fabricator shall use an integrated engineered match component system digital printer approved by the sheeting manufacturer. Each approved digital printer shall only use the compatible retroreflective sign sheeting manufacturer's engineered match component system products. The sign fabricator shall maintain their digital printer's color calibration according to the sheeting manufacturer's requirements to help ensure digitally printed signs meet the manufacturer's specifications. The fabricator shall be trained by the sheeting manufacturer to produce digitally printed traffic signs that qualify for the sheeting manufacturer's warranty.

General

Type 1 Guide Signs shall have two-inch-tall, series C text that indicates the sign size, and the sign install date (MM/YY) located two inches above the bottom border of the sign.

APPENDIX A - Genesee & Wyoming Railroad Services, Inc. Right of Entry Application

Genesee & Wyoming Railroad Services, Inc.

Real Estate Department, 13901 Sutton Park Dr., S, Suite 270, Jacksonville, FL 32224

Contractors Access/Occupancy on Railroad Property

☒ **Check box if Contractor unknown at this time** *(this form will need to be completed with contractor information and submitted prior to any work once bid process is complete)*

Incomplete or Inaccurate Information will delay application request

Section 1 - Applicant Data

Complete Legal Name of Applicant to appear on License Agreement: Maine Turnpike Authority

Applicant Mailing Address: 2360 Congress Street

Portland, ME 04102

Applicant Overnight Address: Same as above

Type of Entity: ☐ Corporation ☐ Partnership ☐ Sole Proprietor ☐ Individual ☐ Municipality ☐ Developer ☒ Other

If other please explain: Transportation Authority

State of Incorporation or Partnership: Maine

Contact during Application Process:

Name: Ryan Barnes, PE, CPESC

Contact Telephone: 207-482-8326 Email Address: RBarnes@maineturnpike.com

Section 2 - Location Data

Railroad Name: St. Lawrence & Atlantic Railroad Estimated Start Date: Summer 2024 (Final Date TBD)

Specify the amount of time access is required: 1-2 Months **Reason for extension of time beyond 60 days

****$500 extension fee for each additional 30 days being requested.**

Nearest City: Auburn County: Androscoggin State: Maine

REQUIRED: Latitude/Longitude (Convert to Decimal Format) (ex 12.3456789/-64.101112): Lat: 44.0325 N, Long: 70.2826W

Address of proposed worksite: Mile Marker 74.50 on Interstate 95

Railroad Subdivision - if known St. Lawrence & Atlantic **US DOT/AAR Crossing Number - if available** N/A

Section 3 - Existing Agreement Data

Is there an Existing Agreement at this Location which will be affected by this Request?

☒ Yes ☐ No If YES, List Agreement Number(s): See Attached

Will facility be exclusively used by Applicant? ☐ Yes ☒ No

If YES, List Name of Lessee: _____

Describe the complete scope of work on or around Railroad property (REQUIRED):

See Attached

Section 4 - Department of Transportation (D.O.T.)

Is this installation associated with a Department of Transportation project? ☐ Yes ☒ No

If Yes, complete the following:

D.O.T. Contract Number: _____ **D.O.T. Project Number:** _____ **D.O.T. Project Name:** _____

D.O.T. Contact Information:

Name: _____

Address: _____

City: _____ **State:** _____ **Zip Code:** _____

Phone Number _____ **Email Address** _____

Some important items to note when completing the application:

Checklist prior to submittal

☒ Latitude & longitudinal information converted to digital decimal format with an aerial map of location

☐ Payment for fees included - check payable to specific railroad

☐ If paying fees by credit card a completed signed credit card release is included - only Visa, MasterCard or Discover can be accepted - US Roads only

☐ Applications can be emailed with a copy of the check in order to start the approval process. Only the check for the doc prep fees needs to be mailed or overnighted when the complete application packet is emailed. Include a copy of the application to make sure the payment is matched to the correct project.

☐ ***When returning the signed agreement and proof of insurance for final review and exeuction please allow 2-3 weeks prior to the start of work. Once all required fees are paid and documentation in place the agreement must go through an approval process before it can be finalized.***

Proposed Scope of Work

The project will rehabilitate the Maine Turnpike Authority (MTA) bridge over the SLA. The majority of the work will be done from the topside of the bridge. However, the Contractor will need to access the underside of the bridge to complete the bridge deck repairs, weeper extensions, and other minor repairs. The Contractor will need to foul the tracks to work around and over them but all work can be accomplished without permanently reducing the clearance envelope.

The rehabilitation will include:

-Wearing surface replacement: Remove the existing 1.5" hot mix asphalt (HMA) wearing surface and membrane and replace with 2" of HMA, tapered at the joints to 1.5". Patch repair concrete deck as needed.

-Approach Pavement: Mill and overlay 1.5" depth of the approach pavement 50' on each approach.

-Joint Repair: Modify existing joint and replace joint seals. Install elastomeric joint headers at each approach.

-Bridge Deck Repairs: Patch repair areas of spalled and delaminated concrete on the underside of the deck ends. Full depth patch repair bridge deck as needed.

-Transition Barrier Repairs: Coat transition barriers with clear protective coating.

-Bridge Rail Repairs: Repair damaged bridge rail and post, including installing a new bridge rail post.

-Brush Curb Repair: Apply clear protective coating to concrete curbs, and fascias.

-Weeper Extension: Extend the existing PVC weep drains so that the drain is below the bottom flange of the girders.

Section 5 - Insurance Requirements - US Roads

Insurance Requirements prior to any construction project - Both the Utility Owner and the Contractor completing installation are required to provide proof of current Commercial General Liability Insurance. Prior to construction the Contractor is required to provide current proof of Railroad Protective Liability Insurance.

General Liability insurance must meet the minimum requirements of $2M per occurrence and $6M aggregate per the terms of the written contract.
Automobile Insurance must meet the minimum requirements of $1M bodily injury and property damage per occurrence.
The General Liability certificate is required to show proof of **CG2417 or its equivalent**. *(Contractual Liability Railroads)*
Evidence of **Workers Compensation** must be provided on certificate and meet the minimum requirements of $1M.
Certificate Holder naming *(specified Railroad)* **Specified Railroad names can be found at www.gwrr.com**

General Liability, Automobile Liability and Umbrella/Excess Liability provides additional insured status to the certificate holder and any other party(ies) specified in or required by written contract between the named insured and the certificate holder.

Where applicable and permitted by law, all policies include a blanket automatic waiver of subrogation endorsement that provides this feature in favor of the certificate holder and any other party(ies) specified in or required by written contract between the named insured and the certificate holder.

Prior to Construction or any access within 50' of Railroad a current **Certificate of Railroad Protective Liability insurance (RPL)** which shows the ***specific Railroad*** as named Insured. If the Contractor does not carry a policy of Railroad Protective Liability insurance, this coverage can be secured through the railroad. An application and current Fee structure for this coverage is available upon request.

Insurance Requirements for potentially hazardous pipelines such as natural gas, oil, petroleum, etc. to be amended as shown below

General Liability Insurance which names the ***specific Railroad*** as additional insured and must meet the limits of $**5M per occurrence and $10M aggregate**. Such policy shall be endorsed to provide Waiver of Subrogation in favor of the certificate holder per written contract.

Pollution Legal Liability Insurance with minimum limits of **Five Million Dollars ($5,000,000)** per occurrence naming the ***certificate holder*** as additional insured per written contract. Such policy shall be endorsed to provide Waiver of Subrogation in favor of the certificate holder per written contract.

Section 6 - Insurance requirements - Canadian Roads

Insurance Requirements prior to any construction project - Both the Utility Owner and the Contractor completing installation are required to provide proof of current Commercial General Liability Insurance.

General Liability insurance must meet the minimum requirements of $2M per occurrence and $2M aggregate per the terms of the written contract.
Automobile Insurance must meet the minimum requirements of $1M bodily injury and property damage per occurrence.
Where applicable, the General Liability certificate is required to show proof of **CG2417 or its equivalent.** (Contractual Liability Railroads)
Evidence of **Workers Compensation** must be provided on certificate and meet the minimum requirments of $1M.
Certificate Holder naming *(specified Railroad)* **Specified Railroad names can be found at www.gwrr.com**

General Liability, Automobile Liability and Umbrella/Excess Liability provides additional insured status to the certificate holder and any other party(ies) specified in or required by written contract between the named insured and the certificate holder.

Where applicable and permitted by law, all policies include a blanket automatic waiver of subrogation endorsement that provides this feature in favor of the certificate holder and any other party(ies) specified in or required by written contract between the named insured and the certificate holder.

IMPORTANT

Prior to application submittal, Questions can be answered and additional contact information obtained by visiting the website at www.gwrr.com - select the specific railroad and click on the link for Real Estate.

Plans for proposed installations shall be submitted to and approved by the Railroad, on behalf of itself, its subsidiaries, and affiliates, and designated engineer before work can begin! Applications submitted not meeting current specifications as outlined in the General Specifications for Sub-grade and Above grade Utility Crossings of Railway's Right-of-Way will be returned and may incur additional engineering review fees. For your convenience a copy of these specifications can be found on the website at www.gwrr.com.

Materials and installations are to be in strict accordance with specifications of National Electrical Safety Code, AREMA, current edition, and requirements of the Railroad.

Upon application approval, applicant agrees to reimburse Railroad for any cost incurred by Railroad incident to the installation, maintenance and/or supervision necessitated by the installation. Applicant further agrees to assume all liability for accidents or injuries that arise as a result of this installation.

This section must be completed in full, signed and dated prior to submittal to the Real Estate Department for processing. Unsigned applications, incomplete or inaccurate Information will delay application request and may incur additional fees.

Date: 03/26/24 **Signature:** [signature]

Phone Number 207-871-7771 **Printed Name** Peter S. Merfeld

Fax Number: 207-878-8613 **Title:** Chief operations officer

Please make check payable to the specific Railroad where proposed work is to occur. A list of Genesee & Wyoming, Inc. subsidiary railroads can be found at: www.gwrr.com . W-9 information available upon request.

Mail the application for proposed project, along with the applicable non-refundable fee(s) in U.S. Funds (Canadian Applicants please pay all fee in Canadian Funds plus HST) to:

Genesee & Wyoming Railroad Services, Inc.
Attn: Real Estate Department
13901 Sutton Park Dr. S., Suite 270
Jacksonville, FL 32224

In order for the application to be complete ALL required details pertinent to the proposed installation must be completed in full and submitted along with the following fees:

	# of Copies	Amount Due	Description
☒	1	$2,250	Engineer review fee, plans/drawings, no larger than 11 x 17. Larger drawings may incur additional engineering fees.
☒	1	$1,750	Completed Contractor's Access/Occupancy Application and Fee required with ALL application submittals. If the contractor is unknown at time of submittal just check the box under the heading on the form.
		$4,000	**Full amount due with submittal for new utility installations -** *Unless prior arrangements are made, applications received without payment will not be processed until receipt of payment. This could extend the time frame for the processing of your request.*
Only applicable for projects over 60 days		$500	Extension fee for each additional 30 days over the initial 60 days

Standard Application processing takes approximately 6-8 weeks. PLEASE READ IN FULL - "Expedited processing" is available and will reduce the processing time to between 1-2 weeks at an additional cost of $3,000. For *all expedited requests* the application and plans submitted must meet engineering specifications and be approved in order for the applicable agreement(s) to be forwarded to the applicant for signature within 2 weeks *from receipt of all required information and full payment of required fees*. It is important to note that an incomplete application and plans submitted that do not meeting engineering specifications will cause a delay in the processing of expedited request and the two week guarantee no longer applies if revisions are required to be made by the applicant in order for them to meet engineering specs for engineering to approve the request.

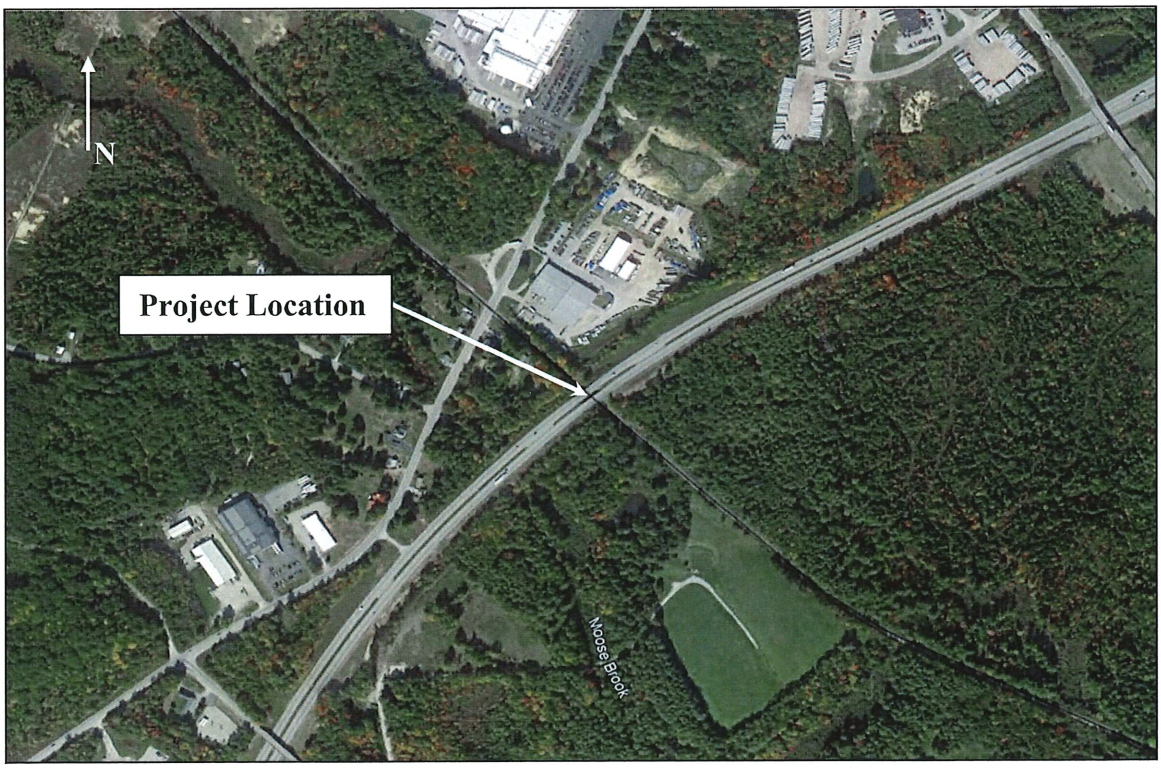
The expedited processing of an application does not apply to the final review and execution phase of the agreement process. Once a signed agreement has been received and ALL required fees and insurance has been submitted the agreement(s) is(are) forwarded for final review by a VP of Real Estate, Legal and the signatory for the Railroad. This final review and execution process can take up to 2 weeks from receipt of all required documentation and fees. This part of the agreement process cannot be expedited.

At this time we are unable to expedite requests for the installation of new private grade crossings, industrial track agreements, and track leases. The process for these requests varies somewhat from the review and approval process for new utilities and takes a little longer to secure all required approvals.

Entering or working on the railroad right of way or any other railroad property without the permission of the railroad is trespassing and illegal. Violators risk the possibility of serious, even fatal injury and will be prosecuted.

LOCATION MAP

St. Lawrence & Atlantic Overpass at MM 74.50
Structure No. 0080/1492
Maine Turnpike over the St. Lawrence and Atlantic Railroad
Auburn



Latitude: 44.0325 N, Longitude: 70.2826 W

THIS AGREEMENT made this Sixth day of August , A.D. 1954, between the MAINE TURNPIKE AUTHORITY, a body both corporate and politic in the State of Maine, and having an office in the City of Augusta, in the County of Kennebec, and State of Maine, hereinafter called the "Authority" and CANADIAN NATIONAL RAILWAY COMPANY, a corporation duly organized and existing by law and having a place of business in Portland in the County of Cumberland and State of Maine, hereinafter called the "Railroad".

WITNESSETH:

WHEREAS, the Authority is authorized by Chapter 69 of the Private and Special Laws of the State of Maine, 1941, to construct, operate and maintain a turnpike from a point at or near Kittery in York County to a point at or near Fort Kent in Aroostook County, together with connecting tunnels and bridges, overpasses and underpasses; and

WHEREAS, the said Authority has determined the location of Section Two (2) of said turnpike between Portland and Augusta, and the State Highway Commission of the State of Maine has approved such location; and

WHEREAS, the location of said turnpike crosses the tracks and land of said Railroad (1) in the Town of Falmouth, County of Cumberland and State of Maine, and (2) in the City of Auburn, County of Androscoggin and State of Maine, as hereinafter more specifically described; and

WHEREAS, the Authority proposes to construct and maintain two overpass bridges and approaches over and across the said tracks and land of the Railroad, for which bridge and approaches the Authority has prepared plans, specifications and schedules of work to be performed under its immediate direction; and

WHEREAS, the Chief Engineer of said Railroad has approved the plans and specifications for the work to be performed in the construction of the said overpass bridges and approaches;

NOW, THEREFORE, the parties hereto agree as follows:

1. All work of construction on or over the property of the Railroad shall be in strict conformance with the plans and specifications as approved and shall be subject to inspection by the Railroad at all times. Any minor changes in such plans and/or specifications which in the opinion of the Chief Engineer are necessary to eliminate hazards to Railroad property or to provide safety in train operations shall be made by the Authority. All work on, over or adjacent to Railroad property shall

not be performed without prior approval of the Chief Engineer who shall determine the proper time for such work to be performed, the methods to be employed and whether or not protection service is required.

2. The entire expense of construction of said overpass bridges and approaches including labor, materials, land damage and any and all expense incidental or pertaining to said construction shall be paid by the Authority.

3.(a) The Railroad agrees that the Authority may let a contract or contracts from all or any portions of the work involved in said projects and also agrees to make any necessary changes in its railroad facilities, including temporary and permanent changes of signal and communication lines by railroad and Western Union forces, and installation of bridge guards; provided, that the expense of all such changes, however incurred, shall be paid by the Authority.

(b) The Railroad agrees to furnish flagmen, including shelter cabins and supplies and other protection services, whenever in the sole opinion of the Chief Engineer the work being performed is of such nature as to require these services.

4. The Authority agrees to reimburse the Railroad for all labor and materials furnished under the provisions of this agreement including, but not limited to the services of flagmen, inspectors and engineers, the use of equipment, necessary supplies, facilities and/or materials. Payment for such work as the Railroad agrees to perform and for such services as the Railroad agrees to furnish, shall be paid by the Authority to the Railroad from month to month.

5. The Authority agrees to pay to the Railroad the sum of One Dollar ($1.00) in full consideration for the easements in the land of the Railroad required for construction and maintenance of the bridges and approaches carrying the turnpike over the tracks and land of the locations hereinafter described; and the Railroad agrees for the consideration aforesaid to give the Authority a good and sufficient deed conveying the required perpetual easement over and across the locations, described as follows:

A certain lot or parcel of land situate in the town of Falmouth, County of Cumberland and State of Maine, bounded and described as follows, to wit:

Beginning at a point on the property line between the land of Peter N. Dyhrberg and the land of the Canadian National Railway Company, said point being located three hundred eighty (380) feet distant southwesterly from, measured on a radial line extended through the survey base line of the Maine Turnpike, so-called, at Station 193+69.8, as shown on a Property Plan entitled "Maine Turnpike Authority, Maine Turnpike, Section 2 - Portland to Augusta" dated May 1954, on file

in the office of the Maine Turnpike Authority and the Cumberland County Registry of Deeds, the parcel of land herein described being shown on Falmouth Supplemental Sheet No. 10 of said plan and being designated as Parcel No. 118;

thence, north thirty-eight degrees forty-three minutes east (N38°-43'E) by the line of land of said Peter N. Dyhrberg a distance of about seven hundred ninety-nine and eight-tenths (799.8) feet to a point, said point being located four hundred one and seven-tenths (401.7) feet distant northeasterly from, measured on a radial line extended through the said survey base line at Station 197+13.9;

thence, south fifty-five degrees thirty-two minutes east (S55°-32'E) a distance of about ninety-nine and three-tenths (99.3) feet to a point on the line of land of Lester E. Marston, said point being located about three hundred ninety-three (393) feet distant northeasterly from, measured on a radial line extended through the said survey base line at Station 198+06.4;

thence, south thirty-eight degrees forty-three minutes west (S38°-43'W) by the line of land of said Lester E. Marston a distance of about seven hundred eighty and five-tenths (780.5) feet to a point, said point being located three hundred eighty (380) feet distant southwesterly from measured on a radial line extended through the said survey base line at Station 196+77.0;

thence, northwesterly by a curve to the left of radius five thousand three hundred forty-nine and fifty-eight hundredths (5349.58) feet concentric with the said survey base line and three hundred eighty (380) feet distant southwesterly therefrom a distance of about one hundred and seven-tenths (100.7) feet to the point of beginning; containing approximately one and eighty hundredths (1.80) acres;

Meaning and intending to describe all that portion of the Canadian National Railroad Company right of way which lies within the right of way of the Maine Turnpike as shown on the aforementioned Property Plan, and being a portion of parcels numbered 5 and 6 as shown on a plan entitled "Right of Way and Track Map - Atlantic and St. Lawrence Railroad" dated June 30, 1917 and identified as plan number V.26/20.

A certain lot or parcel of land situate in the City of Auburn, County of Androscoggin and State of Maine and bounded and described as follows, to wit:

Beginning at a point on the property line between the land of Winfield M. Cox and Elva L. Cox and the land of the Canadian National Railway Company, said point being located one hundred fifty (150) fet distant southeasterly from, measured on a radial line extended through the survey base line of the Maine Turnpike, so-called, at Station 3758+73.4, as shown on a Property Plan entitled, "Maine Turnpike Authority, Maine Turnpike, Section 2 - Portland to Augusta", dated June 1954, on file in the office of the Maine Turnpike Authority and to be filed in the Androscoggin County Registry of Deeds, the parcel of land herein described being shown on Auburn Sheet No. 2 of said Plan;

thence, north forty-three degrees thirteen minutes west (N43°-13'W) by the line of land of said Winfield M. Cox and Elva L. Cox a distance of about three hundred one and seven-tenths (301.7) feet to a point, said point being located one hundred fifty (150) feet distant northwesterly from, measured on a radial line extended through the said survey base line at Station 3758+41.3;

thence, northeasterly by a curve to the right of radius five thousand eight hundred seventy-nine and fifty-eight hundredths (5879.58) feet

concentric with the said survey base line and one hundred fifty (150) feet distant northwesterly therefrom a distance of about ninety-nine and five-tenths (99.5) feet to a point on the line of land of Theodore Simard and Dorilda Simard, said point being located one hundred fifty (150) feet distant northwesterly from, measured on a radial line extended through the said survey base line at Station 3759+30.3;

thence, south forty-three degrees thirteen minutes east (S43°-13'E) by the line of land of said Theodore Simard and Dorilda Simard a distance of about three hundred two and three-tenths (302.3) feet to a point, said point being located one hundred fifty (150) feet distant southeasterly from the said survey base line, measured at right angles at Station 3759+75.8;

thence, southwesterly by a curve to the left of radius five thousand five hundred seventy-nine and fifty-eight hundredths (5579.58) feet concentric with the said survey base line and one hundred fifty (150) feet distant southeasterly therefrom a distance of about ninety-nine and seven tenths (99.7) feet to the point or beginning; containing approximately sixty-nine hundredths (0.69) acres;

Meaning and intending to describe all that portion of the Canadian National Railway Company right of way which lies within a three hundred (300) foot strip of land located one hundred fifty (150) feet each side of the said survey base line of the Maine Turnpike, so-called, as shown on the aforementioned Property Plan, and being a portion of parcels numbered 12 and 13 as shown on a plan entitled "Right of Way and Track Map - Atlantic and St. Lawrence Railroad" dated June 30, 1917, and identified as plan number V.26/14.

6. The Authority, its successors or assigns, agrees to bear the expense of any changes or alterations to said overpass bridges or their approaches which may be required by reason of any future law or regulation, either federal or state, concerning side or overhead clearances.

7. The Authority agrees that no alterations or changes shall be made in the plans and specifications, as approved, without the prior approval of the Chief Engineer.

8. The Authority, its successors or assigns, agrees to construct and maintain its overpass bridges and approaches in such manner that snow, water, ice, sand, earth or other materials and debris will not fall, wash or drain upon Railroad property in amounts sufficient to create a nuisance or hazard to Railroad operations.

The Authority, its successors or assigns, agrees to bear the expense of taking such measures as the Chief Engineer may consider necessary to prevent damage from and to bear the expense of any damage caused by undue accumulations of water, snow, ice, sand, earth or other materials or debris upon Railroad property resulting from the construction, maintenance, repair or existence of said overpass bridges and approaches.

9.(a) The Authority agrees to indemnify and save harmless the Railroad from any and all loss, cost, damage, expense, claims, suits, demands or judgments, direct

or indirect, arising out of or in any way referable to the construction of said overpass bridges and approaches, whether such loss, cost, damage, expense, claims, suits, demands or judgments shall be suffered by reason of damage to the property of the parties hereto, the property in the possession of or under the control of the Railroad, the property of the passengers of the Railroad, or the property of others or by reason of injury to, including death of, the agents, servants or employees of the parties hereto, or to passengers of the Railroad or to any other person whomsoever, howsoever caused.

(b) The Authority shall cause its contractors or sub-contractors before the work is commenced to take out and keep in force until the work is completed and accepted, insurance for the protection of the Authority and the Railroad, such insurance to include the following policies:

(1) Contractors' Public Liability and Property Damage Liability Insurance

(2) Contractors' Protective or Contingent Public Liability and Property Damage Liability Insurance

(3) Railroads' Protective or Contingent Public Liability and Property Liability Insurance

All insurance shall be placed with such companies and in such form and amounts as are approved by the Authority and the Railroad. It is expressly understood and agreed, however, that the liability of the Authority under the provisions of this paragraph 9 is not and shall in no way be limited to or restricted by the amounts agreed upon in the aforementioned insurance policies.

10. The Authority agrees to require in its contracts for the construction of said overpass bridges and approaches that the contractor furnish a good and sufficient bond, in form satisfactoryto the Authority and the Railroad, for the faithful performance and completion of the work of construction. If such bond is allowed to lapse or if for any reason the contractor is unable to complete said work within the time specified in the contract between the contractor and the Authority, then and in either of these events, the Authority will engage other suitable contractors to complete said work and all expense, cost or damage caused to the Railroad by said delay will be paid to the Railroad by the Authority.

11. The Railroad agrees that upon the execution of this agreement, the approval thereof by the State Highway Commission of the State of Maine and the fulfillment of

the provisions of all paragraphs herein, the Authority and its contractor or contractors may commence the proposed work on the locations herein described, provided that all such work shall be performed in accordance with the provisions and limitations set forth in all parts of this agreement, and provided further, that the Chief Engineer of the Railroad shall be given not less than five days' advance notice of the day and hour such work is to be started, in order that he may arrange for proper flagging and inspection. No work shall be started until said Chief Engineer or his designated representative has notified the Authority that the necessary flagmen are at the site of the work and other necessary protective services provided for.

12. (a) After completion of the construction of the overpass bridges and approaches over and across the lands and tracks of the Railroad, according to the plans, specifications and schedule of work, the Authority, its successors or assigns, agrees to maintain the same in a manner satisfactory to the Chief Engineer. Any maintenance or repair work to be performed on, over or adjacent to the Railroad property shall not be performed without the prior approval of the Chief Engineer, who shall determine the proper time for such work to be performed, the methods to be employed and whether or not protection service is required. All expense, including the expense of the Railroad, in connection with such maintenance or repair work, shall be borne by the Authority, its successors or assigns.

(b) The Authority agrees to indemnify and save harmless the Railroad from any and all loss, cost, damage, expense, claims, suits, demands or judgments, direct or indirect, arising out of or in any way referable to the maintenance and repair of said overpass bridges and approaches, whether such loss, cost, damage, expense, claims, suits, demands or judgments shall be suffered by reason of damage to the property of the parties hereto, the property in the possession of or under the control of the Railroad, property of the passengers of the Railroad, or the property of others or by reason of injury to, including death of the agents, servants, or employees of the parties hereto or to passengers of the Railroad or to any other person whomsoever except where the same is caused by the sole negligence of the Railroad, its agents, servants or employees.

13. It is agreed and understood that the Railroad will hold the Authority responsible for all payments and reimbursements provided for in this agreement

notwithstanding any provisions in the specifications for payments by contractors to the Railroad. However, upon receiving payment directly from any contractor for expenses incurred by the Railroad in connection with any of the construction, maintenance or repair work on the overpass bridges and approaches covered by this agreement, the Railroad will relieve the Authority from all responsibility to the extent of such payments received.

14. Whenever the words "Chief Engineer" are used in this agreement, they shall be understood as referring to the Chief Engineer of the Railroad, acting personally or by his duly authorized representative acting within his designated authority.

15. It is agreed and understood that this contract will remain in full force and effect, where applicable, as long as the bridges and overpass approaches remain in existence or until such time as a supplemental agreement is entered into in regard to repair or maintenance.

16. This agreement may be executed in any number of counterparts, each of which shall be deemed the original, and such counterparts shall constitute but one and the same instrument, which shall for all purposes be sufficiently evidenced by any such original counterparts.

IN WITNESS WHEREOF, the Maine Turnpike Authority has caused this agreement to be executed by Paul C. Thurston, its Chairman and its official seal to be hereunto impressed and attested by Lucius D. Barrows, its Secretary and Treasurer; and the Canadian National Railway Company has caused this agreement to be executed in its behalf by W. H. Kyle . . . . . , its Vice-President , and its corporate seal to be hereto impressed and attested by F. H. Machin its Assistant Chief Clerk. . . . . ., on the day and year first above written.

MAINE TURNPIKE AUTHORITY

By /s/ Paul C. Thurston
Chairman

Attest:

/s/ Lucius D. Barrows
Secretary & Treasurer

CANADIAN NATIONAL RAILWAY COMPANY

By /s/ W. H. Kyle

Attest:

/s/ F. H. Machin

Form approved

Execution approved

In accordance with Section 4 (c) of Chapter 69 of the Private and Special Laws of Maine, 1941, the foregoing agreement between the Maine Turnpike Authority and the Canadian National Railway Company dated

is hereby approved.

MAINE STATE HIGHWAY COMMISSION

/s/ David H. Stevens
Chairman

/s/ Harold B. Emery

Approved:

August 6, 1954

CONSULTING ENGINEERS

Under the provisions of Section 702 of the Trust Indenture dated as of January 1, 1953, securing the Maine Turnpike Authority Revenue Refunding and Extension Bonds, the foregoing agreement is hereby approved.

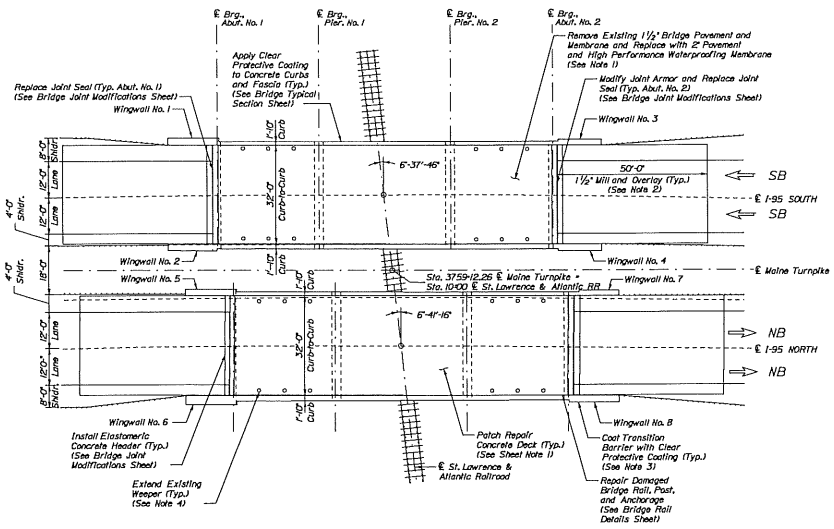
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
Consulting Engineers

By /s/ James P. Exum

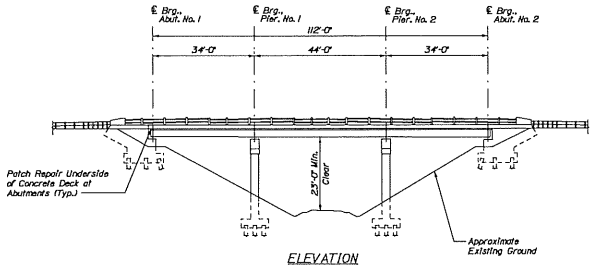
Dated:

8/6, 1954

Draft 98% Plans - Not For Construction



PLAN
Scale: 1/16" = 1'-0"



ELEVATION
(NB Shown, SB Similar)
Scale: 1/16" = 1'-0"

ESTIMATED CONCRETE REPAIR QUANTITIES (SF)

Full Depth Concrete Repairs *Assumes 2.5% of the Deck will require Full Depth Concrete Repairs	180
Overhead Surface Repairs *Includes 2 S.F. Additional Repair Quantity as a Contingency	40

NOTES

1. Bridge pavement shall be tapered from 2" to 1½" over 35 ft to match with the proposed joint header as directed by the Resident.
2. Mill and Pave 1½" HMA. Depth of mill shall be based on string-line measurements to achieve a smooth transition between existing and approach pavement.
3. Clear Protective Coating shall be paid for under Item 515.202 Clear Protective Coating for Concrete Surfaces.
4. Extending existing weepers shall be paid for under Item 502.70 Weep Drain Extensions. See Miscellaneous Repair Details Sheet.

SHEET NOTE

1. For Concrete Repair Notes and Details see Concrete Repair Typical Details Sheet.

Date: 3/13/2024

Filename: ...\MSTA\2024_MM_74.50_plan.dgn

Scale: 16 0 16 32
1/16" = 1'-0"

No.	Revision	By	Date

Designed by:

CONSULTANT PROJECT MANAGER: G. Edington

	By	Date		By	Date
Designed	MFS	3/13/24	Checked	MEB	3/13/24
Drawn	MJC	3/13/24	In Charge of	GME	3/13/24

VANASSE HANGEN BRUSTLIN, INC.
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MAINE TURNPIKE

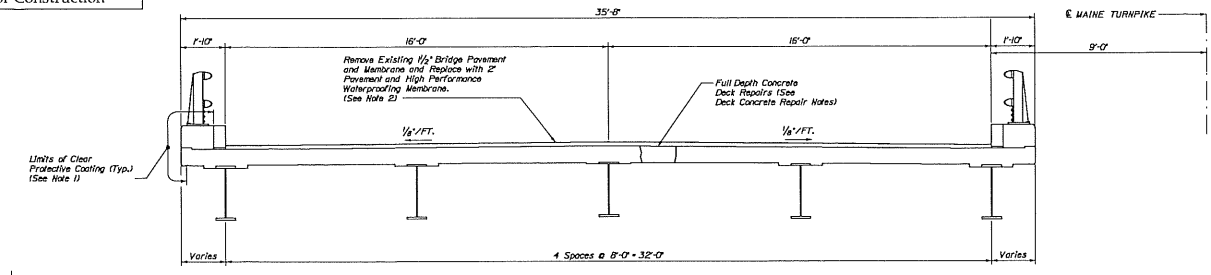
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ryan Barnes, PE, CPESC

MTA PROJECT NO. 2024.07
ST. LAWRENCE AND ATLANTIC RR OVERPASS
AT MM 74.50 IN AUBURN
BRIDGE PLAN AND ELEVATION

VHB: 55729.00 SHEET NUMBER: 24
CONTRACT: 2024.07 24 OF 38

Draft 98% Plans - Not For Construction



SUPERSTRUCTURE TYPICAL SECTION - SOUTHBOUND
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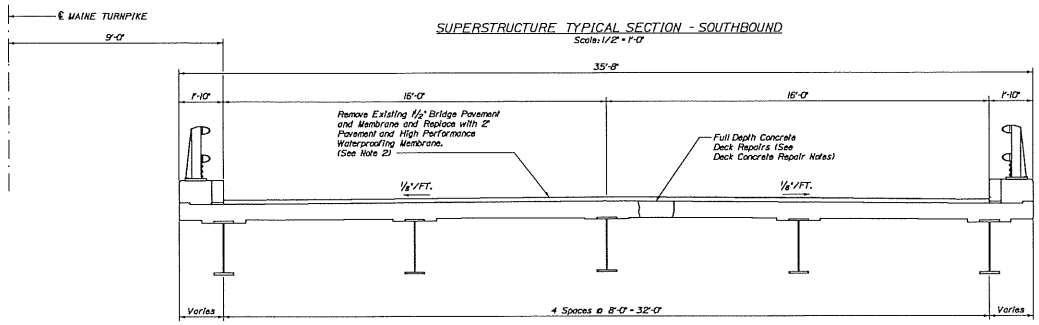

SUPERSTRUCTURE TYPICAL SECTION - NORTHBOUND
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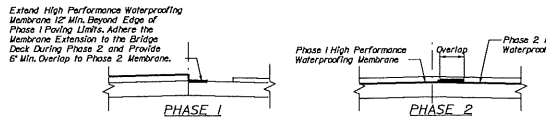

MEMBRANE OVERLAP DETAILS
Not to Scale

MEMBRANE OVERLAP NOTE

1. Details of the membrane overlap method shall be submitted to the Resident for approval.

NOTES

1. Clear Protective Coating Shall be Paid for Under Item 515.202 Clear Protective Coating for Concrete Surfaces.
2. Bridge Pavement Shall be Tapered from 2" to ½" Over 35 ft to Match with Proposed Joint Header as Directed by the Resident.

DECK CONCRETE REPAIR NOTES

1. Prior to the start of deck concrete repairs, the Resident and the Contractor shall sound all deck concrete using a chain drag or other method approved by the Resident to determine the required repair limits. All costs for sounding the existing deck concrete shall be incidental to Item 518.81, Full Depth Concrete Deck Repairs.
2. Sawcut 1" deep along all limits of removal.
3. Chip concrete to the depth specified in Supplemental Specification 518. If the removal limits change during the demolition process, the Contractor shall notify the Resident. The Resident and Contractor shall agree on the revised pay limits prior to the Contractor continuing the removal.
4. Prepare and patch repair deteriorated areas. Install new reinforcing steel, as required. See Supplemental Specification 518.

Scale: 2 0 2 4
1/2" = 1'-0"

No.	Revision	By	Date

Designed by: vhb

CONSULTANT PROJECT MANAGER: G. Edington

	By	Date		By	Date
Designed	MFS	3/13/24	Checked	MEB	3/13/24
Drawn	MJC	3/13/24	In Charge of	GME	3/13/24

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

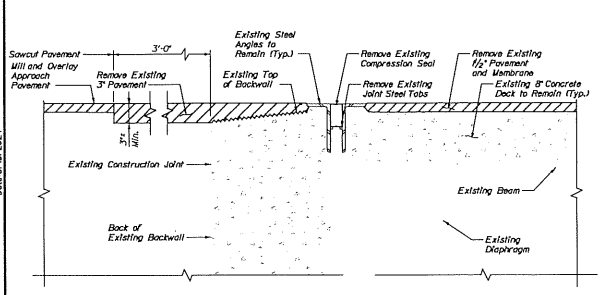
MTA PROJECT MANAGER: Ryan Barnes, PE, CPESC

MTA PROJECT NO. 2024.07
ST. LAWRENCE AND ATLANTIC RR
OVERPASS
AT MM 74.50 IN AUBURN
BRIDGE TYPICAL SECTION

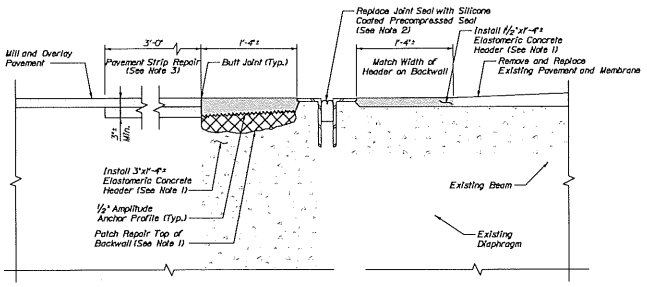
VHB: 55729.00 SHEET NUMBER: 25
CONTRACT: 2024.07 25 OF 38

Date: 3/13/2024
Filename: ...\MSTA\025_MM_74.50_typical.dgn

Draft 98% Plans - Not For Construction

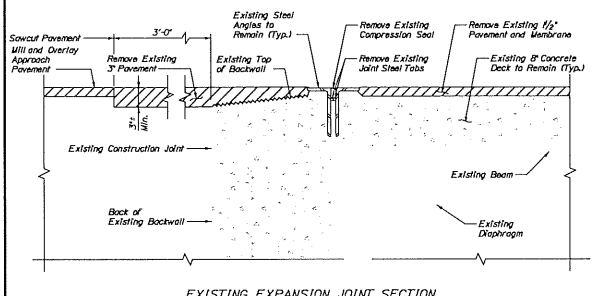


EXISTING EXPANSION JOINT SECTION



PROPOSED EXPANSION JOINT SECTION

SECTIONS AT EXPANSION JOINT AT ABUTMENT NO. 1
Not to Scale



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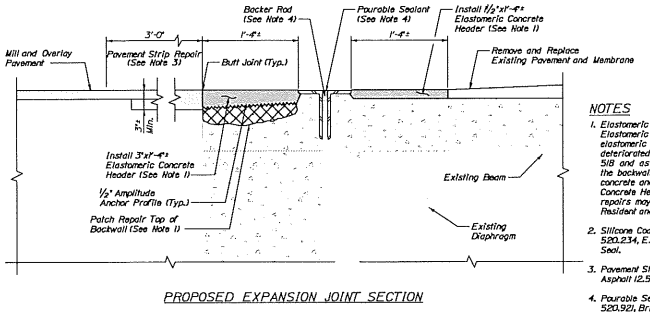

PROPOSED EXPANSION JOINT SECTION

SECTIONS AT EXPANSION JOINT AT ABUTMENT NO. 2
Not to Scale

NOTES

1. Elastomeric Concrete Header shall be paid under Item 518.863 Elastomeric Concrete Header Repair. Prior to placing the elastomeric concrete, the Contractor shall remove any areas of deteriorated concrete in accordance with Supplemental Specification 518 and as directed by the Resident. If repairs to the top of the backwall are needed, the Contractor shall repair with elastomeric concrete and repairs shall be paid under Item 518.864 Elastomeric Concrete Header Repair. If repair depth is greater than 3", the repairs may be done with AAA concrete at the direction of the Resident and paid under Item 518.10 Abutment Repairs.
2. Silicone Coated and Pre-Compressed Seal shall be paid under Item 520.234, Expansion Device - Silicone Coated and Pre-Compressed Seal.
3. Pavement Strip Repair shall be paid under Item 403.208 Hot Mix Asphalt 12.5mm Nominal Maximum Size.
4. Pourable Sealant and Backer Rod shall be paid under Item 520.921, Bridge Joint Modification (St. Lawrence & Atlantic).

Date: 3/13/2024

Filename: ...\025_MM_74.50_joint mod.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by: vhb

CONSULTANT PROJECT MANAGER: G. Edington

	By	Date		By	Date
Designed	MFS	3/13/24	Checked	MEB	3/13/24
Drawn	TSR	3/13/24	In Charge of	GME	3/13/24

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MTA PROJECT MANAGER: Ryan Barnes, PE, CPESC

MTA PROJECT NO. 2024.07
ST. LAWRENCE AND ATLANTIC RR
OVERPASS
AT MM 74.50 IN AUBURN
BRIDGE JOINT MODIFICATIONS

VHB: 55729.00 SHEET NUMBER: 25
CONTRACT: 2024.07 26 OF 38