MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

CONTRACT DOCUMENTS

CONTRACT 2019.11

NORTHERN BRIDGE REPAIRS, 6 LOCATIONS AND
EMERGENCY VEHICLE RAMPS AND
NEW GLOUCESTER TOLL PLAZA REHABILITATION
MILE 62.3 TO 95.6

NOTICE TO CONTRACTORS

PROPOSAL

CONTRACT AGREEMENT

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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 2019.11

NORTHERN BRIDGE REPAIRS, 6 LOCATIONS AND
EMERGENCY VEHICLE RAMPS AND
NEW GLOUCESTER TOLL PLAZA REHABILITATION
MILE 62.3 TO 95.6

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 March 21, 2019 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 or Bridge and Highway 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 general repairs and modifications to the Pleasant River Culvert at Mile 62.3, the Route 26 Underpass Bridge at Mile 64.3 and the Cole Brook Culvert at Mile 65.25 in Gray, the Foster Brook Culvert at Mile 72.9 in New Gloucester, the Webster Road Underpass Bridge at Mile 82.7 in Lewiston, and the Plains Road Underpass Bridge at Mile 95.6 in Litchfield. The work includes jacking a superstructure to increase the underclearance over the Maine Turnpike, pavement and membrane replacement, concrete deck, parapet, fascia, fascia overhang, pier, and abutment repairs, concrete wingwall, headwall, and culvert wall repairs, bridge joint repairs, protective coatings, approach work and paving, guardrail, bridge rails, maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

Thei work also consists of constructing Emergency Vehicle Ramps from Bennett Road to the Maine Turnpike at Mile 68.6 in the Town of New Gloucester, Maine. The work includes clearing, excavation, roadway earthwork and pavement, guardrail, fence, maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

The work also consists of rehabilitation of the New Gloucester Toll Plaza at Mile 67 in the Town of New Gloucester, Maine. The work includes concrete pavement slab removal and replacement and installation of sensors 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 One Hundred ($100.00) 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 March 5, 2019 at 10:00 a.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 2019.11

NORTHERN BRIDGE REPAIRS, 6 LOCATIONS AND EMERGENCY VEHICLE RAMPS AND NEW GLOUCESTER TOLL PLAZA REHABILITATION MILE 62.3 TO 95.6

MAINE TURNPIKE AUTHORITY

PROPOSAL

CONTRACT 2019.11

NORTHERN BRIDGE REPAIRS, 6 LOCATIONS AND
EMERGENCY VEHICLE RAMPS AND
NEW GLOUCESTER TOLL PLAZA REHABILITATION
MILE 62.3 TO 95.6

TO MAINE TURNPIKE AUTHORITY:

The work consists of general repairs and modifications to the Pleasant River Overpass Culvert at Mile 62.3, the Route 26 Underpass Bridge at Mile 64.3 and the Cole Brook Overpass Culvert at Mile 65.25 in Gray, the Foster Brook Overpass Culvert at Mile 72.9 in New Gloucester, the Webster Road Underpass Bridge at Mile 82.7 in Lewiston, and the Plains Road Underpass Bridge at Mile 95.6 in Litchfield. The work includes jacking a superstructure to increase the underclearance over the Maine Turnpike, pavement and membrane replacement, concrete deck, parapet, fascia, fascia overhang, pier, and abutment repairs, concrete wingwall, headwall, and culvert wall repairs, bridge joint repairs, protective coatings, approach work and paving, guardrail, bridge rails, maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

The work also consists of constructing Emergency Vehicle Ramps from Bennett Road to the Maine Turnpike at Mile 68.6 in the Town of New Gloucester, Maine. The work includes clearing, excavation, roadway earthwork and pavement, guardrail, fence, maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

The work also consists of rehabilitation of the New Gloucester Toll Plaza at Mile 67 in the Town of New Gloucester, Maine. The work includes concrete pavement slab removal and replacement and installation of sensors and all other work incidental thereto in accordance with the Plans and Specifications.

This Work will be done under a Contract known as Contract 2019.11 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. 2019.11
Northern Bridge Repairs, 6 Locations (Mile 64.3 to Mile 72.9)
Emergency Vehicle Ramps, Bennett Road (Mile 68.6)
New Gloucester Toll Plaza (Mile 67)

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
201.11	CLEARING	Acre	0.7				
202.12	REMOVING EXISTING STRUCTURAL CONCRETE	Cubic Yard	55				
202.127	REMOVING EXISTING BITUMINOUS PAVEMENT	Lump Sum	1				
202.1295	HYDRO-DEMOLITION	Square Yard	60				
202.191	REMOVING EXISTING DRAIN TROUGHS	Lump Sum	1				
202.202	REMOVING PAVEMENT SURFACE	Square Yard	287				
202.203	PAVEMENT BUTT JOINT	Square Yard	580				
203.20	COMMON EXCAVATION	Cubic Yard	770				
203.25	GRANULAR BORROW	Cubic Yard	102				
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	Cubic Yard	1,050				
304.14	AGGREGATE BASE COURSE - TYPE A	Cubic Yard	360				
403.208	HOT MIX ASPHALT - 12.5MM NOMINAL MAXIMUM SIZE	Ton	705				
403.211	HOT MIX ASPHALT - SHIM	Ton	15				
403.213	HOT MIX ASPHALT, 12.5MM NOMINAL MAXIMUM SIZE (BASE AND INTERMEDIATE COURSE)	Ton	830				
409.15	BITUMINOUS TACK COAT RS-1 OR RS-Ah - APPLIED	Gallon	417				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
419.30	SAWING BITUMINOUS PAVEMENT	Linear Foot	530				
470.08	BERM DROP OFF CORRECTION - GRINDINGS	Ton	110				
502.21	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	Cubic Yard	50				
502.262	STRUCTURAL CONCRETE ROADWAY SLAB WEARING SURFACE	Cubic Yard	5				
502.42	STRUCTURAL CONCRETE, ROADWAY AND SIDEWALK SLAB ON STEEL BRIDGE	Cubic Yard	13				
503.15	EPOXY-COATED REINFORCING STEEL, PLACING	Pound	17,215				
502.701	BRIDGE DRAIN GRATE MODIFCATIONS	Each	8				
503.14	EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED	Pound	17,215				
503.90	SYNTHETIC FIBER REINFORCEMENT	Pound	25				
507.0928	ALUMINUM BRIDGE RAILING - RAIL SECTION REPLACE	Linear Foot	20				
507.095	ALUMINUM BRIDGE RAILING - SPLICE MODIFICATION	Each	88				
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE	Lump Sum	1				
511.07	COFFERDAM	Each	4				
515.201	PIGMENTED PROTECTIVE COATING FOR CONCRETE SURFACES	Square Yard	1,355				
515.202	CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES	Square Yard	2,265				
515.23	EPOXY OVERLAY	Square Yard	12				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
518.10	ABUTMENT REPAIRS	Square Foot	815				
518.20	PIER REPAIRS	Square Foot	2,105				
518.40	EPOXY INJECTION CRACK REPAIR	Linear Foot	445				
518.71	REPAIR OF OVERHEAD SURFACES < 8 INCHES	Square Foot	75				
518.43	PARAPET JOINT REPAIRS	Linear Foot	1,450				
518.75	FASCIA AND OVERHANG REPAIRS	Square Foot	500				
518.80	PARTIAL DEPTH CONCRETE DECK REPAIRS	Square Foot	270				
518.81	FULL DEPTH CONCRETE DECK REPAIRS	Square Foot	15				
520.21	EXPANSION DEVICE - GLAND SEAL	Each	2				
520.2211	EXPANSION DEVICE MODIFICATIONS (WEBSTER ROAD)	Each	2				
520.2211	EXPANSION DEVICE MODIFICATIONS (PLAINS ROAD)	Each	2				
523.522	BEARING BOLSTERS & SPACER PLATES, FABRICATED AND DELIVERED	Lump Sum	1				
523.524	BEARING BOLSTERS & SPACER PLATES, INSTALLED	Lump Sum	1				
524.7211	JACKING EXISTING SUPERSTRUCTURE	Lump Sum	1				
526.306	TEMPORARY CONCRETE BARRIER, TYPE 1 - SUPPLIED BY THE AUTHORITY	Lump Sum	1				
527.341	WORK ZONE CRASH CUSHIONS - TL-3	Unit	14				
			CARRIED FORWARD:				

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
527.342	WORK ZONE CRASH CUSHIONS - TL-2	Unit	2				
603.169	15 INCH CULVERT PIPE OPTION III	Linear Foot	150				
603.91	PRESSURE TREATED WOOD DRAIN TROUGH	Linear Foot	80				
603.55	CONCRETE PIPE TIES	Group	18				
606.1301	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED)	Linear Foot	532				
606.1303	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, 15' RADIUS AND LESS)	Linear Foot	19				
606.1304	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, OVER 15' RADIUS)	Linear Foot	71				
606.1351	TERMINAL END - ANCHORED END - 31" W-BEAM GUARDRAIL	Each	4				
606.1305	31" W-BEAM GUARDRAIL - MID-WAY SPLICE FLARED TERMINAL (31" HEIGHT)	Each	1				
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	Each	9				
606.3631	GUARDRAIL - REMOVE AND STACK OR DISPOSE	Linear Foot	769				
607.09	WOVEN WIRE FENCE - METAL POSTS	Linear Foot	130				
606.1723	BRIDGE TRANSITION - TYPE III	Each	4				
607.17	CHAIN LINK FENCE - 6 FOOT	Linear Foot	895				
607.2326	AUTOMATIC ENTRY GATE SYSTEM	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:				
607.32	BRACING ASSEMBLY TYPE I - METAL POSTS	Each	8				
607.33	BRACING ASSEMBLY TYPE II - METAL POSTS	Each	2				
607.23	CHAIN LINK FENCE GATE	Each	6				
607.34	BRACING ASSEMBLY CHAIN LINK FENCE	Each	48				
609.191	CONCRETE CURB TYPE 2	Linear Foot	60				
610.08	PLAIN RIPRAP	Cubic Yard	26				
613.319	EROSION CONTROL BLANKET	Square Yard	1,390				
615.07	LOAM	Cubic Yard	400				
618.14	SEEDING METHOD NUMBER 2	Unit	33				
619.1201	MULCH - PLAN QUANTITY	Unit	28				
619.1301	BARK MULCH	Cubic Yard	105				
620.58	EROSION CONTROL GEOTEXTILE	Square Yard	34				
620.625	CELLULAR CONFINEMENT SYSTEM	Square Yard	350				
621.037	EVERGREEN TREE (5'-6') GROUP GP A	Each	10				
626.12	QUAZITE JUNCTION BOX	Each	4				
626.22	NON-METALLIC CONDUIT	Linear Foot	760				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
626.223	HORIZONTAL DIRECTIONAL DRILLED CONDUIT	Linear Foot	330				
627.712	WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	Linear Foot	4,510				
627.752	TEMPORARY WHITE OR YELLOW PAVEMENT AND CURB MARKING	Square Foot	36				
627.77	REMOVING PAVEMENT MARKINGS	Square Foot	720				
627.78	TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW	Linear Foot	10,550				
629.05	HAND LABOR - STRAIGHT TIME	Hour	60				
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	Hour	30				
631.172	TRUCK-LARGE (INCLUDING OPERATOR)	Hour	60				
631.32	CULVERT CLEANER (INCLUDING OPERATOR)	Hour	5				
631.36	FOREMAN	Hour	30				
639.19	FIELD OFFICE, TYPE B	Each	1				
643.72	TEMPORARY TRAFFIC SIGNAL	Lump Sum	1				
645.106	DEMOUNT REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	Each	10				
645.116	REINSTALL REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	Each	10				
645.271	REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN, TYPE I	Square Foot	45				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
652.30	FLASHING ARROW BOARD	Each	14				
652.312	TYPE III BARRICADE	Each	11				
652.331	DRUM	Lump Sum	1.0				
652.34	CONE	Each	15				
652.35	CONSTRUCTION SIGNS	Square Foot	9,614				
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	Lump Sum	1				
652.38	FLAGGERS	Hour	1,010				
652.41	PORTABLE-CHANGEABLE MESSAGE SIGN	Each	8				
652.45	TRUCK MOUNTED ATTENUATOR	Cal. Day	50				
652.451	AUTOMATED TRAILER MOUNTED SPEED LIMIT SIGN	Cal. Day	46				
652.46	TEMPORARY PORTABLE RUMBLE STRIPS	Unit	150	$ 150	00	$ 22,500	00
655.04	INSTALLATION OF SENSOR LOOPS	Lump Sum	1				
656.50	BALED HAY, IN PLACE	Each	240				
656.60	TEMPORARY BERMS	Linear Foot	230				
656.62	TEMPORARY SLOPE DRAINS	Linear Foot	230				
656.632	30 INCH TEMPORARY SILT FENCE	Linear Foot	3,330				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
BROUGHT FORWARD:							
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., 201___

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

Available at: http://www.maineturnpike.com/Projects-Planning/Construction-Contracts.aspx
(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 general repairs and modifications to the Pleasant River Overpass Culvert, the Route 26 Underpass Bridge and the Cole Brook Overpass Culvert in Gray, the Foster Brook Overpass Culvert in New Gloucester, the Webster Road Underpass Bridge in Lewiston, and the Plains Road Underpass Bridge in Litchfield. The work includes jacking a superstructure to increase the underclearance over the Maine Turnpike, pavement and membrane replacement, concrete deck, parapet, fascia, fascia overhang, pier, and abutment repairs, concrete wingwall, headwall, and culvert wall repairs, bridge joint repairs, protective coatings, approach work and paving, guardrail, bridge rails, maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

The work also consists of constructing Emergency Vehicle Ramps from Bennett Road to the Maine Turnpike in the Town of New Gloucester, Maine. The work includes clearing, excavation, roadway earthwork and pavement, guardrail, fence, maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

The work also consists of rehabilitation of the New Gloucester Toll Plaza at Mile 67 in the Town of New Gloucester, Maine. The work includes concrete pavement slab removal and replacement and installation of sensors 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 Authority – Contract 2019.11 – Northern Bridge Repairs, 6 Locations, Route 26 Underpass (Mile 64.3) Webster Road Underpass (Mile 82.7) Plains Road Underpass (Mile 95.6) Pleasant River Culvert (Mile 62.3) Cole Brook Culvert (Mile 65.25) Foster Brook Culvert (Mile 72.9) Emergency Vehicle Ramps Bennett Road Underpass (Mile 68.6) New Gloucester Toll Plaza Cash Lane 8 Rehabilitation (Mile 67)”. 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 2019 (Fourth of July)	Noon Wednesday to 6:00 a.m. the following Monday.

103.4 Notice of Award

The following sentence is added:

The Maine Turnpike Authority Board is scheduled to consider the Contract Award on March 28, 2019.

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 THE PERTAINING STATE FUNDED PREVAILING WAGE CONSTRUCTION SITE

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.

Title of Project --------MTA 2019.11 Northern Bridge Repairs-And

Location of Project --Gray/New Gloucester, Cumberland County

2019 Fair Minimum Wage Rates
Heavy & Bridge Cumberland County

Occupation Title	Minimum Wage	Minimum Benefit	Total	Occupation Title	Minimum Wage	Minimum Benefit	Total
Backhoe Loader Operator	$26.48	$4.96	$31.44	Laborer - Skilled	$19.50	$3.55	$23.05
Boilermaker	$24.00	$9.00	$33.00	Line Erector - Power/Cable	$31.00	$5.86	$36.86
Bulldozer Operator	$20.00	$3.71	$23.71	Loader Operator - Front-End	$22.85	$3.31	$26.16
Carpenter	$22.00	$4.42	$26.42	Mechanic- Maintenance	$20.50	$2.96	$23.46
Carpenter - Rough	$22.00	$6.12	$28.12	Mechanic- Refrigeration	$25.71	$5.09	$30.80
Communication Equip Installer	$23.00	$1.82	$24.82	Millwright	$25.20	$8.90	$34.10
Comm Transmission Erector	$19.80	$3.49	$23.29	Painter	$26.00	$1.08	$27.08
Concrete Mixing Plant Operator	$22.11	$4.92	$27.03	Paver Operator	$20.00	$0.00	$20.00
Crane Operator =>15 Tons)	$27.00	$5.14	$32.14	Pipe/Steam/Sprinkler Fitter	$26.40	$9.32	$35.72
Crusher Plant Operator	$17.38	$3.12	$20.50	Pipelayer	$23.00	$1.14	$24.14
Diver	$32.00	$6.91	$38.91	Plumber (Licensed)	$25.00	$4.26	$29.26
Driller - Well	$19.83	$2.66	$22.49	Plumber Helper/Trainee	$19.00	$3.10	$22.10
Earth Auger Operator	$25.84	$5.78	$31.62	Rigger	$22.50	$6.57	$29.07
Electrician - Licensed	$30.07	$7.90	$37.97	Roller Operator - Earth	$22.11	$2.77	$24.88
Electrician Helper/Cable Puller	$17.50	$5.46	$22.96	Roller Operator - Pavement	$19.00	$1.06	$20.06
Excavator Operator	$25.25	$4.27	$29.52	Sheet Metal Worker	$20.00	$4.11	$24.11
Fence Setter	$15.00	$2.00	$17.00	Stone Mason	$21.00	$0.95	$21.95
Flagger	$13.00	$0.00	$13.00	Truck Driver - Light	$17.00	$1.17	$18.17
Ironworker - Reinforcing	$28.71	$0.00	$28.71	Truck Driver - Medium	$19.00	$3.37	$22.37
Ironworker - Structural	$25.38	$3.79	$29.17	Truck Driver - Heavy	$19.00	$2.98	$21.98
Laborers (Helpers & Tenders)	$18.00	$2.26	$20.26	Truck Driver - Tractor Trailer	$21.13	$4.07	$25.20

The Laborer classifications include a wide range of work duties. Therefore, if any specific occupation to be employed on this project is not listed in this determination, call the Bureau of Labor Standards at the above number for further clarification.

Welders are classified in the trade to which the welding is incidental.

Apprentices - The minimum wage rate for registered apprentices are those set forth in the standards and policies of the Maine State Apprenticeship and Training Council for approved apprenticeship programs.

Posting of Schedule - Posting of this schedule is required in accordance with 26 MRS §1301 et. seq., by any contractor holding a State contract for construction valued at $50,000 or more and any subcontractors to such a contractor.

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.

Determination No: **HB-004-2019**

A true copy

Filing Date: **February 21, 2019**

Attest: Scott R. Cotnoir

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

Expiration Date: **12-31-2019**

BLS(Heavy & Bridge Cumberland)

THIS DOCUMENT MUST BE CLEARLY POSTED AT THE PERTAINING STATE FUNDED PREVAILING WAGE CONSTRUCTION SITE

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.

Title of Project --------MTA 2019.11 Northern Bridge Repairs-Cumberland

Location of Project --Gray/New Gloucester, Cumberland County

2019 Fair Minimum Wage Rates
Highway & Earth Cumberland County

Occupation Title	Minimum Wage	Minimum Benefit	Total	Occupation Title	Minimum Wage	Minimum Benefit	Total
Asphalt Raker	$16.00	$0.79	$16.79	Line Erector - Power/Cable	$31.00	$5.32	$36.32
Backhoe Loader Operator	$22.00	$5.08	$27.08	Loader Operator - Front-End	$20.00	$2.97	$22.97
Bulldozer Operator	$23.85	$4.32	$28.17	Mechanic- Maintenance	$20.50	$2.96	$23.46
Carpenter	$20.00	$2.64	$22.64	Millwright	$24.25	$8.80	$33.05
Carpenter - Rough	$19.00	$1.88	$20.88	Oil/Fuel Burner Serv. & Install	$23.00	$3.51	$26.51
Cement Mason/Finisher	$17.00	$1.34	$18.34	Painter	$17.50	$0.42	$17.92
Concrete Mixing Plant Operator	$22.11	$4.89	$27.00	Paver Operator	$21.00	$0.27	$21.27
Crane Operator =>15 Tons)	$26.80	$4.74	$31.54	Pipe-layer	$22.00	$1.49	$23.49
Crusher Plant Operator	$17.00	$3.86	$20.86	Re-claimer Operator	$21.58	$1.80	$23.38
Driller - Well	$19.83	$2.66	$22.49	Roller Operator - Earth	$22.11	$3.02	$25.13
Electrician - Licensed	$22.55	$14.26	$36.81	Roller Operator - Pavement	$19.00	$1.38	$20.38
Electrician Helper/Cable Puller	$17.00	$1.34	$18.34	Screed/Wheelman	$19.00	$0.94	$19.94
Excavator Operator	$21.00	$3.11	$24.11	Sider	$16.75	$1.38	$18.13
Fence Setter	$17.50	$2.94	$20.44	Stone Mason	$21.00	$0.95	$21.95
Flagger	$13.00	$0.00	$13.00	Truck Driver - Light	$17.00	$1.15	$18.15
Grader/Scraper Operator	$18.00	$1.62	$19.62	Truck Driver - Medium	$19.00	$3.13	$22.13
Highway Worker/Guardrail Install	$17.50	$1.76	$19.26	Truck Driver - Heavy	$17.50	$1.41	$18.91
Ironworker - Reinforcing	$22.11	$2.79	$24.90	Truck Driver - Tractor Trailer	$18.50	$3.20	$21.70
Laborers (Incl. Helpers & Tenders)	$15.00	$0.84	$15.84	Truck Driver - Mixer (Cement)	$17.19	$1.07	$18.26
Laborer - Skilled	$17.85	$1.50	$19.35				

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The Laborer classifications include a wide range of work duties. Therefore, if any specific occupation to be employed on this project is not listed in this determination, call the Bureau of Labor Standards at the above number for further clarification.

Welders are classified in the trade to which the welding is incidental.

Apprentices - The minimum wage rate for registered apprentices are those set forth in the standards and policies of the Maine State Apprenticeship and Training Council for approved apprenticeship programs.

Posting of Schedule - Posting of this schedule is required in accordance with 26 MRSA §1301 et. seq., by any contractor holding a State contract for construction valued at $50,000 or more and any subcontractors to such a contractor.

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.

Determination No: **HI-061-2019**

A true copy

Filing Date: **February 21, 2019**

Attest: Scott R. Cotnoir

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

Expiration Date: **12-31-2019**

BLS(Highway & Earth Cumberland)

THIS DOCUMENT MUST BE CLEARLY POSTED AT THE PERTAINING STATE FUNDED PREVAILING WAGE CONSTRUCTION SITE

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.

Title of Project --------MTA 2019.11 Northern Bridge Repairs-And

Location of Project --Lewiston, Androscoggin County

2019 Fair Minimum Wage Rates
Heavy & Bridge Androscoggin County

Occupation Title	Minimum Wage	Minimum Benefit	Total	Occupation Title	Minimum Wage	Minimum Benefit	Total
Backhoe Loader Operator	$26.48	$4.96	$31.44	Laborer - Skilled	$18.15	$5.83	$23.98
Boilermaker	$24.00	$9.00	$33.00	Line Erector - Power/Cable	$31.00	$5.44	$36.44
Bulldozer Operator	$20.00	$3.71	$23.71	Loader Operator - Front-End	$21.35	$3.18	$24.53
Carpenter	$21.00	$4.86	$25.86	Mechanic- Maintenance	$20.50	$2.96	$23.46
Carpenter - Rough	$22.00	$6.53	$28.53	Mechanic- Refrigeration	$25.71	$5.09	$30.80
Communication Equip Installer	$23.00	$1.61	$24.61	Millwright	$25.30	$10.50	$35.80
Comm Transmission Erector	$22.00	$3.62	$25.62	Painter	$18.00	$3.58	$21.58
Concrete Mixing Plant Operator	$22.11	$4.92	$27.03	Paver Operator	$20.00	$0.00	$20.00
Crane Operator =>15 Tons)	$27.00	$6.59	$33.59	Pipe/Steam/Sprinkler Fitter	$25.56	$9.60	$35.16
Crusher Plant Operator	$17.38	$3.12	$20.50	Pipelayer	$23.00	$1.14	$24.14
Diver	$32.00	$6.91	$38.91	Plumber (Licensed)	$25.00	$4.26	$29.26
Driller - Well	$19.83	$2.66	$22.49	Plumber Helper/Trainee	$19.00	$3.10	$22.10
Earth Auger Operator	$25.84	$5.78	$31.62	Rigger	$22.50	$6.57	$29.07
Electrician - Licensed	$30.07	$13.30	$43.37	Roller Operator - Earth	$22.11	$2.77	$24.88
Electrician Helper/Cable Puller	$17.50	$5.46	$22.96	Roller Operator - Pavement	$19.00	$1.06	$20.06
Excavator Operator	$24.25	$3.47	$27.72	Sheet Metal Worker	$20.00	$4.11	$24.11
Fence Setter	$15.00	$2.00	$17.00	Stone Mason	$21.00	$0.95	$21.95
Flagger	$13.00	$0.00	$13.00	Truck Driver - Light	$17.00	$1.17	$18.17
Ironworker - Reinforcing	$28.71	$0.00	$28.71	Truck Driver - Medium	$19.00	$3.37	$22.37
Ironworker - Structural	$23.00	$1.93	$24.93	Truck Driver - Heavy	$19.00	$2.89	$21.89
Laborers (Helpers & Tenders)	$17.00	$1.45	$18.45	Truck Driver - Tractor Trailer	$21.13	$4.07	$25.20

The Laborer classifications include a wide range of work duties. Therefore, if any specific occupation to be employed on this project is not listed in this determination, call the Bureau of Labor Standards at the above number for further clarification.

Welders are classified in the trade to which the welding is incidental.

Apprentices - The minimum wage rate for registered apprentices are those set forth in the standards and policies of the Maine State Apprenticeship and Training Council for approved apprenticeship programs.

Posting of Schedule - Posting of this schedule is required in accordance with 26 MRS §1301 et. seq., by any contractor holding a State contract for construction valued at $50,000 or more and any subcontractors to such a contractor.

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.

Determination No: **HB-003-2019**

A true copy

Filing Date: **February 21, 2019**

Attest: Scott R. Cotnoir

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

Expiration Date: **12-31-2019**

BLS(Heavy & Bridge Androscoggin)

THIS DOCUMENT MUST BE CLEARLY POSTED AT THE PERTAINING STATE FUNDED PREVAILING WAGE CONSTRUCTION SITE

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.

Title of Project --------MTA 2019.11 Northern Bridge Repairs-And

Location of Project --Lewiston, Androscoggin County

2019 Fair Minimum Wage Rates
Highway & Earth Androscoggin County

Occupation Title	Minimum Wage	Minimum Benefit	Total	Occupation Title	Minimum Wage	Minimum Benefit	Total
Asphalt Raker	$15.75	$0.90	$16.65	Line Erector - Power/Cable	$31.00	$5.32	$36.32
Backhoe Loader Operator	$22.00	$5.08	$27.08	Loader Operator - Front-End	$19.00	$2.94	$21.94
Bulldozer Operator	$19.00	$4.34	$23.34	Mechanic- Maintenance	$20.50	$2.96	$23.46
Carpenter	$20.00	$2.64	$22.64	Millwright	$24.25	$8.80	$33.05
Carpenter - Rough	$19.00	$1.88	$20.88	Oil/Fuel Burner Serv &Installer	$23.00	$3.51	$26.51
Cement Mason/Finisher	$17.00	$1.34	$18.34	Painter	$17.50	$0.42	$17.92
Concrete Mixing Plant Operator	$22.11	$4.89	$27.00	Paver Operator	$21.00	$0.35	$21.35
Crane Operator =>15 Tons)	$26.80	$4.74	$31.54	Pipelayer	$22.00	$1.49	$23.49
Crusher Plant Operator	$17.00	$3.86	$20.86	Reclaimer Operator	$21.58	$1.80	$23.38
Driller - Well	$19.83	$2.66	$22.49	Roller Operator - Earth	$22.11	$3.02	$25.13
Electrician - Licensed	$22.55	$14.26	$36.81	Roller Operator - Pavement	$18.50	$1.93	$20.43
Electrician Helper/Cable Puller	$17.00	$1.34	$18.34	Screed/Wheelman	$19.25	$1.00	$20.25
Excavator Operator	$21.00	$3.09	$24.09	Sider	$16.75	$1.38	$18.13
Fence Setter	$17.50	$2.94	$20.44	Stone Mason	$21.00	$0.95	$21.95
Flagger	$13.00	$0.00	$13.00	Truck Driver - Light	$17.00	$3.38	$20.38
Grader/Scraper Operator	$18.00	$1.62	$19.62	Truck Driver - Medium	$19.00	$1.85	$20.85
Highway Worker/Guardrail Install	$17.50	$1.76	$19.26	Truck Driver - Heavy	$17.00	$1.49	$18.49
Ironworker - Reinforcing	$22.11	$2.79	$24.90	Truck Driver - Tractor Trailer	$18.00	$2.94	$20.94
Laborers (Incl.Helpers & Tenders)	$15.00	$0.86	$15.86	Truck Driver - Mixer (Cement)	$17.19	$1.07	$18.26
Laborer - Skilled	$17.75	$1.59	$19.34				

The Laborer classifications include a wide range of work duties. Therefore, if any specific occupation to be employed on this project is not listed in this determination, call the Bureau of Labor Standards at the above number for further clarification.

Welders are classified in the trade to which the welding is incidental.

Apprentices - The minimum wage rate for registered apprentices are those set forth in the standards and policies of the Maine State Apprenticeship and Training Council for approved apprenticeship programs.

Posting of Schedule - Posting of this schedule is required in accordance with 26 MRSA §1301 et. seq., by any contractor holding a State contract for construction valued at $50,000 or more and any subcontractors to such a contractor.

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.

Determination No: **HI-060-2019**

A true copy

Filing Date: **February 21, 2019**

Attest: Scott R. Cotnoir

Scott R. Cotnoir
Wage & Hour Director

Expiration Date: **12-31-2019**

BLS(Highway & Earth Androscoggin)

THIS DOCUMENT MUST BE CLEARLY POSTED AT THE PERTAINING STATE FUNDED PREVAILING WAGE CONSTRUCTION SITE

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.

Title of Project --------MTA 2019.11 Northern Bridge Repairs-Ken

Location of Project --Litchfield, Kennebec County

2019 Fair Minimum Wage Rates
Heavy & Bridge Kennebec County

Occupation Title	Minimum Wage	Minimum Benefit	Total	Occupation Title	Minimum Wage	Minimum Benefit	Total
Backhoe Loader Operator	$26.48	$4.96	$31.44	Laborer - Skilled	$19.50	$5.72	$25.22
Boilermaker	$24.00	$9.00	$33.00	Line Erector - Power/Cable	$31.00	$5.49	$36.49
Bulldozer Operator	$20.00	$3.71	$23.71	Loader Operator - Front-End	$21.50	$3.17	$24.67
Carpenter	$23.50	$4.16	$27.66	Mechanic- Maintenance	$22.25	$3.97	$26.22
Carpenter - Rough	$22.00	$7.20	$29.20	Mechanic- Refrigeration	$25.71	$5.09	$30.80
Communication Equip Installer	$23.00	$1.63	$24.63	Millwright	$25.10	$9.55	$34.65
Comm Transmission Erector	$20.13	$3.83	$23.96	Painter	$19.50	$3.58	$23.08
Concrete Mixing Plant Operator	$22.11	$4.92	$27.03	Paver Operator	$20.00	$0.00	$20.00
Crane Operator =>15 Tons)	$27.00	$6.79	$33.79	Pipe/Steam/Sprinkler Fitter	$27.00	$5.61	$32.61
Crusher Plant Operator	$17.38	$3.12	$20.50	Pipelayer	$23.00	$1.14	$24.14
Diver	$32.00	$6.91	$38.91	Plumber (Licensed)	$25.00	$4.26	$29.26
Driller - Well	$19.83	$2.66	$22.49	Plumber Helper/Trainee	$19.00	$3.10	$22.10
Earth Auger Operator	$25.84	$5.78	$31.62	Rigger	$22.50	$6.57	$29.07
Electrician - Licensed	$29.25	$9.44	$38.69	Roller Operator - Earth	$22.11	$2.77	$24.88
Electrician Helper/Cable Puller	$18.00	$3.38	$21.38	Roller Operator - Pavement	$19.00	$1.06	$20.06
Excavator Operator	$24.00	$2.91	$26.91	Sheet Metal Worker	$20.00	$4.11	$24.11
Fence Setter	$15.00	$2.00	$17.00	Stone Mason	$21.00	$0.95	$21.95
Flagger	$13.00	$0.00	$13.00	Truck Driver - Light	$17.00	$1.17	$18.17
Ironworker - Reinforcing	$28.71	$0.00	$28.71	Truck Driver - Medium	$19.00	$3.37	$22.37
Ironworker - Structural	$20.50	$2.50	$23.00	Truck Driver - Heavy	$18.50	$2.06	$20.56
Laborers (Helpers & Tenders)	$17.00	$1.38	$18.38	Truck Driver - Tractor Trailer	$21.13	$4.07	$25.20

The Laborer classifications include a wide range of work duties. Therefore, if any specific occupation to be employed on this project is not listed in this determination, call the Bureau of Labor Standards at the above number for further clarification.

Welders are classified in the trade to which the welding is incidental.

Apprentices - The minimum wage rate for registered apprentices are those set forth in the standards and policies of the Maine State Apprenticeship and Training Council for approved apprenticeship programs.

Posting of Schedule - Posting of this schedule is required in accordance with 26 MRS §1301 et. seq., by any contractor holding a State contract for construction valued at $50,000 or more and any subcontractors to such a contractor.

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.

Determination No: **HB-005-2019**

A true copy

Filing Date: **February 21, 2019**

Attest: Scott R. Cotnoir

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

Expiration Date: **12-31-2019**

BLS(Heavy & Bridge Kennebec)

THIS DOCUMENT MUST BE CLEARLY POSTED AT THE PERTAINING STATE FUNDED PREVAILING WAGE CONSTRUCTION SITE

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.

Title of Project --------MTA 2019.11 Northern Bridge Repairs-Ken

Location of Project --Litchfield, Kennebec County

2019 Fair Minimum Wage Rates
Highway & Earth Kennebec County

Occupation Title	Minimum Wage	Minimum Benefit	Total	Occupation Title	Minimum Wage	Minimum Benefit	Total
Asphalt Raker	$15.88	$1.04	$16.92	Line Erector - Power/Cable	$31.00	$5.32	$36.32
Backhoe Loader Operator	$22.00	$5.08	$27.08	Loader Operator - Front-End	$18.88	$2.97	$21.85
Bulldozer Operator	$20.33	$4.74	$25.07	Mechanic- Maintenance	$20.50	$2.96	$23.46
Carpenter	$19.75	$3.18	$22.93	Millwright	$24.25	$8.80	$33.05
Carpenter - Rough	$19.00	$1.88	$20.88	Oil/Fuel Burner Serv.& Install	$23.00	$3.51	$26.51
Cement Mason/Finisher	$17.00	$1.34	$18.34	Painter	$17.50	$0.42	$17.92
Concrete Mixing Plant Operator	$22.11	$4.89	$27.00	Paver Operator	$20.25	$0.89	$21.14
Crane Operator =>15 Tons)	$26.80	$4.74	$31.54	Pipe-layer	$22.00	$1.49	$23.49
Crusher Plant Operator	$17.00	$3.86	$20.86	Re-claimer Operator	$21.58	$1.80	$23.38
Driller - Well	$19.83	$2.66	$22.49	Roller Operator - Earth	$21.28	$1.27	$22.55
Electrician - Licensed	$21.78	$14.26	$36.04	Roller Operator - Pavement	$18.53	$2.63	$21.16
Electrician Helper/Cable Puller	$17.00	$1.34	$18.34	Screed/Wheelman	$19.50	$2.87	$22.37
Excavator Operator	$21.00	$3.10	$24.10	Sider	$16.75	$1.38	$18.13
Fence Setter	$17.13	$1.50	$18.63	Stone Mason	$21.00	$0.95	$21.95
Flagger	$13.00	$0.00	$13.00	Truck Driver - Light	$17.00	$3.38	$20.38
Grader/Scraper Operator	$18.00	$1.62	$19.62	Truck Driver - Medium	$19.00	$3.36	$22.36
Highway Worker/Guardrail	$17.50	$1.76	$19.26	Truck Driver - Heavy	$17.00	$1.53	$18.53
Ironworker - Reinforcing	$22.11	$2.79	$24.90	Truck Driver - Tractor Trailer	$18.00	$3.51	$21.51
Laborers (Incl. Helpers & Tenders)	$15.00	$0.88	$15.88	Truck Driver - Mixer (Cement)	$17.19	$1.07	$18.26
Laborer - Skilled	$18.00	$1.61	$19.61				

$2

The Laborer classifications include a wide range of work duties. Therefore, if any specific occupation to be employed on this project is not listed in this determination, call the Bureau of Labor Standards at the above number for further clarification.

Welders are classified in the trade to which the welding is incidental.

Apprentices - The minimum wage rate for registered apprentices are those set forth in the standards and policies of the Maine State Apprenticeship and Training Council for approved apprenticeship programs.

Posting of Schedule - Posting of this schedule is required in accordance with 26 MRSA §1301 et. seq., by any contractor holding a State contract for construction valued at $50,000 or more and any subcontractors to such a contractor.

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.

Determination No: **HI-062-2019**

A true copy

Filing Date: **February 5, 2019**

Attest: Scott R. Cotnoir

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

Expiration Date: **12-31-2019**

BLS(Highway & Earth Kennebec)

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. A Pre-Utility Meeting is required prior to the contractor starting work on Route 26 or the Bennett Road EVR portions of the project.

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 requirements. 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:

Route 26 (Mile 64.3)

AERIAL UTILITIES

COMMUNICATION:

OTELCO
56 Campus Drive
New Gloucester, ME 04260
Tel: 207-688-8284
Cell: 207-590-5111
Jim Knight

CABLE TELEVISION:

Spectrum
118 Johnson Road
Portland, ME 04102
Tel: 207-253-2226
Cell: 207-318-0213
Dennis Heffernan

ELECTRIC:

Central Maine Power Company (Pole Owner)
740 Main St.
Lewiston, ME 04210
Tel: 207-629-4644
Cell: 207-242-5916
Ted Getchell

CENTRAL MAINE POWER (CMP)

The Contractor shall give CMP 10 working days' notice prior to any construction near their poles. CMP will hold their poles for a maximum of 2 days during construction operations near their poles on Route 26.

Bennett Road EVR (Mile 68.6)

AERIAL UTILITIES

COMMUNICATION:

OTELCO (Pole Owner)
56 Campus Drive
New Gloucester, ME 04260
Tel: 207-688-8284
Cell: 207-590-5111
Jim Knight

CABLE TELEVISION:

Spectrum
118 Johnson Road
Portland, ME 04102
Tel: 207-253-2226
Cell: 207-318-0213
Dennis Heffernan

ELECTRIC:

Central Maine Power Company
740 Main St.
Lewiston, ME 04210
Tel: 207-629-4644
Cell: 207-242-5916
Ted Getchell

OTELCO

The Contractor shall give OTELCO 10 working days' notice prior to any construction near their poles. OTELCO will hold their poles for a maximum of 2 days during construction operations near their poles on Bennett Road. OTELCO will require 2 days to reset their existing guy wires as a result of the new embankment construction. The Contractor will coordinate this work with OTELCO.

UNDERGROUND UTILITIES

COMMUNICATION:

OTELCO
56 Campus Drive
New Gloucester, ME 04260
Tel: 207-688-8284
Cell: 207-590-5111
Jim Knight

104.4.7 Cooperation With Other Contractors

This Subsection is amended by the addition of the following:

Adjacent contracts currently scheduled for the 2019 construction season include:

MTA Contract 2019.04 – West Gardiner Open Road Tolling Mile 100.2

MTA Contract 2018.05 – Exit 103 I-295 SB Underpass Bridge Rehabilitation Mile 103.0

MTA Contract 2018.07 – Androscoggin Bridges Substructure Repairs Mile 78.9

MTA Contract 2018.17 – Auburn Exit 75 Toll System Upgrades Mile 75.3

MTA Contract 2018.15 – Bridge Rehab Cobbosseecontee Strm. Overpass Mile 99.2

MaineDOT Win 023376.00 – Light Capital Paving in Litchfield

The following Subsection is added:

105.2.4.2 Lead Paint

The Contractor shall note that the existing underpass bridge structures 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.

105.8.2 Permit Requirements

The Project is being permitted under Section 404 of the Clean Water Act, through the US Army Corps of Engineers Programmatic General Permit, Category 1. The Project is subject to the General Conditions of the Category 1 Authorization dated October 13, 2015 through October 13, 2020. Copies of the Self-Verification Notification Forms are attached in the Appendix.

The Project is subject to the requirements of the Maine Pollutant Discharge Elimination System (MPDES) General Permit for Stormwater Discharge from Construction Activity, as promulgated by the US Environmental Protection Agency (US EPA) and Administrated by the Maine Department of Environmental Protection (DEP).

A Notice of Intent (NOI), accompanied by a preliminary Limit of Disturbance (LOD) plan was submitted by the Authority to the DEP for coverage under the Maine Construction General Permit (MCGP). Compliance with the erosion and sedimentation control requirements outlined in this Contract is required by the Contractor.

The Contractor shall prepare a LOD plan 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, which were submitted as part of the NOI, has been estimated to be Bennett 1.29 acres for Bennet Road EVR, 0.42 acres for Route 26, 0.10 acres for Webster Road, 0.14 acres for Plains Road, 0.05 acres for Pleasant River Culvert, 0.06 acres for Cole Brook Culvert & 0.07 acres for Foster Brook Culvert for a total of 2.13 acres LOD.

At any time during the Contract, if 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 exceeds the estimated LOD noted above, by 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 the estimated LOD noted above, by over one acre, the Resident shall first approve of the plan and then possibly resubmit the NOI for MaineDEP approval. The approval may take a minimum of 21 working days.

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

The Contractor shall comply with the conditions outlined in the Army Corps General Permit, Maine Department of Environmental Protection NRPA Permit by Rule, the US Army Corps of Engineers General Permit, and 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.

107.1 Contract Time and Contract Completion Date

This Subsection is amended by the addition of the following:

All work shall be completed on or before June 13, 2020. The construction of Contract 2019.11, Northern Bridge Repairs, 6 Locations, and Bennett Road Emergency Vehicle Ramps shall be substantially complete by November 8, 2019.

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 and culvert repairs are completed, including jacking of superstructure, replacement of bridge membranes and pavement, concrete repairs, approach slab, protective coatings, and guardrail installations/attachments.
- All roadway and emergency vehicle ramp work is completed, including surface pavement, shoulder widening, gates, removal of all temporary traffic control so roadway and ramp available for normal flow of traffic.

- All roadways are fully opened to traffic including shoulders, guardrail, surface pavement and all construction signage and traffic control devices removed from the construction sites and all detour routes.
- All disturbed slopes are loamed, seeded and mulched, temporary erosion control mix and/or blanket installed where necessary.

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 Contractor will be allowed to close the Route 26 Underpass Bridge to traffic for a maximum period of 14 calendar days to jack the bridge to its final position and place the bridge joints and concrete. During this closure period, the Contractor will be allowed to work Sundays but not Holidays. The following criteria must also be met:

- This closure cannot take place before the end of the 2018-2019 school year in Gray.
- This closure must be complete before the beginning of the 2019-2020 school year in Gray.
- Any concrete placed during the closure period must cure for a full 5 days and attain a compressive strength of 3000 psi before opening the bridge.
- All Phase I work must be complete except for final paving.

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 to at least one lane of alternating traffic.

All in-stream work at the culverts to be completed between July 15 and October 1, 2019.

The following activities must be completed by the time specified. Supplemental liquidated damages (SLD) of One Thousand Dollars ($1000) per calendar day per activity shall be assessed for each calendar day, or fraction thereof, that any of the below noted activities remain incomplete. The assessed SLD shall continue until the activities are complete:

- The Contractor will be allowed to close the Webster Road Underpass Bridge for a maximum of twenty-one (21) calendar days.
- The Contractor will be allowed to close the Plains Road Underpass Bridge for a maximum of twenty-one (21) calendar days. All top-side work must be complete by July 1, 2019.

107.4.7 No Excuse Incentive/Disincentive (I/D)

The Contractor will be assessed an incentive of Two Thousand Dollars ($2,000) per calendar day for every full calendar day the Route 26 Underpass Bridge is open to traffic sooner than the allowable closure period, up to a maximum of four (4) days. The Contractor shall be assessed a disincentive of Two Thousand Dollars ($2,000) per calendar day for every calendar day, or fraction thereof, beyond the allowable closure period. Additionally, the Contractor will be assessed a disincentive of Two Thousand Dollars ($2,000) per calendar day, or fraction thereof,

that the closure period extends into the school years. The disincentive assessment shall continue until the Route 26 Underpass Bridge is open to traffic.

For purposes of calculation and the determination of entitlement to the "No Excuse I/D" stated above, the "No Excuse I/D" closure period will not be adjusted for any reason, cause or circumstance whatsoever, regardless of fault.

eSPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Existing Drain Troughs)

202.01 Description

The following paragraph is added:

The work shall consist of removing and disposing of the exposed portions of the existing drain troughs attached to, or in front of, the abutment bridge structures.

The filling and shaping of the void left by the removal of the existing drain troughs shall be filled with Granular Borrow and considered incidental to this item.

202.025 General

All drain trough components removed 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.

202.07 Method of Measurement

The following paragraph is added:

Removing Existing Drain Troughs shall be measured by the lump sum.

202.08 Basis of Payment

The following sentences are added:

Removing Existing Drain Troughs shall be paid for at the Contract lump sum price which includes all removals, disposal, granular borrow, equipment and labor necessary to satisfactorily complete the work.

Payment will be made under:

Pay Item	Pay Unit

202.191	Removing Existing Drain Troughs	Lump Sum

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Existing Structural Concrete)
(Removing of Existing Bituminous Pavement)

202.01 Description

This section is amended by the addition of the following:

No demolition will be permitted until the approved method of shielding is completely installed. Traffic will not be permitted to use the travelway directly under the demolition work; a lane closure will be required.

All materials removed as part of this work shall become the property of the Contractor unless otherwise noted. The Contractor shall provide the Resident with an affidavit stating the final location of all disposed material and that the material was disposed of in accordance with the Maine Department of Environmental Protection Solid Waste Regulations.

202.031 Removing Existing Bituminous Pavement and Concrete Wearing Surface from Bridges and Scarifying the Top of Deck.

The first paragraph is amended by the addition of the following:

The use of milling equipment to remove existing bituminous pavement is not allowed.

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Hydro-Demolition)

Description - This work shall consist of removing and disposing of concrete using hydro-demolition to the depth and locations shown on the plans in accordance with these specifications. The work also includes surface milling, water control, shielding, removal and disposal of concrete and debris, any necessary trim work, cleaning and all incidentals needed to prepare the area for new concrete.

Surface Preparation - The Contractor shall hydro-demo the area a maximum of one and a half (1-1/2) inches in depth with a hydro-demolition machine capable of accurately and automatically establishing the depth required. The final removal of the remaining ½ inch of concrete shall be completed with either shot blast machine or diamond grinding machine to an International Concrete Repair Institute (ICRI) Concrete Surface Profile (CSP) of not greater than CSP 6. If surface demolition snags or damages any reinforcing GFRP, the operation shall be stopped immediately and the depth of removal adjusted accordingly. Any damaged or dislodged reinforcing GFRP shall be repaired or replaced at the Contractor's expense.

All construction debris or residual materials from the hydro-demolition process shall be completely removed from the roadway slab prior to the commencement of the final surface preparation.

Equipment - The hydro-demolition equipment shall consist of a water supply system, a high-pressure water pumping system, a demolition type unit, and a water and debris containment system. The demolition unit shall be a robotic, computerized, self-propelled unit utilizing a high-pressure water jet stream that is capable of removing concrete to the desired depths specified, including the selective removal of all concrete.

The water and debris containment system shall be capable of capturing wet and dry debris and standing water. All dust shall be contained.

All water used in conjunction with the hydro-demolition process shall be potable water, except that stream, river or lake water may be used if properly filtered and approved by the Resident prior to use.

Only individuals who have experience on jobs of similar size and type over the past three years shall operate the hydro-demolition equipment.

The demolition unit must provide shielding to ensure containment of all dislodged concrete within the removal area. Flying debris on or adjacent to the work site will not be allowed.

Construction Requirements - Prior to the beginning of hydro-demolition, the Contractor must submit a plan to the Resident for the control and filtering of all water discharged by the operation. All drains, joints, and other locations where discharge water could exit the roadway must be

blocked, in order to direct runoff to a central collection and filtering location, as designed by the Contractor. The Contractor shall be responsible for compliance with all environmental laws and regulations regarding the discharge of runoff water into the environment. Specific details shall be provided by the Contractor detailing the method of water and debris collection, filtering, treatment, and legal disposal.

The Contractor is responsible for the disposal of all concrete and debris, and securing any applicable permits which may be required.

The robotic hydro-demolition equipment shall be calibrated on a representative sample of sound roadway concrete, as directed by the Resident. The calibration must accomplish the desired surface profile, and cutting depth as indicated on the contract plans. Water pressure shall be kept to the minimum needed to attain these results. Extreme care shall be taken to not remove more than the depth desired. The operating parameters shall be recorded as follows:

Calibration Location Water Pressure Nozzle Size and Type Nozzle Travel Speed

All resets of the hydro-demolition equipment shall be calibrated as above.

Clean-up and removal of slurry and rubble from the hydro-demolition shall follow as closely as practicable behind the hydro-demolition process. The cleaned surface shall be free of all debris, loose material, slurry, and cement paste, including the GFRP reinforcing to remain.

The Contractor shall take steps to prevent damage to existing GFRP reinforcing and concrete roadway slab to remain. All equipment shall be operated in a manner that does not damage the slab, GFRP reinforcing or Toll Plaza components. Any damage caused by the Contractor's equipment or negligence shall be repaired at the Contractor's expense. Contamination of the roadway slab by construction equipment or any other source shall be prevented.

Method of Measurement - Hydro-demolition, will be measured for payment by the square yard with no deductions made for areas occupied by loop stub ups.

Basis of Payment - The accepted quantity of concrete roadway slab removal by hydro-demolition will be paid for at the contract unit price per square yard for the areas shown on the plans and as directed by the engineer. This price will be considered full compensation for removing and disposing of concrete and debris resulting from this work, including, but not limited to, surface milling, water retention and disposal, materials, equipment and all incidentals necessary to complete the work. If the Contractor elects to use hydro-demolition as the method of concrete removal for other portions of the work, no additional payment for use of hydro-demolition in those areas shall be made.

Payment will be made under:

Pay Item		Pay Unit
202.1295	Hydro-Demolition	Square Yard

SPECIAL PROVISION

SECTION 203

EXCAVATION AND EMBANKMENT

203.01 Description

The following paragraph is added:

This work shall consist of cutting, removing and disposing of the full depth of existing bituminous concrete pavement at the approaches to the bridge structures within the limits of work as shown on the Plans or as approved by the Resident. The pavement shall be sawcut to the full depth of pavement at the limits of the excavation to provide a clean, vertical cut surface.

203.04 General

The following sentences are added to the end of the third paragraph.

There are no approved waste storage areas or waste areas within the Project limits unless shown on the Plans. Unsuitable materials shall be disposed of off-site in accordance with Subsection 203.06.

The following paragraph is added after the third paragraph.

All excavations shall be accomplished in accordance with the applicable OSHA Standards. The Resident reserves the right to request the Contractor to prepare an excavation plan. This plan shall include, but not necessarily be limited to, the limit and depth of excavation, side slope, shoring, trench box and utility support.

203.10 Embankment Construction - General

The thirteenth and fourteenth paragraphs are deleted and replaced with the following:

All portions of the embankment shall be compacted in accordance with the designated embankment compaction requirements specified for the Project.

The existing slopes should be benched as shown on the drawings prior to placing additional fill. Embankment fill should be placed in lifts which extend laterally beyond the limits of the design side slopes such that the specified degree of compaction is achieved within the limits of the completed embankment. The slopes should then be trimmed back to design dimensions.

203.16 Winter Construction of Embankments

The word “core” is deleted from the first and second sentences in the first paragraph.

203.18 Method of Measurement

The following paragraphs are added:

There will be no additional payment for the required excavation plan, and costs shall be incidental to the Excavation items.

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.

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 401.03 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	45	8.0	20,000	15,000
70E-34	45	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.

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 40°F or higher and the area to be paved is not frozen. The Contractor may place Hot Mix Asphalt Pavement as traveled way wearing course, 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 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 paragraph:

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.

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 401.111 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. 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

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

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
Route 26 Underpass Bridge					
Wearing	**12.5mm**	**403.208**	**1.5”**	**1**	**B, E, I, J, L, N**
Base	**12.5mm**	**403.213**	**1.5”**	**1**	**B, E, J, L, N**
Route 26 Underpass Approaches					
Wearing	**12.5mm**	**403.208**	**1.5”**	**1**	**B, E, I, J, L, N**
Shim	**9.5mm**	**403.211**	**Var.**	**(2” max. lift)**	**B, E, J, L, N**
Base	**12.5mm**	**403.213**	**4.5”**	**2**	**B, E, J, L, N**
Webster Road Underpass Bridge Plains Road Underpass Bridge					
Wearing	**12.5mm**	**403.208**	**1.5”**	**1**	**B, E, I, J, L, N**
Base	**12.5mm**	**403.213**	**1.5”**	**1**	**B, E, J, L, N**
Webster Road & Plains Road Underpasses Approaches Mill & Fill					
Wearing	**12.5mm**	**403.208**	**1.5”**	**1**	**B, E, I, J, L, N**
Emergency Vehicle Ramp					
Wearing	**12.5mm**	**403.208**	**2”**	**1**	**B, E, J, L, N**
Base	**12.5mm**	**403.213**	**2”**	**1**	**B, E, J, L, N**
Emergency Vehicle Ramp (Northbound) – 2” Mill & 2” Overlay Areas					
Wearing	**12.5mm**	**403.208**	**2”**	**1**	**B, E, J, L, N**

COMPLEMENTARY NOTES

A. The required PGAB for this mixture shall be **64E-28.**
B. The required PGAB for this mixture shall be **64-28.**
C. A maximum of 15 percent RAP may be used.
D. RAP may not be used.

E. 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. (N design) Minimum and Maximum PGAB content shall not apply.
F. 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)
G. 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.
H. Joints shall be constructed as the "notched wedge" type in accordance with Subsection 401.17.
I. Joint density will be measured in accordance with Subsection 401.165.
J. Tack coat shall be applied between all layers of pavement at a rate of 0.04 G/SY.
K. PGAB shall conform to the provisions of 403.02 – Polymer Modified PGAB for HMA
L. The contractor shall furnish a quality control technician equipped with an approved densometer to ensure density requirements are met.
M. Hydrated Lime shall be incorporated into the mixture.
N. 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.

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

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 409.15, 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

SPECIAL PROVISION

SECTION 419

SAWING AND SEALING JOINTS IN BITUMINOUS PAVEMENT

(Sawing Bituminous Pavement)

419.01 Description

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

419.02 General

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

Unless otherwise noted or directed, the sawcut shall be vertical, a minimum of 3/8 inch wide, and extend to the depth as shown on the Plans.

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

419.03 Method of Measurement

Sawing Bituminous Pavement will be measured by the linear foot of pavement actually cut and accepted. No additional payment will be made for variations in the pavement thickness.

419.04 Basis of Payment

Sawing Bituminous Pavement will be paid for at the Contract unit price per linear foot which shall be full compensation for all materials, tools, equipment labor, and all incidentals necessary for the completion of the work to the satisfaction of the Resident. The disposal of sawcut residue shall be incidental to this item.

Payment will be made under:

Pay Item		Pay Unit
419.30	Sawing Bituminous Pavement	Linear Foot

SPECIAL PROVISION

SECTION 470

BERM DROP OFF CORRECTION

(Berm Dropoff Correction - Grindings)
(Berm Correction)

470.01 Description

This work shall consist of furnishing and placing bituminous grindings to eliminate the berm dropoff along the inside and outside shoulder edges at all locations, including guardrail sections at locations shown on the plans or as directed by the Resident.

The work shall also consist of removing materials at the inside and outside shoulder edges at all locations, including guardrail sections at locations shown on the plans or as directed by the Resident.

470.02 Bituminous Materials

The recycled bituminous pavement shall be reprocessed (crushed) to meet the following gradations:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieve
¾”	100
½”	95-100
No. 4	50-80
No. 50	18-28
No. 200	3-10

470.03 Method of Construction

Work under this item shall be in accordance with the details as shown on the Plans or as directed by the Resident.

At a minimum, a walk behind plate compactor shall be used for compaction. Other methods may be used upon approval by the Resident.

470.04 Method of Measurement

Berm Dropoff Correction – Grindings will be measured by the ton of Pavement grindings delivered and installed.

Material included in the delivery slips and not used or rejected shall be deducted from the amount being measured for payment.

Berm Correction will be measured by the linear foot for material removed.

470.05 Basis of Payment

The accepted quantity of "Berm Dropoff Correction – Grindings" will be paid for at the contract unit price per ton, which price shall include all materials, crushing to gradation range, weighing, transportation, placement, labor, equipment, and all incidentals necessary to accomplish the work.

The accepted quantity of "Berm Correction" will be paid for at the contract unit price per linear foot, which price shall include removing all materials, grading, transportation, labor, equipment, and all incidentals necessary to accomplish the work.

Payment will be made under:

Pay Item		Pay Unit
470.08	Berm Dropoff Correction – Grindings	Ton
470.081	Berm Correction	LF

SPECIAL PROVISION

SECTION 502

STRUCTURAL CONCRETE

(Bridge Drain Grate Modification)

502.01 Description

The following sentences are added:

The work also consists of removing existing bridge drain grates, and fabricating, galvanizing, and installing bridge drain grate extensions where noted and as detailed on the Plans.

The work also consists of removing and patching deck concrete adjacent to the bridge drain grates being modified where noted and as detailed on the Plans.

502.03 Materials

The following sentences are added:

Bridge drain materials shall meet the requirements specified in, and shall be galvanized in accordance with, Division 700, Subsection 711.04, Bridge Drains.

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 sentences are added:

Prior to beginning the work, the Contractor shall make provisions to ensure that concrete debris or portions of the existing bridge drains do not drop into any water body, roadway, shoulder or railroad area below.

The existing bridge drain grates shall be removed by grinder, cut off wheel or other mechanical means which minimize damage to the adjacent grate to remain. After removal of the existing bridge drain grate and adjacent concrete the replacement grate shall be fitted and welded to the existing bridge drain body.

All bridge drains grates shall be accurately placed at the locations shown on the Plans or as approved by the Resident. The Contactor shall provide an adequate means for securely holding them in the required positions during welding.

Touch-up the damaged galvanizing with two coats of zinc-rich chromate paint after wire brushing and solvent cleaning the damaged area.

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

502.53 Method of Measurement

Bridge Drain Grate Modification will be measured per each by the actual number of bridge drain grates modified per the Plans, complete in place and accepted.

504.54 Basis of Payment

Bridge Drain Grate Modification will be paid for at the Contract unit price per each, which price shall be full compensation for measuring and preparing the existing bridge drain grate; fabrication, galvanizing and installation of the replacement bridge drain grate and extension, galvanizing touchup, and deck removal and repair including all materials, labor, tools, equipment and incidentals necessary for furnishing and installing the Bridge Drain Grate Modification with the Plans and Specifications.

Payment will be made under:

Pay Item		Pay Unit
502.701	Bridge Drain Grate Modification	Each

SPECIAL PROVISION

SECTION 502

STRUCTURAL CONCRETE

(Pavement Slabs)

This Subsection of the Supplemental Specifications shall apply in its entirety and shall be amended with the following:

Description - This work shall consist of providing MTA Class AAA Deck concrete with the addition of five (5) pounds of synthetic structural fiber per cubic yard (CY) for the New Gloucester Lane 8 slab rehabilitation.

Method of Measurement

The limits to be used in determining the quantities of the structural concrete items will be as follows:

Structural Concrete, Pavement Slabs - The limits will be the New Gloucester Lane 8 slab rehabilitation as indicated on the plans.

Basis of Payment

No direct payment will be made for concrete admixtures with the exception of Synthetic Fiber Reinforcement, which shall be paid for under its respective Pay Item, 503.90.

Payment will be made under:

Pay Item		Pay Unit
502.262	Structural Concrete, Pavement Slabs	Cubic Yard

SPECIAL PROVISION

SECTION 503

REINFORCING STEEL

(Synthetic Fiber Reinforcement)

The following Subsection shall be added:

Description

This work shall consist of furnishing synthetic fiber reinforcement to be used as temperature and shrinkage reinforcement in the structural concrete pavement slabs.

Materials

The following sentence shall be added:

Synthetic fibers shall be STRUX 90/40 as manufactured by W. R. Grace & Co. or an approved equal.

The following Subsection shall be added:

Dosage

The dosage rate for synthetic fibers shall be five lbs per cubic yard of concrete.

Method of Measurement

The following sentence shall be added:

Synthetic fiber reinforcement will be measured by the pound.

Basis of Payment

Payment will be made under:

Pay Item		Pay Unit
503.90	Synthetic Fiber Reinforcement	Pound

SPECIAL PROVISION

SECTION 506

PAINTING STRUCTURAL STEEL

(Zinc Rich Protective Coating System)

506.01 Description

This work shall consist of applying a zinc-rich protective coating to steel substrate in accordance with the Plans and Specifications.

The termination point shall be taped off to prevent overrun and overspray. The finish coat color shall match color of the existing paint system.

506.02 Materials

Materials shall comply with the requirements in the respective Subsections of this Specification.

506.03 Submittals

The Contractor shall submit for review by the Authority a materials list and other such details as described within the Plans and the respective subsections of this Specification.

506.04 General Requirements

Requirements for the type of protective coating to be furnished are as follows:

- Zinc-Rich Coating System Subsections 506.10 through 506.17

506.05 Inspection

The Resident will have the authority to reject material or workmanship that does not meet the Contract requirements.

506.06 Non-Conforming Work

Rejected material and workmanship shall be corrected or replaced by the Contractor in accordance with Subsection 106.8.2 of the Standard Specifications.

506.07 through 506.09 Vacant

ZINC-RICH COATING SYSTEMS

506.10 Description

This work shall consist of application of a two coat, zinc-rich coating system in accordance with this Specification. Where the selected coating system is a three coat system, the intermediate coat shall be omitted and only the primer and top coat shall be applied. The touch up coating required for the girder areas affected by the installation of the bolsters and spacer plates shall be field applied.

506.11 Materials

Coatings systems shall be selected from the Northeast Protective Coating Committee (NEPCOAT) Qualified Products List (QPL) A or B list. The list may be found through the NEPCOAT Web page (http://www.nepcoat.org).

The Contractor shall provide the batch description, lot number, date of manufacture, shelf life and the manufacturer's published storage requirements for each coating to the Resident. In addition, the Contractor shall provide the manufacturer's published instructions for application of each coat of the coating system including equipment, surface preparation, anchor profile, mixing, thinning, application, cure time for the entire range of allowable environmental conditions, DFT and recoat time.

506.12 Limits of Work

All surfaces exposed in the assembled product shall be coated with primer and topcoat. Surfaces to be embedded in concrete shall receive a mist coat (0.75 to 1.5 mils) of primer only.

Faying surfaces of bolted connections shall be primed only and develop a Class B slip coefficient in accordance with the *"Specification for Structural Joints Using ASTM A325 or A 490 Bolts"* by the Research Council of Structural Connections (RCSC). The Contractor shall provide documentation to demonstrate that the coating was tested and met the above requirements.

506.13 Surface Preparation

Prior to cleaning, all corners and edges of members and plates, whether rolled cut or sheared, exposed in the assembled product shall be rounded to approximately 1/8 inch radius. A series of tangents to the approximate radius will be considered as rounded

Surfaces to be field-painted shall be power tool cleaned to meet the requirements of SSPC-SP3. All surfaces shall be solvent wiped in accordance with SSPC-SP1 following power tool cleaning.

After cleaning is complete the surface shall be visually inspected for fins, tears, delaminations and other discontinuities. Fins, tears and other discontinuities shall be removed with a grinder or other suitable power tool and the area shall be blended at a slope of approximately 1:20.

The allowable time between cleaning and primer application shall not exceed the manufacturer's published recommendations or eight hours, whichever is less. If the substrate develops flash rust (rust bloom) before the primer is applied or before the primer application is completed, the piece shall be re-blasted to bare substrate and re-coated.

506.14 Mixing and Application

All protective coatings shall be applied using a method approved by the Resident. Protective coating shall not be applied when the steel temperature, or the ambient temperature in the immediate vicinity of the piece(s) in question; See manufacturers guidelines for temperature limitations. Thinning and mixing of coatings shall be in conformance with the manufacturer's published instructions. Thinner shall be measured using a graduated cup or other container that clearly indicates the amount of thinner being added. Mixing shall be done using the method, equipment and for the amount of time recommended by the coating manufacturer.

Primer and topcoat shall be applied in accordance with the manufacturer's published recommendations. Environmental conditions in the immediate vicinity of the surfaces to be coated shall be within the range of the manufacturer's published requirements both during the coating operation and during the curing period. Primer shall not be force cured.

Recoat time shall be in accordance with the manufacturer's published requirements for the environmental conditions at the time of application and cure. If the coating is contaminated with dust, debris, over spray or other deleterious material, the surface shall be cleaned in accordance with SSPC-SP 1 immediately prior to recoating. Other methods of cleaning may be used if approved by the Resident.

The Resident shall be given ample notice in order to inspect the product prior to coating, recoating or removal of paint from the area. "Ample notice" shall be defined at the Pre-Job meeting depending on shop or site conditions.

Substrates that are primed or surfaces that are recoated without notification of the Resident will be rejected and no further coating shall be done on the piece. Rejected coating shall be removed and re-applied. The cost of repairs shall be borne by the Contractor.

506.15 Vacant

506.16 Touch-up and Repairs

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

506.17 Handling and Storage

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

506.18 through 506.19 Vacant

506.60 Method of Measurement

Protective Coating shall be measured by the lump sum, complete and accepted. The limits shall be as shown on the Plans or as described within the respective Subsections.

506.61 Basis of Payment

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

Pay Items		Pay Unit
506.9103	Zinc-Rich Protective Coating System	Lump Sum

SPECIAL PROVISION

SECTION 507

RAILINGS

(Aluminum Bridge Railing –Splice Modification)

507.01 Description

The following sentence is added:

This work consists of re-centering the existing 3'-0" cast aluminum splice bar in the center of the bridge rail splice joint and mechanically fastening the splice bar to the aluminum bridge rail on one side of the bridge rail splice joint per the details on the Plans.

507.08 Method of Measurement

Aluminum Bridge Railing – Splice Modification will be measured for payment by each, satisfactorily modified and accepted.

507.09 Basis of Payment

Aluminum Bridge Railing – Splice Modification will be paid at the Contract unit price per each which price shall be full compensation for all labor, materials, equipment and incidentals required for re-centering and mechanically fastening the splice bar as shown on the Plans, in accordance with these Specifications or as approved by the Resident.

Payment will be made under:

Pay Item		Pay Unit
507.095	Aluminum Bridge Railing – Splice Modification	Each

SPECIAL PROVISION

SECTION 507

RAILINGS

(Aluminum Bridge Railing – Rail Section Replace)

507.01 Description

The following paragraph is added after the first paragraph:

The Authority will supply used rail sections and connection hardware from existing stockpiles for the Contractor to install for the work under Item 507.0928 Aluminum Bridge Railing – Rail Section Replace. The Contractor shall load the rail sections at the Crosby Maintenance Yard at Mile 45.8 Southbound in South Portland, and transport and unload the rail sections at the project site.

507.08 Method of Measurement

Aluminum Bridge Railing - Rail Section Replace will be measured as linear foot, delivered, erected, and accepted.

507.09 Basis of Payment

Aluminum Bridge Railing - Rail Section Replace will be paid for at the unit price for linear foot price, complete in place. All costs for loading, transporting and unloading used rail components supplied by the Authority shall be incidental to this item.

Payment will be made under:

Pay Item		Pay Unit
507.0928	Aluminum Bridge Railing – Rail Section Replace	LF

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 clear penetrating sealer followed by a pigmented top coat, to protect new and existing concrete and masonry structures. The coating system shall be applied to piers, endposts, wingwalls, and abutments in accordance with the Plans, Specifications and 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. Where the removal of existing pigmented coatings is required the anticipated removal limits, and the anticipated quantity of removal, will be shown on the plans. The actual removal limits may vary and will be established and marked in the field by the Resident.

515.02 Materials

The pigmented penetrating sealer system shall be a two coat system consisting of Certi-Vex Guard Clear (primer/sealer) and Certi-Vex HBC Smooth (top coat), as manufactured by Vexcon Chemicals, Inc., or an approved equal, consisting of the following two parts:

- The primer shall be a vinyl toulene 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 top coat shall be solvent borne modified acrylic resins with selected pigments and fillers.

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

The Contractor shall submit the Vexcon Chemical's product data sheets, material safety data sheets and recommended instructions for application of the Certi-Vex Guard Clear and Certi-Vex HBC Smooth.

The pigmented penetrating sealer color shall be 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

All caulking, patching, and joint sealant shall be installed prior to application of the sealer. The surface shall be prepared in strict accordance with the instructions of the approved manufacturer. Surface shall be fully cured, dry, and free from contamination such as asphalt coatings, oil, grease, loose particles, decaying matter, moss, algae growth, and curing compounds. For maximum penetration of the primer, the Contractor shall lightly sandblast the surface.

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 concrete 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 coating.

Where 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

Following removal of existing coating systems all exposed surfaces of the substructure unit to be coated shall be cleaned and rinsed by pressure washing. 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. After pressure washing the concrete surfaces shall be allowed to air dry for a minimum of 48 hours prior to applying the new protective coating.

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. Spray or roll the primer at the recommended application rate. If the surface is very absorbent, the primer 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 primer shall not be applied in direct sunlight when the air or surface temperature is greater than 90ºF, or when air or surface temperature is below 35ºF. The top coat shall not be applied when air or surface temperature is below 45ºF or as approved by the Resident.

For surfaces that have previously received pigmented coating the primer shall only be applied to areas where the existing coating was marked for removal and then removed by sandblasting. The primer application shall extend beyond the removal limits of the existing coating system by six inches on all sides.

The primer shall be allowed to dry for a minimum of two-hours before applying pigmented top coat. Under poor drying conditions this time shall be extended. The primer shall not be coated with top coat until the surface is dry. The top coat should be applied by brush, roller or suitable airless spray.

Top coat material shall be applied per the manufacturer's recommended application rate and in strict accordance with the manufacturer's written instructions. The top coat shall provide consistent color without light spots or shadows. The Resident reserves the right to have the Contractor recoat the top coat if the dried top coat(s) lack consistent color or show light spots or shadows.

For surfaces that have previously received pigmented coating the top coat 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 Concrete Protective Coating will be measured for payment by the square yard, satisfactorily applied and accepted.

The removal of existing pigmented protective coatings will not be measured for payment separately, but shall be incidental to the Pigmented Protective Coating for Concrete Surfaces pay item.

515.06 Basis of Payment

Pigmented Concrete 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 pigmented concrete protective 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, vegetation removal, and protection of surfaces not designated for treatment will not be paid for separately, but shall be incidental to the Pigmented Concrete Protective Coating 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 piers, endposts, parapets and fascia in accordance with the Plans, Specifications and the manufacturer's published recommendations.

515.02 Materials

The penetrating sealer shall be StandOff® SLX100 Water & Oil Repellent, as manufactured by ProSoCo, Inc., or an approved equal. The sealer shall have the following properties:

Active Substance:	modified alkyl alkoxy silane
Active Content:	> 90%
Form:	clear liquid
VOC:	< 3.5 pounds per gallon

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

The Contractor shall submit the ProSoCo's product data sheets, material safety data sheets and recommended instructions for application of the StandOff® SLX100.

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 application shall not be conducted when surface and air temperatures are below 40°F or above 90°F. The work shall not be conducted when there is a chance of the surface temperature falling below 40°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 24-hours after application. After treatment, surfaces should be protected from rain for not less than 48-hours. It shall not be applied when winds are sufficient to carry airborne chemicals to unprotected surfaces.

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.

Sealer shall be applied as packaged without dilution or alteration. The sealer shall be applied with low pressure (20 psi) airless spray equipment or with a heavily saturated brush or roller unless otherwise permitted by the Resident. 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. Apply from the bottom up with sufficient material to thoroughly coat the surface and create a slight rundown below the spray pattern. Allow the first application to penetrate the concrete surface, and within a few minutes after the first coat appears dry, reapply in the same saturating manner.

When the sealer is applied to vertical and sloped surfaces, it shall be applied in two applications, 10 minutes apart, with a low pressure (20 psi) airless sprayer.

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

(Parapet Joint Repair)

518.01 Description

The following sentence is added:

This work shall consist of the removal and replacement of existing deteriorated parapet joint sealant as approved by the Resident. The Contractor shall provide the Resident safe access to all the parapet joints for inspection before this work begins, including access to the fascia parapet joints.

The following Subsection is added:

518.032 Construction Requirements

After the Resident has identified the joint repair locations, the Contractor shall remove the existing joint sealant to a minimum 3/8 inch depth, clean and prepare the concrete surfaces per sealant manufacturer recommendations, and replace the sealant to the edge of concrete with an approved polyurethane-based sealant such as Sikaflex-1a or other product on the MaineDOT approved products list as directed by the Resident.

518.10 Method of Measurement

The following sentence is added:

The quantity of Parapet Joint Repair will be measured by the linear foot where the repair occurs.

518.11 Basis of Payment

The following sentence is added:

Parapet Joint Repair will be paid for at the Contract unit price per linear foot, which includes all materials, labor, equipment, and incidentals necessary to complete the work including removal of existing joint sealant.

Payment will be made under:

Pay Item		Pay Unit
518.43	Parapet Joint Repair	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 all concrete crack widths equal to or greater than 0.06 inches as shown on the Plans or identified by the Resident.

518.02 Repair Materials

The following paragraphs are added:

Epoxy injection crack repair 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

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 following paragraph is added:

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

518.11 Basis of Payment

The following paragraph is 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
518.40	Epoxy Injection Crack Repair	Linear Foot

SPECIAL PROVISION

SECTION 520

EXPANSION DEVICES – NON MODULAR

(Expansion Joint Modifications)

520.01 Description

This work consists of removing the existing joint seals, modifying and cleaning the existing steel rails and joint armor, and installing new replacement seals in the bridge joints at the Webster Road and Plains Road Bridges in accordance with the Plans and this Specification.

520.02 Materials

Replacement joints used at Webster Road shall be Expansion Device - Gland Seal and shall meet the material requirements of Section 520 - Expansion Devices - Non-Modular Expansion Joints.

Materials for bonded silicone-and-foam hybrid seals (used on Plains Road Bridge) shall meet the material requirements of Expansion Device - Compression Seal specified in this Subsection except the joint shall be an EMSEAL Bridge Expansion Joint System (BEJS) seal (bonded silicone and foam hybrid seals are not covered on the Maine Department of Transportation Prequalified List of Approved Products).

520.06 Installation

Existing steel shall be cleaned and sandblasted prior to the installation of the new joint steel. Any portions of the existing steel rails within the parapet joint opening that must be removed to fit the new joint rails shall be ground smooth prior to installation of the new joint steel rails.

The Contractor shall install the replacement joint seals according to the manufacturer's recommendations. Replacement bonded silicone and foam hybrid seals, and gland seals shall be installed full deck width (including turn-ups within parapets) in one piece after the existing seals are removed and the existing seal extrusions or joint armor are repaired, cleaned, sandblasted and primed (if priming is recommended by the seal manufacturer). Additionally, the EMSEAL manufacturer's technical representative shall be on site for the first day of installation of this seal and all costs associated with this shall be considered incidental to the appropriate pay item listed below.

Once the new gland seals are permanently installed, the Contractor shall thoroughly clean the abutment seats, bearings, and girder ends by pressure washing to remove any debris, salt, or other foreign contaminants. Payment for pressure washing shall be incidental to the Expansion Device Modifications item.

520.07 Method of Measurement

Expansion Device Modifications will be measured by each unit, complete in place and accepted.

520.08 Basis of Payment

The accepted quantity of expansion devices will be paid for at the contract unit price each, which shall be full compensation for removal and disposal of the existing joint seal, cleaning and partial removal of existing steel rails, installation of new joint armor, and all materials, coatings, equipment, labor and incidentals necessary for furnishing and installing the new seals.

Payment will be made under:

Pay Item		Pay Unit
520.2211	Expansion Device Modifications (Webster Road)	Each
520.2211	Expansion Device Modifications (Plains Road)	Each

SPECIAL PROVISION

SECTION 523

BEARINGS

(Bearing Bolsters and Spacer Plates Installation)

523.01 Description

The following paragraphs are added:

This work shall also consist of furnishing and installing Steel Bolsters, Steel Spacer Plates, and all related fasteners and hardware. The specification requirements for Steel Rocker Bearings shall apply to this work.

523.50 Method of Measurement

The following paragraphs are added:

Bearing Bolsters and Spacer Plates, Furnished and Installed will be measured for payment by the Lump Sum which price shall include all components and hardware required to satisfactorily complete the work.

523.51 Basis of Payment

The first paragraph is amended as follows:

The Lump Sum payment for Bearing Bolsters and Spacer Plates, Furnished and Installed shall be considered full compensation for all materials, equipment, labor and incidentals required to complete the work in accordance with the Plans and these Specifications.

Payment will be made under:

Pay Item		Pay Unit
523.522	Bearing Bolsters and Spacer Plates, Fabricated and Delivered	Lump Sum
523.524	Bearing Bolsters and Spacer Plates, Installed	Lump Sum

SPECIAL PROVISION

SECTION 524

TEMPORARY STRUCTURAL SUPPORTS

(Jacking Existing Superstructure)

524.01 Description

The following paragraphs are added:

This work shall consist of the jacking and temporary structural support of the existing superstructure at pier and abutment locations to allow for the removal and reinstallation of existing bearings and for the installation of proposed bearing bolster and spacer plate assemblies. All girders at all supports must be jacked and temporarily supported simultaneously while the bridge is closed to traffic.

This work shall also consist of designing, fabricating, erecting, operating, maintaining, and dismantling the temporary structural supports and jacking systems required to perform the work.

524.02 Materials

This subsection is replaced in its entirety with the following:

Materials used as temporary structural supports shall be structural grade sawn timber, structural steel, or a combination of both, at the Contractor's option. All temporary structural support materials, whether new or used, shall be sound and of adequate strength and cross section for the intended loads. All structural steel shall have a minimum yield strength of 36,000 psi.

Blocking and/or pads required to accommodate differences in elevation and/or to distribute loads to the soil may additionally incorporate plain and reinforced concrete as approved by the Resident.

524.03 Design

This subsection is replaced in its entirety with the following:

The jacking system and temporary structural supports shall be designed to support all applicable loads including, but not limited to, all vertical loading including live load and impact, transverse and longitudinal horizontal loads, differential settlement induced loads, and shall account for any temporary unbalanced loading due to jacking forces and other loading during load transfer. The temporary structural supports shall be designed with sufficient redundancy that failure of one member will not cause the collapse of the entire system or the supported structure. Temporary structural supports which are adjacent to traveled ways or which support structures carrying traffic, shall additionally be designed to resist any vibration or impact forces due to traffic and shall incorporate sufficient protection against impact by errant vehicles. Temporary structural supports which are founded on, or are in close proximity to, existing structures to be rehabilitated shall be designed to resist any vibration induced by other work to be completed on the project.

The jacking system and temporary structural support shall be designed and sealed by a Professional Engineer licensed in the State of Maine. Design computations, plans, details, working drawings, and other documentation necessary to complete the work and certify conformance with these provisions shall be approved by the Resident prior to beginning this work.

The Contractor shall provide bracing or other means of restraint to prevent longitudinal and transverse movement of the superstructure and twisting of the stringers or deck during the jacking operations, and while the superstructure is temporarily supported. These lateral restraints shall include steel sliding plates, or alternative low friction rigid material, to facilitate vertical movement of the superstructure during jacking operations.

All design, detail and load requirements shall conform to the most current edition of the AASHTO LRFD Bridge Design Specifications with applicable Interim Specifications, the Contract Plans, the Standard Specifications, and as specified herein. The design computations shall verify the proposed jacking scheme does not introduce unacceptable stresses in the existing bridge components including steel girders, diaphragms, connections and pier caps. All design computations submitted for approval shall be reviewed, checked, and initialed accordingly. Any support systems requiring attachment to existing concrete shall be approved by the Resident. Systems requiring extensive drilling and anchoring into existing concrete will not be accepted.

The estimated unfactored bearing reactions are as follows:

- At Abutments: 40 kips Dead Load, per bearing
  7 kips Construction Live Load, per bearing
- At Piers: 135 kips Dead Load, per bearing
  22 kips Construction Live Load, per bearing

The Contractor shall provide a jacking system and a temporary support system with a capacity of at least 150% of the loads stated above.

The jacking force applied at each jack location shall not exceed of 125% of the loads identified to avoid overstressing, or otherwise damaging, the pier caps or superstructure. If loads in excess of these limits are required the jacking operations shall cease and the Resident shall be notified. Jacking operations shall not resume until guidance is provided by the Resident. Jacks on the piers shall be located on the existing centerlines of bearing.

Removal of lead based paint shall be in accordance with Subsection 105.2.4.2, Lead Paint. The Contractor shall submit a lead based paint removal plan to the Resident for approval prior to the start of the work.

All surfaces of the existing steel girders, where paint is removed for jacking operations shall be repaired with two coats of cold-galvanizing, upon completion of the work.

524.04 Erection and Removal

The following paragraphs are added:

The existing superstructure shall be raised by jacking at each pier and abutment. A minimum of four jacking points shall be used at each pier and abutment location. The jacking shall be synchronized so that all portions of the girders are raised by approximately equal amounts simultaneously. A maximum of 1/8 inch differential movement between adjacent girders will be allowed during the jacking operation. A maximum of 2 inches of differential movement will be permitted between a substructure jacking height and the overall plane of the other substructure jacking heights during jacking operations.

The Contractor may support the jacking systems and temporary structural support systems off of the top of abutment seats, top of pier caps, footings, or Contractor-furnished blocking systems. The proposed anchorage system shall not be supported primarily from the face of abutment or face of pier. Bracing shall be provided to maintain the superstructure in a stable condition during the jacking operations.

Drawings showing the method the Contractor chooses to raise, temporarily support, and brace the superstructures shall be stamped by a Professional Engineer registered in the State of Maine, and shall be submitted to the Resident for approval.

524.05 Method of Measurement

This subsection is replaced in its entirety with the following:

Jacking Existing Superstructure will be measured by the lump sum and will include the design, fabrication, erection, operation, maintenance, and removal of all required temporary jacking and structural support systems to the extent specified herein. It shall also include the removal or modification, and reinstallation of existing bridge elements to prevent damage during the jacking operation and the repair of damaged or removed protective coatings as specified herein. Temporary works used by the Contractor for their convenience will not be measured for payment. The work associated with removal and reinstallation of existing highway appurtenances (e.g. guardrails, sign supports, etc.) to facilitate the erection of temporary structural supports will not be measured for payment, but will be considered incidental to the Jacking Existing Superstructure Pay Item.

524.06 Basis of Payment

This subsection is removed and replaced with the following:

Jacking Existing Superstructure will be paid for at the contract lump sum price which price shall be full compensation for all materials, equipment, labor and incidentals necessary for the design, erection, maintenance and dismantling of the jacking and temporary support systems; and the satisfactory jacking and lowering of the superstructure required on the project in accordance with these specifications.

Payment will be made under:

Pay Item		Pay Unit
524.7211	Jacking Existing Superstructure	Lump Sum

SPECIAL PROVISION

SECTION 524

TEMPORARY STRUCTURAL SUPPORTS

(Protective Shielding - Steel Girders)

524.01 Description

The following paragraph is added:

This work shall also consist of furnishing all labor, equipment and materials required to provide protection for the public during demolition and construction. This protection shall include, but not necessarily be limited to, protective shielding of existing structures during demolition work, concrete removal, and installation of temporary deck support over roadway lanes and shoulders on all existing and new bridge structures.

The following Subsections are added:

524.031 Protective Shielding Design

Prior to the start of work, the Contractor shall submit working drawings for review and comment indicating the sizes and dimensions of protective shielding. The proposed methods of protective shielding, including connections and fasteners, shall be in accordance with the following criteria:

The protective shielding shall be designed for safely supporting all construction and dead loads, but not less than 100 pounds per square foot with a load duration of seven (7) days. Protective shielding shall be stiff enough to limit deflection to 1/2 inch under maximum loads and to be tightly sealed at all joints. The protective shielding shall be placed on the tops of the bottom flanges of the steel girders with edges and laps made tight to protect the turnpike motorists from dust, debris and falling objects.

524.041 Protective Shielding Erection and Removal

No portion of the protective shielding installed over a roadway shall project below a plane connecting the bottoms of the bottom flanges of the steel stringers. During demolition operations, the protective shielding shall be covered with sheet plastic made tight at edges and laps to prevent water used in the demolition operation from falling onto the facilities under the bridge.

The protective shielding on existing and new structures shall extend horizontally three feet beyond the fascia lines and vertically to a point one foot minimum above the top of parapet or railing. The shielding shall also extend 10 feet beyond the edge of pavement of the roadway below, unless otherwise noted on the Plans or as approved by the Resident.

Shielding shall be approved and installed prior to the start of any demolition work and shall remain in position during all demolition work. Shielding shall also be approved and installed prior

to the start of any deck forming and shall remain in position during all deck work. The shielding shall be relocated or removed only as approved by the Resident.

Construction sequences may require protective shielding material to be removed, stored and then reinstalled by the Contractor. Any shielding which is damaged during this removal and reinstallation shall be replaced by the Contractor at no additional cost.

524.28 Method of Measurement

The following paragraph is added:

Protective Shielding will not be measured separately for payment, but shall be incidental to related contract items under Section 518.

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 Yard Mile 45.7 Southbound	3540 LF

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

(Work Zone Crash Cushion)

527.01 Description

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

The Contractor shall furnish and install 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:

Only work zone crash cushions meeting the NCHRP Report 350 TL-3 crash test requirements may be used on the turnpike and local roadways with posted speeds of 45 MPH or greater. Work zone crash cushions meeting the NCHRP Report 350 TL-2 crash test requirements may be used 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 NCHRP Report 350 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.

527.05 Basis of Payment

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

SPECIAL PROVISION

SECTION 603

PIPE CULVERTS AND STORM DRAINS

(Pressure Treated Wood Drain Trough)

603.01 Description

The following paragraphs are added:

This work shall also consist of furnishing and installing pressure treated wood drain trough at the locations shown on the Plans or as directed by the Resident.

603.02 Materials

The following paragraphs are added:

Wood for pressure treated wood drainage trough shall be Yellow Pine, Number 2 or better, .40 CCA, D4 S. The pressure treated wood shall meet AWPA Standard P-5 or Federal Standard TT-W-550. The treating process shall meet Federal Specification TT-W-571, or AWPA Commodity Standards as applicable.

Assembly hardware shall be heavy zinc plated or stainless steel.

Caulking shall be Sikaflex 1a, or an approved equal.

Trough liner material shall be W.R. Grace Ice and Water Shield roofing underlayment, or approved equal.

603.03 General

The following paragraphs are added:

The pressure treated wood drainage trough shall be fabricated and installed in a workmanlike manner. Corners shall be mitered; adjacent boards and sections shall be butt jointed at a wide cleat, or spliced with a full dimensioned piece of pressure treated wood; and fastener holes shall be predrilled to prevent splitting.

The trough liner shall be installed prior to installation of the top cleats, and shall wrap the top edge and 2 inches down the exterior face of the trough sideboard; and shall be held in place with galvanized roofing nails.

The pressure treated wood drain trough shall be backfilled to the top of the side rail with materials available from on-site excavation, supplemented with common borrow, if required.

603.11 Method of Measurement

The following paragraphs are added:

Pressure treated wood drain trough will be measured by the length in linear feet along the centerline of the invert, laid as directed, complete in place and accepted.

Excavation, bedding and backfill will not be measured separately but shall be incidental to the Pressure Treated Wood Drain Trough pay item.

Common borrow will not be measured under this item but shall be measured under Item 203.25 Common Borrow.

603.12 Basis of Payment

The following paragraphs are added:

The accepted quantity of pressure treated wood drainage trough will be paid at the Contract unit price per linear foot.

Payment will be made under:

Pay Item		Pay Unit
603.91	Pressure Treated Wood Drain Trough	Linear Foot

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(31" W-Beam Guardrail – Mid-way Splice (Steel Posts, 8" Offset Blocks, Single Faced))

606.01 Description

The section is amended by the addition of the following:

This work shall consist of furnishing and installing guardrail components at the required locations in accordance with the Specifications and in reasonably close conformity with the lines and grades shown on the Plans.

606.02 Materials

The section is amended by the addition of the following:

Steel posts shall be of length specified in the plans.

The guardrail elements shall be per the Components' List found on Sheet No. 2 of 2 of draft Drawing SGR47 – 31" W-Beam Guardrail with Standard 8" Offset Block in the Task Force 13 Report noted above and/or as noted in the Contract Documents unless noted otherwise.

606.04 Rails

The section is amended by the addition of the following:

Height of top of rail shall be 31" measured from final grade. Height transition from 31" W-Beam, mid-spliced guardrail to existing guardrail shall occur over a 25' length.

606.08 Method of Measurement

The section is amended by the addition of the following:

31" W-Beam Guardrail – Mid-way Splice (Steel Posts, 8" Offset Blocks, Single Faced) will be paid for at the contract unit price per linear foot of rail satisfactorily installed and accepted.

606.09 Basis of Payment

The section is amended by the addition of the following:

The accepted quantity of 31" W-Beam Guardrail – Mid-way Splice (Steel Posts, 8" Offset Blocks, Single Faced) will be paid for at the contract unit price per linear foot of rail and shall be full compensation for furnishing all labor, equipment and materials necessary to complete the work.

Payment will be made under:

Pay Item		Pay Unit
606.1301	31” W-Beam Guardrail – Mid-way Splice (Steel Posts, 8” Offset Blocks, Single Faced)	Linear Foot
606.1303	31” W-Beam Guardrail – Mid-way Splice (Steel Posts, 8” Offset Blocks, Single Faced, 15’ Radius and Less)	Linear Foot
606.1304	31” W-Beam Guardrail – Mid-way Splice (Steel Posts, 8” Offset Blocks, Single Faced, Over 15’ Radius)	Linear Foot

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(Guardrail – Flared Terminal – 31" W-Beam Guardrail)

606.01 Description

The following sentences are added:

This work shall consist of furnishing and installing a FLEAT (Flared Energy Absorbing Terminal) for use with the 31" W-Beam Guardrail – Mid-way Splice (7' Steel Posts, 8" Offset Blocks, Single Faced) as manufactured by Road Systems, Inc., 1507 East 4th Street, Big Spring, Texas 79720, (915) 263-2435, and retroreflective adhesive sheeting in accordance with these Specifications and the manufacturer's installation instructions, and in reasonably close conformity with the lines and grades as shown on the Plans or as approved by the Resident.

606.02 Materials

The following sentence is added:

Guardrail – Flared Terminal – 31" W-Beam Guardrail components shall be comprised of those shown in the manufacturers installation instructions. 8" blocks shall be used.

Reflective sheeting shall meet the requirements of Subsection 719.01, Reflective Sheeting – minimum ASTM Type XI; 3M™ Diamond Grade™ DG³ Reflective Sheeting Series 4000 or approved equal, color WHITE.

The contractor shall request for the impact face object marker, black chevron on yellow background, to be included in the shipped materials when installation is on the left side of roadway.

The following Subsections are added:

606.03 Posts

Wood offset blocks shall be toe-nailed in two locations to the wood post to prevent the blocks from moving.

606.035 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 reflective adhesive sheeting shall be applied to the nose of the FLEAT System after installation. The existing sheeting shall be replaced on FLEAT systems to be removed, modified, and reset. Color – WHITE.

606.041 Reflective Sheeting

The color for the reflective sheeting shall be silver (WHITE) when installed on the outside shoulder and shall be black chevron on yellow background only when installed on the inside shoulder.

606.08 Method of Measurement

The second paragraph is amended by the addition of: "Guardrail – Flared Terminal – 31" W-Beam Guardrail, " after the words "Terminal section, ".

Guardrail – Flared Terminal – 31" W-Beam Guardrail will be measured by each unit satisfactorily complete in place and accepted.

606.09 Basis of Payment

The first paragraph is amended by the addition of: "Guardrail – Flared Terminal – 31" W-Beam Guardrail, " after the words "Terminal section, ".

The second paragraph is amended by the addition of: ", Guardrail – Flared Terminal – 31" W-Beam Guardrail, and " after the words "NCHRP 350 end treatments ".

The retroreflective sheeting will not be measured separately for payment, but shall be incidental to the Guardrail – Flared Terminal – 31" W-Beam Guardrail item.

Payment will be made under:

Pay Item		Pay Unit
606.1305	31" W-Beam Guardrail – Mid-Way Splice Flared Terminal (31" Height)	Each

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(Terminal End – Anchored End – 31" W-Beam Guardrail)

606.01 Description

The section is amended by the addition of the following:

This work shall consist of furnishing and installing Terminal End – Anchored End – 31" W-Beam Guardrail end treatment in accordance with these Specifications, the AASHTO-AGC-ARBTA Joint Committee Task Force 13 Report: A Guide to Standardized Highway Barrier Hardware, Drawing SEW31 in AASHTO Manual for Assessing Safety Hardware (MASH) approval letter B-256; and in reasonably close conformity with the lines and grades as shown on the Plans or as approved by the Resident.

606.02 Materials

The following sentences are added:

The guardrail elements shall be per the Components' List found on Sheet No. 2 & 3 of 3 of Drawing SEW31 – Trailing-end Anchorage System in the Task Force 13 Report noted above and/or as noted in the Contract Documents. The component RWM14a shall be modified to a length of 9'-4½" measured from the center of the Midway Splice to the center of the last guardrail post.

The following Subsection is added:

606.042 Terminal End - Anchored End

The following sentences are added:

Installation of the Terminal End – Anchored End - 31" W-Beam Guardrail end treatment shall be in strict accordance with these plans and specifications, the AASHTO-AGC-ARBTA Joint Committee Task Force 13 Report and the Details on Sheet No. 1 of 3 of Drawing SEW31 – Trailing-End Anchorage System.

606.08 Method of Measurement

The second paragraph is amended by the addition of: ", Terminal End - Anchored End – 31" W-Beam Guardrail," after the words "Terminal section,".

606.09 Basis of Payment

The first paragraph is amended by the addition of: ", Terminal End - Anchored End – 31" W-Beam Guardrail," after the words "Terminal section,".

The second paragraph is amended by the addition of: “, Terminal End - Anchored End – 31” W-Beam Guardrail, and” after the words “NCHRP 350 end treatments”.

Payment will be made under:

Pay Item		Pay Unit
606.1351	Terminal End - Anchored End – 31” W-Beam Guardrail	Each

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(Reflectorized Flexible Guardrail Marker)
(Underdrain Delineator Post)

606.01 Description

The following sentence is added:

This work shall consist of furnishing and installing new delineator posts, in accordance with these Specifications and meeting NHCRP 350 requirements, at locations as shown on the Plans or as approved by the Resident.

Existing and new delineator posts shall be located as follows, with the indicated panel:

Outside Shoulder:

- One at guardrail trailing ends (green delineator).
- Two at guardrail approach ends (one red delineator on first post and one red delineator on angle points).

Median:

- One at guardrail trailing ends (green delineator, facing traffic).
- Two at guardrail approach ends (one red delineator on first post of CAT units, green on guard rail side, red on median opening side; and one red (both sides) delineator at angle point).
- One at all other median guardrail angle points (red on both sides).

Other Locations:

- One at culvert outlets (green delineator).
- Twenty per mile evenly spaced at the edge of outside shoulder (white delineator).
- One at electrical junction boxes not associated with another item (red delineator).
- One at communication only junction boxes not associates with another item (orange delineator).

Delineator posts that do not exist in the locations described above shall be supplied and installed by the Contractor. The installation of the delineator post shall include the demountable reflectorized delineator panel.

White edge delineators shall not be installed on any portion of the widened shoulder for Guardrail 350 Flared Terminal installations, and shall not be installed behind the Guardrail 350 Flared Terminal rail segments.

606.02 Materials

The following paragraphs are added:

Non-guardrail Delineator Posts shall conform to Subsection 606.02 paragraph 3.

The seventh through ninth sentences of the fourth paragraph are deleted and replaced with the following:

Reflectorized flexible markers shall be a minimum of 2 inches in diameter, a maximum of 36 inches in length, ovalized at the top of the post to allow application of 3 inch by 9 inch high intensity reflective sheeting, and shall be capable of recovering from repeated impacts. The flexible guardrail delineator markers shall be grey and capped at the top with a flexible rubber cap; Safe-Hit Flexible Guardrail Delineator or approved equal. Reflective material shall meet the requirements of ASTM Type IX Diamond Grade VIP (Visual Impact Performance).

The demountable reflectorized delineator panels shall meet the material requirements of Subsection 719.06. The delineator panel shall be rectangles measuring 9 inches by 3 inches.

606.03 Posts

The following paragraphs are added:

The top of delineator posts shall be installed 4 feet 6 inches (54 inches) above the edge of pavement elevation. Delineators shall be installed 4 feet from the edge of pavement except those delineating end treatment, culverts and electrical items.

Mile marker posts shall be mounted on breakaway supports. The bottom of the sign shall be 5’ - 0” (60”) above the pavement at the solid white line and shall be offset five feet from the edge of pavement.

A mock-up of the guardrail delineator posts shall be submitted to the Resident for approval prior to installation.

Any materials damaged by the Contractor’s operation shall be replaced at no additional cost to the Authority.

Top of the delineator panel shall be flush with the top of post.

606.08 Method of Measurement

The following sentence is added:

Delineator Posts shall be measured by each unit satisfactorily installed.

606.09 Basis of Payment

The following paragraph are added:

The accepted quantity of Delineator Posts will be paid for under the Underdrain Delineator Post item, at the Contract unit price per each which shall be full compensation for the post, mounting hardware, assembly components, reflective material, post installation and all incidentals necessary to complete the work.

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(Bridge Transition- Type III)

606.01 Description

The following sentence is added:

This work shall consist of furnishing and installing Type III Bridge Transitions at bridge endposts on bridges over the turnpike as shown in the Contract Documents.

The following Subsection is added:

606.071 Guardrail Attachments at Bridges

Bridge transition - Type III shall be used at bridge endpost locations as shown on the plans.

606.08 Method of Measurement

The following sentence is added:

Bridge transition - Type III will be measured by each unit of the type specified, installed and accepted.

606.09 Basis of Payment

The following paragraphs are added:

Bridge Transition - Type III will be paid for at the Contract unit price each complete in place and shall be full compensation for furnishing all labor, equipment and materials necessary to complete the work consisting of, but not necessarily limited to, the following: furnishing and installing guardrail, modifications to concrete end wall to accept terminal anchor, one terminal connector, precast concrete transition curb, including terminal connector anchorage and all other detailed accessories; furnishing and installing all required posts, rails, offset brackets, back-up plates, nuts, bolts, washers, and all other items necessary to make for a complete installation as shown on the Plans or as approved by the Resident.

Payment will be made under:

Pay Item		Pay Unit
606.1723	Bridge Transition - Type III	Each

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(Guardrail - Remove and Stack or Dispose)

606.01 Description

The following paragraphs are added:

This work shall consist of removing and stacking or disposing of existing single and double guardrail elements, component parts and hardware as approved by the Resident. The Resident shall designate which existing guardrail shall be stacked and which existing guardrail shall be disposed of. Guardrail to be stacked shall be transported and delivered to the Kennebunk Maintenance Area. All remaining existing unsuitable guardrail elements, posts, component parts and hardware shall become the property of the Contractor and shall be removed from turnpike property. The Contractor shall provide the Resident with an affidavit stating the final location of all disposed material and that the material was disposed of in accordance with the Maine Department of Environmental Protection Solid Waste Regulations.

606.08 Method of Measurement

The following paragraphs are added:

Guardrail - Remove and Stack or Dispose will be measured on a linear foot basis of guardrail satisfactorily Removed and Stacked or Disposed, whether single rail or double rail. Double twisted end sections will be measured for payment on a linear foot basis as 25 feet of guardrail removed.

606.09 Basis of Payment

The following paragraphs are added:

The accepted quantity of Guardrail - Remove and Stack or Dispose will be paid for at the Contract unit price bid per linear foot, which price shall be full compensation for removing, stacking, transporting, and/or disposing all guardrail elements, component parts and hardware, equipment, labor and all incidentals necessary to complete the work. No additional payment will be made for double rail. Stockpiling existing rail elements, posts, and component parts will not be measured separately for payment, but shall be incidental to Item 606.3631.

Payment will be made under:

Pay Item		Pay Unit
606.3631	Guardrail - Remove and Stack or Dispose	Linear Foot

SPECIAL PROVISION

SECTION 607

FENCES

(Automatic Entry Gate System)

607.01 Description

The following paragraphs are added:

This work shall consist of furnishing and constructing a bi-directional traffic, Automatic Upswing Rigid Cantilever Arm Barrier Gate (Gate System) in accordance with the following specifications.

The installation shall include the assembly and erection of all parts and materials complete at the locations shown on the Plans and as recommended by the Manufacturer or as approved by the Resident.

607.02 Materials

The following paragraph is added:

The automatic entry gate shall be the StrongArm14F UPS Premium Industrial Barrier System manufactured by Nice/HySecurity, 6705 S 209th St, Suite 101, Kent, WA 98032, (800) 321-9947. It shall have the following features:

Arm Length Max.	14 Feet
Open/Close Time	6 - 10 seconds
Arm Design	Aluminum, Side Mount, Breakaway
Temperature Rating	-40 degrees F to 158 degrees F
Duty Cycle	200 cycles/hr
Warranty	5 years
Relays	Three Standard with 8 Additional using Hy8 Relay
Communications	RS-232m RS-485, Ethernet/Fiber using Hynet Gateway, any necessary software shall be provided to the MTA.
Back Up Power	Integrated UPS shall be provided

Foundations necessary for the automatic entry gates, cabinets and any ancillary equipment shall meet the requirements of Section 626 of the Standard Specifications and the Manufacturer's recommendations.

607.03 General

The following paragraphs are added:

A plan for the Gate System and conduit system shall be designed and submitted to the Resident Engineer for approval. The system shall be designed for bi-directional traffic and provide vehicles sensors to determine when vehicles have passed through the gate and it is safe for the gate to close.

Operational control of the automatic entry gate shall be as follows:

The gate operation shall be via the existing Mighty Mule gate remote transmitters that the MTA currently utilizes and in addition shall be controlled by the MTA Lenel electronic card system. The MTA will be responsible for providing the Lenel card system. Contractor shall be responsible for the integration of the Lenel system with the Gate System. Contractor shall provide and install conduit, mounting posts, & foundations for card readers located 20 feet on either side of gate. Readers shall be mounted 4 feet (for cars/light duty trucks) and 6 feet (for large vehicles) above the road surface and protected with a bollard. Gate system shall also include a manual push button within a knox box located on the local road side of the gate attached to the same post as the Lenel card reader.

A UPS battery backup system that is capable of operating the automatic entry gate through a power outage shall be included in the installation.

Gate Beam shall be replaceable and come with three (3) additional replacement beams. Gate beams and gate support (control cabinet) shall be retroreflectorized with Rail Gate Arm Type V alternating red and white prismatic reflective tape both sides, for full width of beam and height of cabinet.

Obstruction Detection Devices: Provide Gate System with automatic safety sensor(s). Activation of sensor(s) causes operator to immediately function as follows:

- Action: Reverse gate in both opening and closing cycles and hold until clear of obstruction.
- Action: Stop gate in opening cycle and gate in closing cycle and hold until clear of obstruction.
- Internal Sensor: Built-in torque or current monitor senses gate is obstructed.
- Photoelectric/Infrared Sensor System: Designed to detect an obstruction in gate's path when infrared beam in the zone pattern is interrupted

Contractor will be responsible for the meter, meter pedestal, separate 334 NEMA cabinet to house the necessary circuit breakers for the gate system and the Lenel Card System.

Gate System shall include 6 Bollards – Bollards will be provided by the MTA for installation by the Contractor. Bollards shall be picked up by the Contractor at the West Gardiner Maintenance Yard. Bollards shall be installed on either side of the gate mechanism and at the end approximately two feet from the end of the gate when it is in the closed position. A clear distance of no less than 16 feet and no more than 16’6” should be provided for vehicles to drive through the gate opening.

The Contractor shall provide a qualified technician to thoroughly review and confirm that the gate system is satisfactory and operational as designed. Prior to the gate system becoming operational, both Contractor and Resident shall review and comment upon the Gate System.

607.06 Method of Measurement

Automatic Entry Gate System will be measured as one lump sum which shall include fully operational systems at both the northbound and southbound emergency vehicle ramps.

607.07 Basis of Payment

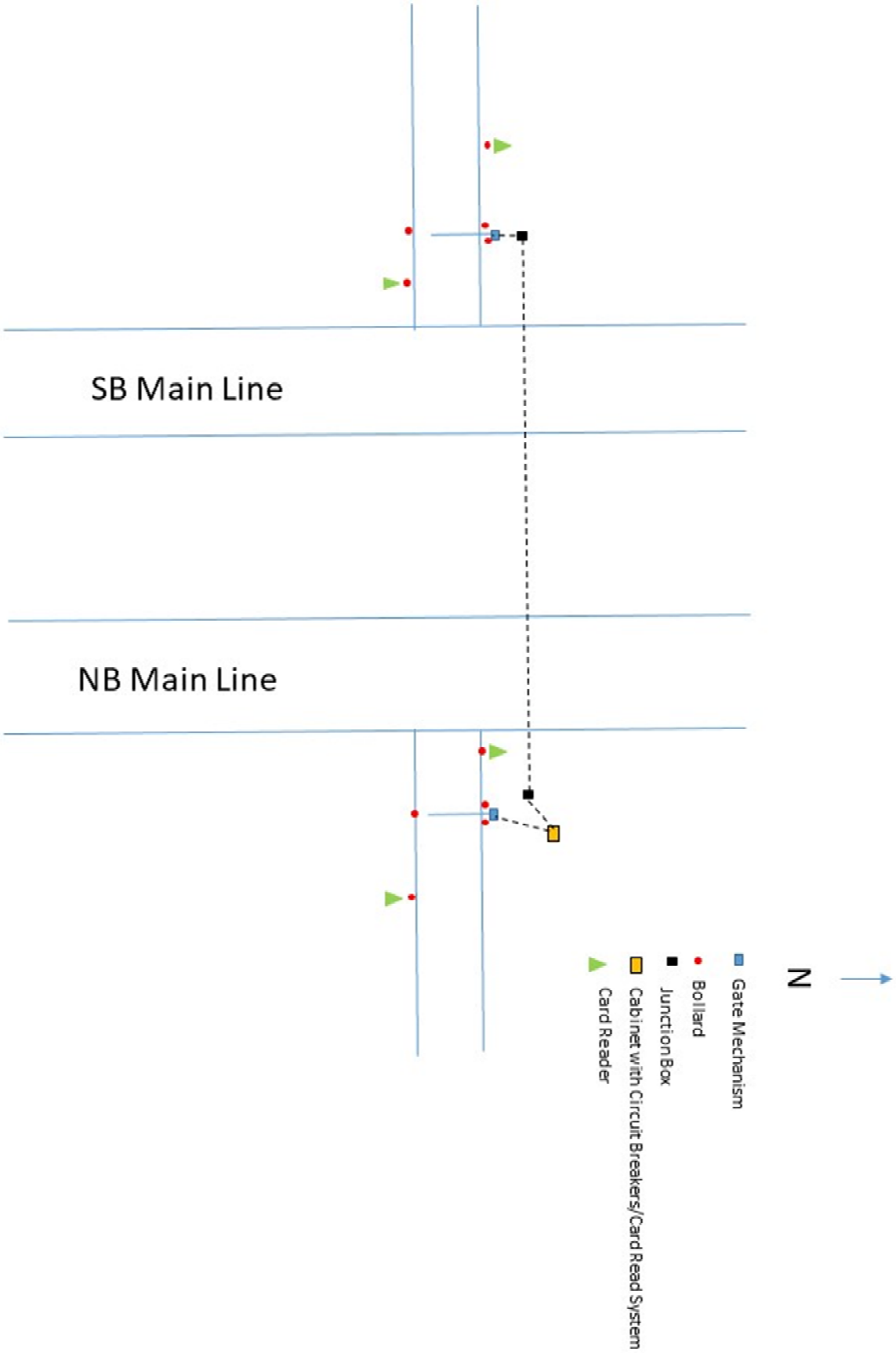
Automatic Entry Gate System will be paid for the complete in place system, which payment shall be full compensation for furnishing and installing all materials, necessary hardware, cabinets, foundations, meter, wire, bollard installation, excavation and concrete, and all incidentals required for a complete functioning installation at both the northbound and southbound emergency vehicle ramps. Removal and proper disposal of existing gate will be considered incidental to this work.

Gate connection to existing or proposed fence will not be measured separately for payment, but shall be incidental to the gate work.

Conduit shall be paid under respective items in Section 626 of the Standard Specifications.

Payment will be made under:

Pay Item		Pay Unit
607.2326	Automatic Entry Gate System	Lump Sum


SB Main Line
NB Main Line
Gate Mechanism
Bollard
Junction Box
Cabinet with Circuit Breakers/Card Read System
Card Reader
N

SPECIAL PROVSION

SECTION 609

CURB

(Concrete Curb Type 2)

609.01 Description

The following sentences are added:

This work shall consist of furnishing and installing Concrete Curb Type 2 in accordance with these Specifications and in reasonably close conformity with the lines, grades and locations as shown on the Plans or as approved by the Resident.

This work shall also consist of all excavation and backfill necessary to install the proposed curb as shown on the Plans.

609.02 Materials

The following sentence is added:

Backfill shall be Aggregate Subbase Course Gravel Type D in conformance with Subsection 304.02.

609.19 Method of Measurement

The following sentences are added:

Concrete Curb Type 2 shall be measured by the linear foot along the front face of the curb at the elevation of the finished grade, complete in place and accepted.

Excavation and backfill associated with curb installation shall be incidental to Item 609.191, Concrete Curb Type 2.

609.10 Basis of Payment

Payment will be made under:

Pay Item		Pay Unit
609.191	Concrete Curb Type 2	Linear Foot

SPECIAL PROVISION

SECTION 613

EROSION CONTROL BLANKET

613.01 Description

This work shall also include seeding, mulching and watering the median swale and/or longitudinal flow line to the limits and width as shown on the Plans or as directed by the Resident.

613.02 Materials

The following sentences are added:

Seeding shall meet the requirements of Section 618, Seeding, Method Number 2.

Mulch shall meet the requirements of Section 619.

The following Subsection is added:

613.041 Maintenance and Acceptance

See Section 618.10 for maintenance and acceptance of seeding.

613.042 Mulch

All mulch shall be placed after the area has been seeded and prior to the installation of the Erosion Control Blanket.

613.09 Basis of Payment

The following "and mulch" is added after the words "initial seeding" in the second sentence.

SPECIAL PROVISION

SECTION 619

MULCH

(Mulch – Plan Quantity)
(Temporary Mulch)

619.01 Description

The first paragraph is modified by the addition of the following:

"as a temporary or permanent erosion control measure" after the word "mulch".

Add the following sentence at the end of the first paragraph:

Refer to Section 656 Temporary Soil and Water Pollution Control, for more information on Temporary Mulch.

619.03 General

The first paragraph is deleted and replaced with the following:

Cellulose fiber mulch shall not be used within 200 feet of a wetland or stream. The limits shall be 200 feet up station and down station of the wetland or streams as well as the slopes adjacent to the stream. The application of hay or straw mulch with an approved binder shall be used at these locations to prevent erosion.

The use of cellulose fiber mulch will only be allowed at other areas with the approval of the Resident. The Contractor may be required to demonstrate that the material may be applied in a manner that will prevent erosion and will aid in the establishment of permanent vegetation. The Resident reserves the right to require the use of hay or straw mulch at all locations if he determines that the cellulose mulch is ineffective. Cellulose fiber mulch is not acceptable for winter stabilization.

610.06 Method of Measurement

The following sentence is added:

Temporary Mulch will be paid for by the lump sum.

656.10 Basis of Payment

Temporary Mulch will be paid for at the Contract price per lump sum which shall be full compensation for furnishing and spreading the Temporary Mulch as many times as necessary as determined by the Contractor's operations and staging. The price shall also include the additional mulch netting and snow removal necessary during the winter months.

Payment will be made under:

Pay Item		Pay Unit
619.1201	Mulch – Plan Quantity	Unit
619.1202	Temporary Mulch	Lump Sum

SPECIAL PROVISION

SECTION 620

GEOTEXTILES

(Cellular Confinement System)

620.01 Description

The following paragraph is added:

This work shall also include designing, furnishing and installing a proprietary cellular confinement system on slopes steeper than 2H:1V at the locations shown on the plan or designated by the Resident.

The cellular confinement system shall consist of a four (4) inch deep (minimum) geocell material which may be expanded to form a three dimensional cellular confinement system which resembles the appearance of a large honeycomb. This geocell material shall be anchored to the slope, filled with loam and seed and covered with erosion control blanket to form a stable slope protection system.

The work shall also include having the manufacturer provide a qualified field representative on site at the start of construction to ensure the cellular confinement system is installed in accordance with the Contract Documents.

620.02 Materials

The following is added:

Slope stabilization geotextile shall be GEOWEB - GW30V Cellular Confinement System as manufactured by Presto Geosystems, PO Box 2399, Appleton, Wisconsin 54912 2399. Toll Free (800) 548 3424. Phone (920) 738 1328. Fax (920) 738 1222.E Mail info@prestogeo.com. Website www.prestogeo.com or approved equal.

Stake anchors shall be #4 reinforcing steel (minimum), 24” long (minimum). with molded, high-strength polyethylene end caps installed on the exposed rebar ends.

Keys shall be constructed of polyethylene and provide a high strength connection to connect the cellular confinement system together at each interleaf and end to end connection.

Infill material shall be loam meeting the requirements of Section 615 with a Soil Conservation Service texture of loam, sandy loam or silty loam. Topsoil shall be neither excessively acidic nor alkaline; and shall be free of any foreign material. Clays and silts are not acceptable infill material.

The Contractor shall submit shop drawings and installation instructions for review by the Resident.

620.03 Placement

The following paragraphs are added:

Prepare subgrade and install cellular confinement system in accordance with Manufacturer's recommendations.

Excavate or fill foundation soils so top of installed cellular confinement system is flush with or slightly lower than adjacent terrain or final grade as indicated on the drawings or as directed by the Resident.

Install the cellular confinement system in accordance with the approved shop drawings and the manufacturer's published recommendations. The stake anchors and keys shall be installed in a grid pattern provided by the manufacturer and approved by the Resident.

Place specified infill in expanded cells with suitable material handling equipment. Limit the drop height to a maximum of 3 feet (1 m) to avoid damage or displacement of the cell walls. Fill the cellular confinement system sections from the crest of the slope to toe or in accordance with Resident's direction. Evenly spread infill and tamp into place.

Fill the anchorage trench with the specified material and compact as required by the Contract Documents.?

Seed, and install erosion control fabric, secured per the Manufacturer's instructions, immediately after placement of the loam fill materials

620.05 Protection of Fabric

The following is added:

The manufacturer's recommendation for cellular containment system installation, staking, and placement of loam shall be strictly followed so the cellular containment system is not damaged. The operation of construction vehicles over the installed cellular containment system will not be permitted.

620.07 Method of Measurement

The following is added:

The quantity of cellular containment system will be measured by the number of square yards of surface area satisfactorily covered and accepted.

Common excavation and fill materials to obtain subgrade for the cellular containment system will be measured for payment under their respective pay items. Proper preparation of the subgrade to accept the cellular containment system will not be measured separately but shall be incidental to Item 620.625 Cellular Confinement System.

Loam, seed, and erosion control blanket will be measured for payment under their individual pay items. No additional compensation will be allowed for any additional labor, material or equipment required to place these materials in the cellular containment system in accordance with the manufacturer's recommendation.

620.08 Basis of Payment

The following is added:

Cellular containment system will be paid for at the contract unit price per square yard. Such payment shall be full compensation for proper preparation of the subgrade to accept the cellular containment system; and for designing, furnishing and placing the cellular containment system, and required stake anchors and keys.

Payment will be made under:

Pay Item		Pay Unit
620.625	Cellular Confinement System	Square Yard

SPECIAL PROVISION

SECTION 621

LANDSCAPING

(Evergreen Trees)

The provisions of Section 621 of the Standard Specifications shall apply with the following additions and modifications:

621.0001 Description

This work shall consist of the Contractor furnishing and planting trees, shrubs, vines, and other plants and shall include all planting operations and material as well as the care and replacement of the plants during the establishment period, all in accordance with the specifications, planting plans and schedules and the directions of the Resident.

Landscaping shall include the placement of loam and mulch in planting best as shown on the drawings.

621.0037 Method of Measurement

Wood fiber mulch for the planting and tree areas is be incidental to the installation of the landscape plants. No separate measurement or payment will be made.

621.0038 Basis of Payment

Payment will be made under:

Pay Item		Pay Unit
621.037	Evergreen Tress (5'-6'), GP A Thuja O. Douglass (Douglass Arborvite)	Each

SPECIAL PROVISION

SECTION 626

FOUNDATIONS, CONDUIT, AND JUNCTION BOXES
FOR HIGHWAY SIGNING, LIGHTING AND SIGNALS

(Quazite Junction Box)

626.02 General

The following paragraph is added:

Junction boxes for the electrical and communication conduit associated with the toll equipment and intelligent transportations systems shall be polymer concrete as manufactured by QUAZITE® a division of Hubbell Power Systems. The boxes shall be 36" x 24" and 21" deep. The words ELECTRICAL, LIGHTING, TRAFFIC, or COMMUNICATION shall be stamped on the cover as noted in the Plans or directed by the Resident. The boxes shall have an 8,000 lb. load rating. All existing QUAZITE® Junction Boxes in useable condition shall be removed and relocated as directed by the Resident Engineer.

Junction boxes for the electrical associated with highway lighting shall be precast concrete. All existing Precast Junction Boxes in useable condition shall be removed and relocated as directed by the Resident Engineer. New boxes shall have the word LIGHTING stamped on the cover.

626.04 Method of Measurement

The following sentence is added:

Quazite junction box shall be measured by each unit in place and accepted existing or new.

Precast junction box shall be measured by each unit in place and accepted existing or new.

626.05 Basis of Payment

The words, "polymer concrete" shall be added after the words, "precast concrete" in the second sentence of the second paragraph.

Payment will be made under:

Pay Item		Pay Unit
626.12	Quazite Junction Box	Each

SPECIAL PROVISION

SECTION 626

FOUNDATIONS, CONDUIT, AND JUNCTION BOXES
FOR HIGHWAY SIGNING, LIGHTING AND SIGNALS

(Horizontal Directional Drilled Conduit)

626.01 Description

The following paragraph is added:

Horizontal Directional Drilling (HDD) method shall be used for installation of non-metallic conduit for highway lighting, toll systems and traffic signals when specified on the project plans or approved by the Resident. It shall include furnishing of all materials, site preparation, equipment setup, pilot bore, conduit pulling through the drilled bore, installation of pull wire and fittings, site restoration, and incidental work necessary to satisfactorily install conduit at the required locations and depths.

626.02 General

The following sections are added:

Materials

Conduit for Horizontal Directional Drilling shall meet requirements of Section 715.03 for non- metallic conduit. Non-metallic conduit to be installed under roadways shall be Schedule 80 or greater. Non-metallic conduit to be installed in other locations shall be Schedule 40 or greater. Conduit sections shall be joined by methods suitable for installation by HDD. Joined conduit sections must have adequate strength and flexibility to withstand the installation stresses and overburden pressures without compromising the structural stability of the conduit wall. Conduit must be able to meet the bend radius required for the proposed installation. Conduit sections shall be joined in a manner resulting in the inner surfaces being flush and even.

Construction

Prior to commencing HDD work, the Contractor shall submit a drilling work plan to the Resident for approval addressing the following, at minimum:

- Profile of the proposed bore plotted at a scale appropriate for the crossing and acceptable to the Resident;
- HDD site layout including entry and exit points;
- Drilling fluid management plan, including drilling fluid types and specifications, cleaning and recycling equipment to be used, estimated flow rates, procedures for minimizing drilling fluid escape, and the method and location for final disposal of waste drilling fluids. Material safety data sheets shall be provided for all drilling fluid additives that will be used;
- Conduit storage and handling details;
- Summary of assembly and installation procedures to be used;
- Material safety data sheets of any other potentially hazardous substances to be used;
- Response plans for possible problems that may be encountered;

- Documentation and certification of the ability of the proposed conduit to withstand installation stresses and pressures.

The HDD drill rig and auxiliary pieces of equipment shall be appropriate for the diameter and length of conduit being installed. The power system shall provide sufficient pressure to power the drilling operations with a hydraulic system free from leakage. The directional drilling machine shall be anchored as necessary to stabilize it against excessive dislocation.

In order to minimize friction and prevent collapse of the bore hole, a soil stabilizing agent (drilling fluid) may be introduced into the annular bore space from the front end of the drill head to create a slurry. The drilling fluids shall be selected or designed for the site's specific soil and ground water conditions. The drilling fluid mixing system shall be self-contained and closed with sufficient size to mix and deliver drilling fluid to the drill head. The mixing system shall continually agitate the drilling fluid during drilling operations. The fluids delivery system shall be capable of pumping drilling fluid with sufficient volume and pressure from the mixing tank through the drill rods to the drill head.

Alignment of the bore shall be accomplished by proper orientation of the drill head as it is pushed through the ground by the drill rig. Orientation and tracking of the drill head shall be determined by using an acceptable tracking system from a transmitter located within the drill head. The HDD guidance system shall be capable of locating and tracking the drill head continuously and accurately both horizontally and vertically during the pilot bore. All equipment shall be properly calibrated before commencing the directional drilling operation.

Borehole diameter relative to the conduit diameter shall be minimized to limit potential damage from soil displacement, settlement, and heaving. When necessary, the pilot borehole may be enlarged by back reaming to accommodate conduit larger than the pilot borehole size. Back reaming may be accomplished ahead of or at the same time as pulling the conduit through the pilot borehole. The back-reamer shall be sized to create a large enough borehole to allow cuttings to transfer from the face of excavation to the surface with minimum soil displacement.

Escaping slurry or drilling fluids shall be confined at the ground surface during pull back or drilling. All drilling fluids shall be disposed of or recycled in a manner acceptable to the Maine Department of Environmental Protection. Upon completion of the HDD operation, the work site shall be cleaned of all excess slurry or spoils. Any damage caused by heaving, settlement, separation of pavement, escaping drilling fluid, or other damage from the directional drilling operation shall be repaired by the Contractor to the satisfaction of the Resident.

At the completion of the HDD conduit installation, the Contractor shall provide to the Resident marked up plans noting location, depth, and material type of all conduit installed by the Horizontal Directional Drilling method.

626.04 Method of Measurement

The following sentence is added:

Horizontal Directional Drilled Conduit will be measured by the number of linear feet of conduit in place and accepted by the Resident.

626.05 Basis of Payment

Payment will be made for the total number of linear feet of Horizontal Directional Drilled Conduit and accepted at the contract price per linear foot. Payment shall include the cost of furnishing and installing the conduit; site preparation and restoration of drilling entry and exit points; removal of excavated material and drilling spoils; removal and disposal of drilling fluids and excess slurry; pull wire, fittings, grounding and bonding; test cleaning of conduit interior; and all other materials, labor, equipment, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item		Pay Unit
626.223	Horizontal Directional Drilled Conduit	Linear Foot

SPECIAL PROVISION

SECTION 627

PAVEMENT MARKINGS

(White or Yellow Pavement Marking Line)

627.01 Description

The following sentences are added:

This work shall consist of furnishing and placing the final pavement markings at locations as shown on the Plans or as directed by the Resident.

The following sentence is added:

This work shall consist of furnishing and placing pavement marking paint and temporary pavement marking paint at locations as shown on the Plans or as directed by the Resident.

627.02 Materials

The following is added before the last paragraph:

The paint for pavement markings shall be 100% acrylic waterbase paint.

627.04 General

The following is added to the third paragraph:

Dotted white lines (DWL) shall consist of alternate 3 foot painted line segments and 9 foot gaps.

Permanent pavement marking paint shall be applied at the end of each work week prior to opening the work area to traffic or as approved by the Resident.

Temporary pavement marking paint and temporary pavement markers shall be applied daily prior to opening the work area to traffic during non-work hours or as approved by the Resident.

627.08 Removing Lines and Markings

The last sentence is deleted and is not replaced.

627.09 Method of Measurement

The second and third sentences in the second paragraph are deleted and replaced with the following:

The measurement of broken white lines, both permanent and temporary and dotted white lines, will include the gaps when painted. Temporary painted pavement marking lines will be measured for payment by the linear foot.

627.10 Basis of Payment

This Subsection is deleted and replaced with the following:

The accepted quantity of white or yellow pavement marking lines will be paid at the Contract price per linear foot. This price shall include all labor and materials to furnish, and install the paint line.

The accepted quantity of broken and dotted white pavement marking lines will be paid at the Contract price per linear foot. This price shall include all labor and materials to furnish and install the paint line.

The accepted quantity of temporary white or yellow pavement marking lines will be paid at the Contract price per linear foot. This price shall include all labor and materials to furnish, install and maintain the paint marking.

The accepted quantity of temporary white or yellow pavement and curb marking will be paid at the Contract price per square foot. This price shall include all labor and materials to furnish, install and maintain the paint marking.

Payment will be made under:

Pay Item		Pay Unit
627.712	White or Yellow Pavement Marking Line	Linear Foot
627.752	Temporary White or Yellow Pavement and Curb Marking	Square Foot

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Flaggers)

Section 652 of the Maine Turnpike Authority 2016 Supplemental Specifications is modified as follows:

652.2.4 Other Devices

Paragraph five is deleted and replaced with the following:

STOP/SLOW paddles shall be the primary and preferred hand-signaling device. Flags shall be limited to emergencies. The paddle shall have an octagonal shape and be at least 18 inches wide with letters at least 6 inches high and should be fabricated from light semi-rigid material. STOP/SLOW paddles shall have internal flashing LEDs and be Visual-Alert LED STOP/SLOW Paddles or approved equivalent.

652.4 Flaggers

The last sentence in the first paragraph is deleted and replaced with the following:

Only flashing SLOW/STOP paddles shall be used and the flagger station shall be illuminated to assure visibility in accordance with 652.6.2.

Add:

Flaggers shall not stop traffic on Turnpike mainline or interchange ramps. Only State Police are allowed to stop traffic on mainline or interchange ramps.

652.7 Method of Measurement

Add:

Payment for flagging will only be made for the initial installation and removal of the temporary traffic control signal system and during final surface paving at the Route 26 site, unless otherwise directed by the Resident.

Flaggers used for the convenience of the Contractor will not be measured for payment and shall be incidental to the various pay items.

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Truck Mounted Attenuator)

Section 652 of the Maine Turnpike Authority 2016 Supplemental Specifications is modified as follows:

652.1 Description

The following paragraph is added:

When a pay item for a Truck Mounted Attenuator (TMA) is included in the contract at least one TMA will be required on the project and its use will be required. The truck mounted attenuator should be utilized in lane closures and other construction operations where workers are exposed to traffic and not protected by other positive means. The Contractor shall manage the utilization and operation of the TMA and if at least one 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.

652.2.1 Truck Mounted Attenuator

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

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.
- A mounted revolving amber light or amber strobe light 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 10,000 lbs.

652.3.7 Operations

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

The Contractor shall manage the operation of the truck mounted attenuator. The truck mounted attenuator should be utilized in lane closures and other construction operations where workers are exposed to traffic and not protected by positive means. The operation of the vehicle shall be in accordance with the Manual of Uniform Traffic Control Devices and the manufacturer's recommendation.

Installation: The chart below identifies the distance from the work zone or hazard where the TMA shall be deployed. If the work zone is within a marked lane closure, the barrier truck distances shall apply and if the work is mobile, then shadow truck distances shall apply. The

TMA shall not be located in the buffer zone. When used as a barrier, the barrier truck shall be parked in low gear with brakes applied and the front wheels turned away from the work zone and the adjacent traffic lane. For placement details, reference the Manual of Uniform Traffic Control Devices (MUTCD).

Weight of Truck	Barrier Truck Distance from Work Zone of Hazard	Shadow Truck Distance from Work Vehicle or Work Zone
10,000 lbs	250 ft	300 ft
15,000 lbs	200 ft	250 ft
>24,000 lbs	150 ft	200 ft

652.7 Method of Measurement

The last paragraph is deleted and replaced with:

Truck mounted attenuator shall be measured for payment by the calendar day for each calendar day that a unit is used on a travel lane or shoulder on the project, as approved by the Resident.

652.8.2 Basis of Payment

The last two paragraphs are deleted and replaced with:

The Truck Mounted Attenuator(s) will be paid for at the Contract unit price per calendar day for each TMA used. 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.

Payment will be made under:

Pay Item		Pay Unit
652.45	Truck Mounted Attenuator	Calendar Day

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Temporary Portable Rumble Strips)

652.01 Description:

This work consists of furnishing and placing temporary portable rumble strips RoadQuake 2F TPRS or an approved equal.

652.02 Materials:

Furnish a temporary portable rumble strip system, which 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.

652.03 General:

Placement:

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.

Maintenance:

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.

652.04 Method of Measurement:

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.

652.05 Basis of Payment:

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.

Pay Item		Pay Unit
652.46	Temporary Portable Rumble Strip	Unit

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Automated Speed Limit Sign)

652.1 Description

This special provision provides for furnishing, operating, and maintaining an Automated Trailer Mounted Radar Speed Limit Sign for project use. When a pay item for an Automated Trailer Mounted Radar Speed Limit Sign is included in the Contract at least one will be required on the project 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.

652.1.1 Instruction and maintenance manuals shall be provided.

652.2 Materials

Automated Trailer Mounted Speed Limit Sign

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, and power supply specifically constructed to operate as a trailer-mounted sign. The preferred color of the unit shall be “construction orange”.

Signs

Base material for the regulatory speed limit signs shall be weather proof, 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 Appendix).

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

Power supply

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

Flashing Lights

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, either strobe, halogen, or incandescent lamps, 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.

Radar

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.

CONSTRUCTION REQUIREMENTS

652.3.2 Responsibility of the Contractor

The Contractor shall furnish the Automated Trailer Mounted Speed Limit Sign as described in this Special Provision for this project.

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. 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.

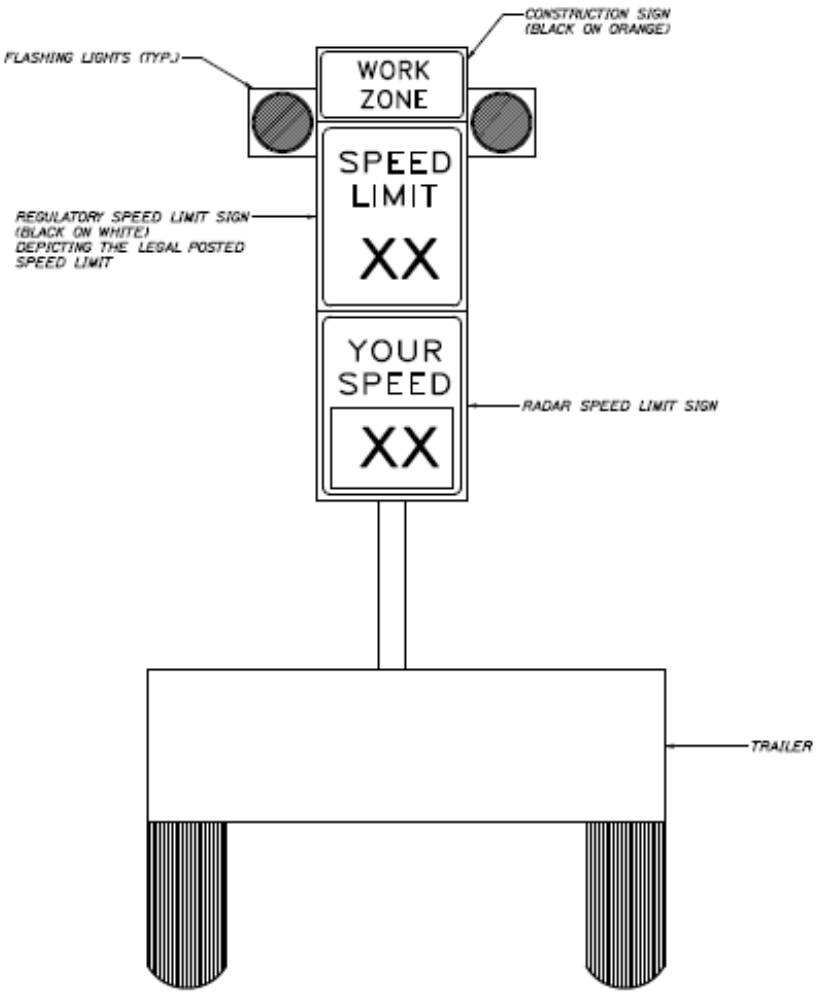
652.7 Method of Measurement

Automated Trailer Mounted Speed Limit Sign shall be measured for payment by the calendar day for each calendar day that the unit is used on a travel lane or shoulder on the project or per each for the continued use for the duration of the project. 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.

652.8 Basis of Payment

The Automated Trailer Mounted Speed Limit Sign(s) will be paid for at the Contract unit price per calendar day or per each. This price shall include all costs associated with the use of the Automated Trailer Mounted Speed Limit Sign.

Pay Item		Pay Unit
652.451	Automated Trailer Mounted Speed Limit Sign	Calendar Day
652.452	Automated Trailer Mounted Speed Limit Sign	Each



Date: 2/13/2018

Filename: Trailer Mounted Speed Limit.dgn

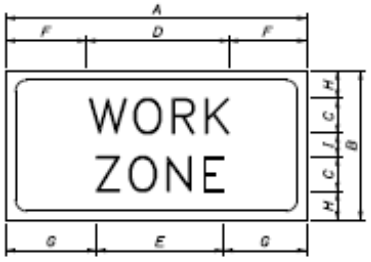
MAINE TURNPIKE

HNTB

FEBRUARY 2018

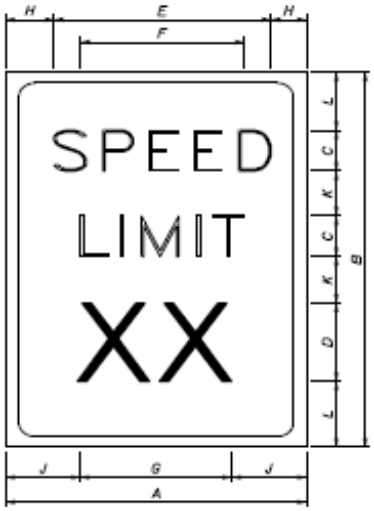
AUTOMATED TRAILER MOUNTED
SPEED LIMIT SIGN

1OF 2



SIGN #1

1.25" BORDER, 0.75" INDENT,
BLACK ON ORANGE, 8B GRADE PLYWOOD SIGN



SIGN #2

1.25" BORDER, 0.75" INDENT,
BLACK ON WHITE, 8B GRADE PLYWOOD SIGN

	DIMENSIONS (INCHES) / LETTER FONTS											
	A	B	C	D	E	F	G	H	I	J	K	L
#1	48	20	5D	18⅛	16⅝	14⅞	15⅝	4	2	N/A	N/A	N/A
#2	48	60	8E	16E	38¼	29¼	29½	4½	9⅜	9¼	8	6

Date: 2/13/2018

Filename: Trailer Mounted Speed Limit.dgn

MAINE TURNPIKE

HNTB

FEBRUARY 2018

TRAILER MOUNTED CONSTRUCTION ZONE
SPEED LIMIT SIGN

2 OF 2

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.

Route 26 Traffic Control Requirements

A minimum of one-lane alternating traffic shall be maintained on Route 26 at all times in accordance with the details shown on the Plans with the exception of a two week closure for jacking the bridge and installing new bridge joints. The Contractor shall coordinate directly with the Authority for acceptable road closure dates as outlined in Section 107.4.6. The Contractor shall notify the Resident/Authority two weeks prior to this closure. A temporary detour shall be established and maintained at all times in accordance with the detour plan shown on the Plans. The detour route begins at the Route 26 bridge over the Maine Turnpike, proceeding south to Route 202; following Route 202 across the Turnpike to Route 26A; following Route 26A back to Route 26 on the west side of the Turnpike. The Resident will notify the Town of Gray prior to closing Route 26 at the Turnpike. The Contractor shall erect any additional local road signage required by the Resident at least one day prior to this closure. Once installation of the Route 26 detour signage is in place, the bridge may be closed to traffic to complete the work.

Webster Road Traffic Control Requirements

Webster Road will be closed to through traffic between Marsh Road and Furbish Road. The Contractor shall coordinate directly with the Authority for acceptable road closure dates as outlined in Section 107.4.6. The Contractor shall notify the Resident/Authority two weeks prior to the closure. A temporary detour shall be established and maintained at all times in accordance with the detour plan shown on the Plans. The detour route begins at the Webster Road bridge over the Maine Turnpike, proceeding southeast to Crowley Road; following Crowley Road to South Lisbon Road; following South Lisbon Road to Old Lisbon Road across the Turnpike and back to Webster Road on the west side of the Turnpike. The Resident will notify the City of Lewiston prior to closing Webster Road at the Turnpike. The Contractor shall erect any additional local road signage required by the Resident at least one day prior to this closure. Once installation of the Webster Road detour signage is in place, the bridge may be closed to traffic to complete the work.

Plains Road Traffic Control Requirements

Plains Road will be closed to through traffic between Small Road and Upper Pond Road. The Contractor shall coordinate directly with the Authority for acceptable road closure dates as outlined in Section 107.4.6. The Contractor shall notify the Resident/Authority two weeks prior to the closure. A temporary detour shall be established and maintained at all times in accordance with the detour plan shown on the Plans. The detour route begins at the Plains Road bridge over the Maine Turnpike, proceeding east to Upper Pond Road; following Upper Pond Road to Richmond Road (Route 197); following Richmond Road to Small Road, following Small Road across the Turnpike back to Plains Road on the west side of the Turnpike. The Resident will notify the Town

of Litchfield prior to closing Plains Road at the Turnpike. The Contractor shall erect any additional local road signage required by the Resident at least one day prior to this closure. Once installation of the Plains Road detour signage is in place, the bridge may be closed to traffic to complete the work.

Maine Turnpike Traffic Control Requirements

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:

Bridge work directly over traffic or 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. Installing and removing shielding
2. Superstructure rehabilitation
3. Pier rehabilitation
4. Unbolting structural steel
5. Removing structural steel
6. Erecting structural steel or concrete beams
7. Installing and removing deck and diaphragm forms
8. Erecting or moving sign panels on bridges
9. Bolting structural steel
10. Painting structural steel

When approved by the Resident, Items 4, 7 and 9 may be performed over traffic if a temporary floor is provided between the bottom flanges of the beams.

Loading or unloading of trucks shall not be closer than six feet from an open travel lane when being loaded or unloaded within the work zone.

A minimum of one lane shall be open to traffic in each direction at all times. Open lanes during periods of single lane closures shall have a minimum width of 14 feet. Permanent lane closures are not allowed.

Lane Closures will NOT be allowed Northbound on Fridays from 3 p.m. to 6:00 p.m. from June 1 to October 15.

When the Speed Limit on the Maine Turnpike has been reduced to 45 mph, temporary shoulder/lane closures will not be allowed. All temporary shoulder/lane closures in place shall be immediately removed. Only work on the Turnpike Mainline that is behind temporary concrete barrier will be allowed.

Temporary Mainline Lane Closures	24 hours per day starting at 7:00 p.m. Sunday thru 6:00 p.m. Friday
Temporary Mainline Shoulder Closures	24 hours per day starting at 7:00 p.m. Sunday thru 6:00 p.m. Friday

SPECIAL PROVISION

SECTION 655

ELECTRICAL

(Installation of Sensor Loops)

Description

The Contractor shall sawcut any concrete pavement slab as directed by the Resident and according to Plans and detailed manufacturer's instructions provided prior to installation. Given the proprietary nature of the loop installation requirements, the manufacturer's instructions will only be provided to the awarded Contractor. Loop installation will involve multiple sawcuts within the limits indicated on the Plans and per manufacturer provided templates. Templates for loop cutting outlines shall be provided by the SI. No loop installation activities shall be done without the SI representative on-site. The SI will also provide the required materials for sealing the loops, including but not limited to, the required epoxy, pump and related injection equipment prior to the Contractor placing sensor loops. The Contractor shall be responsible for obtaining and operating required sawcutting equipment.

NOTE: All dust must be contained so that no silica reaches Authority employees or patrons. This may be accomplished by using wet saws, advanced air filter systems or by building an enclosure around the work area. The Contractor shall provide the Resident a 5-day notice prior to any sawcutting activities.

Basis of Payment

Payment to be made as lump sum for all associated Sensor loops shown on Plan drawings. Sawcutting of pavement, installation of epoxy and loops will be incidental to item.

Payment will be made under:

Pay Item		Pay Unit
655.04	Installation of Sensor Loops	Lump Sum

SPECIAL PROVISION

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 VII, Type VIII or Type IX, for all signs. All Type 1 Guide Signs shall meet at a minimum the requirements for ASTM 4956 –Type XI sheeting. Use of overlay film that degrades the retroreflectivity of the sign sheeting (i.e. Avery-Dennison overlay film) will be prohibited.

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.

Signs may only be covered using materials and techniques explicitly approved by the sheeting manufacturer for that purpose and shall not alter the sign sheeting warranty.

- 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 block.

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 Direct Applied Reflectorized Letters, Numerals, Symbols, and Borders

Direct applied letters, numerals, symbols and borders shall consist of cut out sheeting shall meet at a minimum the requirements for ASTM 4956 – Type VII, Type VIII or Type IX sheeting.

All Type 1 Guide Signs shall meet at a minimum the requirements for ASTM 4956 – Type XI sheeting.

APPENDIX

January 28, 2019

Mr. John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook,ME 04092

RE: Katahdin Lab Number: SM0685
Project ID: Turnpike Bridge Paint
Project Manager: Mr. Galen Nickerson
Sample Receipt Date(s): January 23, 2019

Dear Mr. Doughty:

Please find enclosed the following information:

* Report of Analysis (Analytical and/or Field)
* Quality Control Data Summary
* Chain of Custody (COC)
* Login Report

A copy of the Chain of Custody is included in the paginated report. If requested, the original COC is attached as an addendum to this report.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact the project manager listed above. The results contained in this report relate only to the submitted samples. This cover letter is an integral part of the ROA.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in an attached technical narrative or in the Report of Analysis.

We appreciate your continued use of our laboratory and look forward to working with you in the future. The following signature indicates technical review and acceptance of the data.

Please go to http://www.katahdinlab.com/cert for copies of Katahdin Analytical Services Inc. current certificates and analyte lists.

Sincerely,
KATAHDIN ANALYTICAL SERVICES

Leslie Dimond

Leslie Dimond - Quality Assurance Officer

01/28/2019

Date

TECHNICAL NARRATIVE

Metals Analysis

Katahdin Sample Numbers SM0685-(1, 2) are solid samples that were subjected to TCLP extraction on 1/23/19 in accordance with USEPA Method 1311. The TCLP fluid blank identified as PBT1504A is associated with these samples. The measured barium concentration in the TCLP fluid blank PBT1504A (0.046mg/L) is above the laboratory's reporting limit. However, because the concentrations of barium in the TCLP blank and in the associated TCLP extracts are well below the regulatory limit, reanalysis was not required.

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL "U" LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level (PQL) or LOQ could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

H_ Please note that the regulatory holding time for _____ is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. _____ for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H1 - pH H2 - DO H3 - sulfite H4 - residual chlorine

T1 The client did not provide the full volume of at least one liter for analysis of TSS. Therefore, the PQL of 2.5 mg/L could not be achieved.

T2 The client provided the required volume of at least one liter for analysis of TSS, but the laboratory could not filter the full one liter volume due to the sample matrix. Therefore, the PQL of 2.5 mg/L could not be achieved.

M1 The matrix spike and/or matrix spike duplicate recovery performed on this sample was outside of the laboratory acceptance criteria. Sample matrix is suspected. The laboratory criteria was met for the Laboratory Control Sample (LCS) analyzed concurrently with this sample.

M2 The matrix spike and/or matrix spike duplicate recovery was outside of the laboratory acceptance criteria. The native sample concentration is greater than four times the spike added concentration so the spike added could not be distinguished from the native sample concentration.

R1 The relative percent difference (RPD) between the duplicate analyses performed on this sample was outside of the laboratory acceptance criteria (when both values are greater than ten times the PQL).

MCL	Maximum Contaminant Level	NL	No limit
NFL	No Free Liquid Present	FLP	Free Liquid Present
NOD	No Odor Detected	TON	Threshold Odor Number

D-1 As required by Method 5210B, APHA Standard Methods for the Examination of Water and Wastewater (21st edition), the BOD value reported for this sample is 'qualified' because the check standard run concurrently with the sample analysis did not meet the criteria specified in the method (198 +/- 30.5 mg/L). These results may not be reportable for compliance purposes.

D-2 The measured final dissolved oxygen concentrations of all dilutions were less than the method-specified limit of 1 mg/L. The reported BOD result was calculated assuming a final oxygen concentration equal to 1 mg/L. The reported value should be considered a minimum value.

D-3 The dilution water used to prepare this sample did not meet the method and/or regulatory criteria of less than 0.2 or 0.4 mg/L dissolved oxygen (DO) uptake over the five day period of incubation. These results may not be reportable for compliance purposes.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SM0685-001
Report Date: 1/28/2019
PO No.:
Project: Turnpike Bridge Paint

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MM 64.3 RT 26 UNDERPASS	AQ	No(Total)	01/17/2019	01/23/2019

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prep Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	1
BARIUM, TCLP	1.68	mg/L	0.025	1	0.005	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	
CADMIUM, TCLP	U 0.0250	mg/L	0.0250	1	0.005	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	1
CHROMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	1
LEAD, TCLP	0.865	mg/L	0.02	1	0.005	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	1/25/19	AB	SW846 7470	1/25/19	AB	MA25HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	1
SILVER, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SM0685-002
Report Date: 1/28/2019
PO No.:
Project: Turnpike Bridge Paint

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MM 82.7 WEBSTER RD UNDERPASS	AQ	No(Total)	01/17/2019	01/23/2019

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prep Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	1
BARIUM, TCLP	2.20	mg/L	0.025	1	0.005	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	
CADMIUM, TCLP	U 0.0250	mg/L	0.0250	1	0.005	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	1
CHROMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	1
LEAD, TCLP	5.95	mg/L	0.02	1	0.005	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	1/25/19	AB	SW846 7470	1/25/19	AB	MA25HGW1	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	1
SILVER, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/24/19	MM	SW846 3010	1/24/19	AB	MA24ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin
ANALYTICAL SERVICES

EXTRACTION FLUID BLANK REPORT

Sample ID: PBT1504A

Element Name	Result	Units	Flag	PQL	File
ALUMINUM	0.2	mg/L	J	1.5	IMA18A
ARSENIC	0.0071	mg/L	U	0.04	IMA18A
BARIUM	0.046	mg/L	H	0.025	IMA18A
BERYLLIUM	0.00051	mg/L	U	0.025	IMA18A
CADMIUM	0.00024	mg/L	U	0.0250	IMA18A
CALCIUM	0.14	mg/L	J	0.500	IMA18A
CHROMIUM	0.0018	mg/L	U	0.0500	IMA18A
COBALT	0.0012	mg/L	U	0.0500	IMA18A
COPPER	0.0031	mg/L	U	0.125	IMA18A
IRON	0.065	mg/L	J	0.500	IMA18A
LEAD	0.0054	mg/L	U	0.02	IMA18A
LITHIUM	0.02	mg/L	J	0.500	IMA18A
MAGNESIUM	0.039	mg/L	U	0.500	IMA18A
MANGANESE	0.0053	mg/L	U	0.025	IMA18A
MERCURY	0.013	ug/L	U	0.20	HMA17A
NICKEL	0.0075	mg/L	J	0.0500	IMA18A
POTASSIUM	0.20	mg/L	U	5.00	IMA18A
SELENIUM	0.012	mg/L	U	0.050	IMA18A
SILVER	0.0013	mg/L	U	0.050	IMA18A
THALLIUM	0.0054	mg/L	U	0.075	IMA18A
TIN	0.775	mg/L	H	0.500	IMA18A
VANADIUM	0.0012	mg/L	U	0.0500	IMA18A
ZINC	0.042	mg/L	J	0.100	IMA18A

U The analyte was not detected in the sample at a level greater than the instrument detection limit.

J The analyte was detected in the sample at a concentration greater than the instrument detection limit, but less than the laboratory's Practical Quantitation Level.

H The analyte was detected in the sample at a concentration greater than the laboratory's acceptance limit.

Katahdin
ANALYTICAL SERVICES

PREPARATION BLANK REPORT

Sample ID: PBWMA24ICW1 **Batch ID:** MA24ICW1 **Work Order:** SM0685

Element Name	Flag	Result	Units	PQL	MDL	File
ARSENIC	U	0.008	mg/L	0.008	0.0014	IMA24A
BARIUM	U	0.0050	mg/L	0.0050	0.00023	IMA24A
CADMIUM	U	0.00500	mg/L	0.00500	0.000049	IMA24A
CHROMIUM	U	0.0100	mg/L	0.0100	0.00036	IMA24A
LEAD	U	0.005	mg/L	0.005	0.0011	IMA24A
SELENIUM	J	0.003	mg/L	0.010	0.0024	IMA24A
SILVER	U	0.010	mg/L	0.010	0.00026	IMA24A

U The analyte was not detected in the sample at a level greater than the method detection limit.

J The analyte was detected in the sample at a concentration greater than the method detection limit, but less than the laboratory's Practical Quantitation Level.

H The analyte was detected in the sample at a concentration greater than the laboratory's acceptance limit.

Katahdin
ANALYTICAL SERVICES

PREPARATION BLANK REPORT

Sample ID: PBWMA25HGW1 **Batch ID:** MA25HGW1 **Work Order:** SM0685

Element Name	Flag	Result	Units	PQL	MDL	File
MERCURY	U	0.20	ug/L	0.20	0.013	HMA25A

U The analyte was not detected in the sample at a level greater than the method detection limit.

J The analyte was detected in the sample at a concentration greater than the method detection limit, but less than the laboratory's Practical Quantitation Level.

H The analyte was detected in the sample at a concentration greater than the laboratory's acceptance limit.

LABORATORY CONTROL SAMPLE REPORT

Sample ID: LCSWMA24ICW1 **Batch ID:** MA24ICW1 **Work Order:** SM0685

Element Name	True Value	Result	Units	Recovery(%)	Flag	Limits (%)		File
ARSENIC	0.100	0.101	mg/L	101.0		80	120	IMA24A
BARIUM	2.00	1.96	mg/L	98.0		80	120	IMA24A
CADMIUM	0.250	0.260	mg/L	104.0		80	120	IMA24A
CHROMIUM	0.200	0.192	mg/L	96.0		80	120	IMA24A
LEAD	0.100	0.105	mg/L	105.0		80	120	IMA24A
SELENIUM	0.100	0.103	mg/L	103.0		80	120	IMA24A
SILVER	0.050	0.047	mg/L	94.0		80	120	IMA24A

H Laboratory control sample recovery is greater than the laboratory's acceptance limit.

L Laboratory control sample recovery is less than the laboratory's acceptance limit.

LABORATORY CONTROL SAMPLE REPORT

Sample ID: LCSWMA25HGW1 **Batch ID:** MA25HGW1 **Work Order:** SM0685

Element Name	True Value	Result	Units	Recovery(%)	Flag	Limits (%)		File
MERCURY	5.00	4.98	ug/L	99.6		80	120	HMA25A

H Laboratory control sample recovery is greater than the laboratory's acceptance limit.

L Laboratory control sample recovery is less than the laboratory's acceptance limit.

Katahdin Analytical Services, LLC. Sample Receipt Condition Report

Client: HNTB	KAS PM: GN	Sampled By: NA
Project: MTA PAINT	KIMS Entry By: SD	Delivered By: NA
KAS Work Order#: SM 0685	KIMS Review By: GN	Received By: SD
SDG #:	Cooler: 1 of 1	Date/Time Rec.: 1/22/19 1505

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				✓	
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.		✓			Temp (°C): 8.3 — Thermometer ID: IR-1
Samples received at <6 °C w/o freezing?		✓			Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?		✓		✓	The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?				✓	
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles:					
Aqueous: No bubble larger than a pea?				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
Air: Refer to KAS COC for canister/flow controller requirements.	√ if air included				
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	
11. Bottleware Prepped on:					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Katahdin ANALYTICAL SERVICES
600 Technology Way
P.O. Box 540
Scarborough, ME 04070
Tel: (207) 874-2400
Fax: (207) 775-4029

Chain of Custody

Client: HNTB	Contact: John Doughty	Phone #: (207)774-5155	Fax #: (207)228-0909
Address: 340 County Road Suite 6-C	City: Westbrook	State: Maine	Zip Code: 04092
Purchase Order #:	Proj. Name/No.: Turnpike Bridge Paint		Katahdin Quote #:
Bill (if different than above):		Address:	
Sampler (Print/Sign): Nick Adams			Copies To:

LAB USE ONLY

Work Order #: **SM 0685**
Katahdin Project Number

Remarks:

Shipping Info: FEDEX UPS CLIENT
Airbill No:
Temp C Temp Blank Intact Not Intact

	Sample Description	Date/Time Collected	Matrix	No. of Containers	Analysis and Container Type Preservatives: TCLP Metals	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N
	MM 64.3 Route 26 Underpass Bridge grab	1/17/2019 1545	S	1	1										
	MM 82.7 Webster Road Underpass grab	1/17/2019 1615	S	1	1										

COMMENTS: Metals list: As, Ba, Cd, Cr, Pb, Se, Ag, Hg

Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:
Nick Adams	1/22/19 1505				
Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:

All laboratory and field work shall be governed by KATAHDIN's Standard Terms and Conditions, except where a Purchase Order or Contract supersede.

Katahdin
ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Jan. 23, 2019
03:19 PM

Login Number: SM0685

Account: HNTBCO001 NoWeb
HNTB Corp.

Project:

Primary Report Address:
John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook,ME 04092
jdoughty@hntb.com

Primary Invoice Address:
Accounts Payable
HNTB Corp.
340 County Rd
Suite 6-C
Westbrook,ME 04092

Report CC Addresses:
Invoice CC Addresses:

Quote/Incoming:

Login Information:

ANALYSIS INSTRUCTIONS	:
CHECK NO.	:
CLIENT PO#	:
CLIENT PROJECT MANAGE	:
CONTRACT	:
COOLER TEMPERATURE	: 8.3
DELIVERY SERVICES	: KAS
EDD FORMAT	:
LOGIN INITIALS	: SO
PM	: GN
PROJECT NAME	: Turnpike Bridge Paint
QC LEVEL	: II
REPORT INSTRUCTIONS	: Email PDF and invoice to John, no HC.
SDG ID	:
SDG STATUS	:
VERBAL TAT	:

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SM0685-1	MM 64.3 RT 26 UNDERPASS	17-JAN-19 15:45	23-JAN-19			04-FEB-19	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SAMPLING				
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

SM0685-2	MM 82.7 WEBSTER RD UNDERPASS	17-JAN-19 16:15	23-JAN-19			04-FEB-19	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

Total Samples: *2* ***Total Analyses:*** *3*

Katahdin
ANALYTICAL SERVICES

NH ELAP Lab ID 2001 (DW, NPW, SCM)
NYSDOH ELAP Lab ID 11121 (AE - T015)

February 4, 2019

Mr. John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook,ME 04092

RE: Katahdin Lab Number: SM0864
Project ID: Turnpike Bridge Paint
Project Manager: Mr. Galen Nickerson
Sample Receipt Date(s): January 28, 2019

Dear Mr. Doughty:

Please find enclosed the following information:

* Report of Analysis (Analytical and/or Field)
* Quality Control Data Summary
* Chain of Custody (COC)
* Login Report

A copy of the Chain of Custody is included in the paginated report. If requested, the original COC is attached as an addendum to this report.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact the project manager listed above. The results contained in this report relate only to the submitted samples. This cover letter is an integral part of the ROA.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in an attached technical narrative or in the Report of Analysis.

We appreciate your continued use of our laboratory and look forward to working with you in the future. The following signature indicates technical review and acceptance of the data.

Please go to http://www.katahdinlab.com/cert for copies of Katahdin Analytical Services Inc. current certificates and analyte lists.

Sincerely,
KATAHDIN ANALYTICAL SERVICES

Leslie Dimond

Leslie Dimond - Quality Assurance Officer

02/04/2019

Date

TECHNICAL NARRATIVE

Metals Analysis

Katahdin Sample Numbers SM0864-(1-4) are solid samples that were subjected to TCLP extraction on 1/29/19 in accordance with USEPA Method 1311. The TCLP fluid blank identified as PBT1505A is associated with these samples. The measured barium concentration in the TCLP fluid blank PBT1505A (0.026mg/L) is above the laboratory's reporting limit. However, because the concentrations of barium in the TCLP blank and in the associated TCLP extracts are well below the regulatory limit, reanalysis was not required.

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL "U" LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level (PQL) or LOQ could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

H_ Please note that the regulatory holding time for _____ is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. _____ for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H1 - pH H2 - DO H3 - sulfite H4 - residual chlorine

T1 The client did not provide the full volume of at least one liter for analysis of TSS. Therefore, the PQL of 2.5 mg/L could not be achieved.

T2 The client provided the required volume of at least one liter for analysis of TSS, but the laboratory could not filter the full one liter volume due to the sample matrix. Therefore, the PQL of 2.5 mg/L could not be achieved.

M1 The matrix spike and/or matrix spike duplicate recovery performed on this sample was outside of the laboratory acceptance criteria. Sample matrix is suspected. The laboratory criteria was met for the Laboratory Control Sample (LCS) analyzed concurrently with this sample.

M2 The matrix spike and/or matrix spike duplicate recovery was outside of the laboratory acceptance criteria. The native sample concentration is greater than four times the spike added concentration so the spike added could not be distinguished from the native sample concentration.

R1 The relative percent difference (RPD) between the duplicate analyses performed on this sample was outside of the laboratory acceptance criteria (when both values are greater than ten times the PQL).

MCL	Maximum Contaminant Level	NL	No limit
NFL	No Free Liquid Present	FLP	Free Liquid Present
NOD	No Odor Detected	TON	Threshold Odor Number

D-1 As required by Method 5210B, APHA Standard Methods for the Examination of Water and Wastewater (21st edition), the BOD value reported for this sample is 'qualified' because the check standard run concurrently with the sample analysis did not meet the criteria specified in the method (198 +/- 30.5 mg/L). These results may not be reportable for compliance purposes.

D-2 The measured final dissolved oxygen concentrations of all dilutions were less than the method-specified limit of 1 mg/L. The reported BOD result was calculated assuming a final oxygen concentration equal to 1 mg/L. The reported value should be considered a minimum value.

D-3 The dilution water used to prepare this sample did not meet the method and/or regulatory criteria of less than 0.2 or 0.4 mg/L dissolved oxygen (DO) uptake over the five day period of incubation. These results may not be reportable for compliance purposes.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SM0864-001
Report Date: 2/4/2019
PO No.:
Project: Turnpike Bridge Paint

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MM 83.7 GROVE ST U-PASS GRAB	AQ	No(Total)	01/25/2019	01/28/2019

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prep Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
BARIUM, TCLP	0.865	mg/L	0.025	1	0.005	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	
CADMIUM, TCLP	U 0.0250	mg/L	0.0250	1	0.005	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
CHROMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
LEAD, TCLP	U 0.02	mg/L	0.02	1	0.005	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	2/1/19	JS	SW846 7470	2/1/19	MD	MB01HGW2	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
SILVER, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SM0864-002
Report Date: 2/4/2019
PO No.:
Project: Turnpike Bridge Paint

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MM 93.3 ROUTE 197 U-PASS GRAB	AQ	No(Total)	01/25/2019	01/28/2019

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prep Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
BARIUM, TCLP	0.029	mg/L	0.025	1	0.005	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	
CADMIUM, TCLP	U 0.0250	mg/L	0.0250	1	0.005	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
CHROMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
LEAD, TCLP	U 0.02	mg/L	0.02	1	0.005	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
MERCURY, TCLP	0.20	ug/L	0.20	1	0.2	SW846 7470	2/1/19	JS	SW846 7470	2/1/19	MD	MB01HGW2	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
SILVER, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SM0864-003
Report Date: 2/4/2019
PO No.:
Project: Turnpike Bridge Paint

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MM 95.6 PLAINS RD U-PASS GRAB	AQ	No(Total)	01/25/2019	01/28/2019

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prep Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
BARIUM, TCLP	1.64	mg/L	0.025	1	0.005	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	
CADMIUM, TCLP	U 0.0250	mg/L	0.0250	1	0.005	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
CHROMIUM, TCLP	U 0.0500	mg/L	0.0500	1	0.01	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
LEAD, TCLP	75.5	mg/L	0.02	1	0.005	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	
MERCURY, TCLP	U 0.20	ug/L	0.20	1	0.2	SW846 7470	2/1/19	JS	SW846 7470	2/1/19	MD	MB01HGW2	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
SILVER, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook, ME 04092

Lab Sample ID: SM0864-004
Report Date: 2/4/2019
PO No.:
Project: Turnpike Bridge Paint

Sample Description	Matrix	Filtered	Date Sampled	Date Received
MM 102 EX102 INTERCHANGE GRAB	AQ	No(Total)	01/25/2019	01/28/2019

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prep Date	By	QC	Notes
ARSENIC, TCLP	U 0.04	mg/L	0.04	1	0.008	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
BARIUM, TCLP	0.288	mg/L	0.025	1	0.005	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	
CADMIUM, TCLP	U 0.0250	mg/L	0.0250	1	0.005	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
CHROMIUM, TCLP	0.0905	mg/L	0.0500	1	0.01	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	
LEAD, TCLP	131	mg/L	0.05	2	0.005	SW846 6010	2/1/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	
MERCURY, TCLP	0.24	ug/L	0.20	1	0.2	SW846 7470	2/1/19	JS	SW846 7470	2/1/19	MD	MB01HGW2	
SELENIUM, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1
SILVER, TCLP	U 0.050	mg/L	0.050	1	0.01	SW846 6010	1/31/19	MM	SW846 3010	1/31/19	AB	MA31ICW1	1

1 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects,sample volume, or quantity used for analysis.

Katahdin
ANALYTICAL SERVICES

EXTRACTION FLUID BLANK REPORT

Sample ID: PBT1505A

Element Name	Result	Units	Flag	PQL	File
ALUMINUM	0.074	mg/L	U	1.5	IMA29A
ANTIMONY	0.0064	mg/L	U	0.04	IMA29A
ARSENIC	0.0071	mg/L	U	0.04	IMA29A
BARIUM	0.026	mg/L	H	0.025	IMA29A
BERYLLIUM	0.00051	mg/L	U	0.025	IMA29A
CADMIUM	0.00024	mg/L	U	0.0250	IMA29A
CALCIUM	0.056	mg/L	U	0.50	IMA29A
CHROMIUM	0.0018	mg/L	U	0.0500	IMA29A
COBALT	0.0012	mg/L	U	0.0500	IMA29A
COPPER	0.0031	mg/L	U	0.125	IMA29A
IRON	0.027	mg/L	U	0.500	IMA29A
LEAD	0.0054	mg/L	U	0.02	IMA29A
LITHIUM	0.03	mg/L	J	0.500	IMA29A
MAGNESIUM	0.039	mg/L	U	0.500	IMA29A
MANGANESE	0.0053	mg/L	U	0.025	IMA29A
MERCURY	0.09	ug/L	J	0.20	HMA29A
NICKEL	0.0065	mg/L	J	0.0500	IMA29A
POTASSIUM	0.3	mg/L	J	5.00	IMA29A
SELENIUM	0.012	mg/L	U	0.050	IMA29A
SILVER	0.0013	mg/L	U	0.050	IMA29A
THALLIUM	0.0054	mg/L	U	0.075	IMA29A
TIN	0.0055	mg/L	U	0.500	IMA29A
VANADIUM	0.0012	mg/L	U	0.0500	IMA29A
ZINC	0.020	mg/L	J	0.100	IMA29A

U The analyte was not detected in the sample at a level greater than the instrument detection limit.

J The analyte was detected in the sample at a concentration greater than the instrument detection limit, but less than the laboratory's Practical Quantitation Level.

H The analyte was detected in the sample at a concentration greater than the laboratory's acceptance limit.

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ANALYTICAL SERVICES

PREPARATION BLANK REPORT

Sample ID: PBWMA31ICW1 **Batch ID:** MA31ICW1 **Work Order:** SM0864

Element Name	Flag	Result	Units	PQL	MDL	File
ARSENIC	U	0.008	mg/L	0.008	0.0014	IMA31A
BARIUM	U	0.0050	mg/L	0.0050	0.00023	IMA31A
CADMIUM	U	0.00500	mg/L	0.00500	0.000049	IMA31A
CHROMIUM	U	0.0100	mg/L	0.0100	0.00036	IMA31A
LEAD	U	0.005	mg/L	0.005	0.0011	IMA31A
SELENIUM	U	0.010	mg/L	0.010	0.0024	IMA31A
SILVER	U	0.010	mg/L	0.010	0.00026	IMA31A

U The analyte was not detected in the sample at a level greater than the method detection limit.

J The analyte was detected in the sample at a concentration greater than the method detection limit, but less than the laboratory's Practical Quantitation Level.

H The analyte was detected in the sample at a concentration greater than the laboratory's acceptance limit.

Katahdin
ANALYTICAL SERVICES

PREPARATION BLANK REPORT

Sample ID: PBWMB01HGW2 **Batch ID:** MB01HGW2 **Work Order:** SM0864

Element Name	Flag	Result	Units	PQL	MDL	File
MERCURY	J	0.03	ug/L	0.20	0.013	HMB01A

U The analyte was not detected in the sample at a level greater than the method detection limit.

J The analyte was detected in the sample at a concentration greater than the method detection limit, but less than the laboratory's Practical Quantitation Level.

H The analyte was detected in the sample at a concentration greater than the laboratory's acceptance limit.

LABORATORY CONTROL SAMPLE REPORT

Sample ID: LCSWMA31ICW1 **Batch ID:** MA31ICW1 **Work Order:** SM0864

Element Name	True Value	Result	Units	Recovery(%)	Flag	Limits (%)		File
ARSENIC	0.100	0.101	mg/L	101.0		80	120	IMA31A
BARIUM	2.00	2.15	mg/L	107.5		80	120	IMA31A
CADMIUM	0.250	0.256	mg/L	102.4		80	120	IMA31A
CHROMIUM	0.200	0.216	mg/L	108.0		80	120	IMA31A
LEAD	0.100	0.104	mg/L	104.0		80	120	IMA31A
SELENIUM	0.100	0.098	mg/L	98.0		80	120	IMA31A
SILVER	0.050	0.052	mg/L	104.0		80	120	IMA31A

H Laboratory control sample recovery is greater than the laboratory's acceptance limit.

L Laboratory control sample recovery is less than the laboratory's acceptance limit.

LABORATORY CONTROL SAMPLE REPORT

Sample ID: LCSWMB01HGW2 **Batch ID:** MB01HGW2 **Work Order:** SM0864

Element Name	True Value	Result	Units	Recovery(%)	Flag	Limits (%)		File
MERCURY	5.00	4.94	ug/L	98.8		80	120	HMB01A

H Laboratory control sample recovery is greater than the laboratory's acceptance limit.

L Laboratory control sample recovery is less than the laboratory's acceptance limit.

Katahdin Analytical Services, LLC. — Sample Receipt Condition Report

Client: HNTB	KAS PM: GN	Sampled By: NA
Project: MTA BRIDGE PAINT	KIMS Entry By: JCB	Delivered By: NA
KAS Work Order#: SM 0864	KIMS Review By: GN	Received By: GN
SDG #:	Cooler: 1 of 1	Date/Time Rec.: 1/28/19 1025

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				✓	
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.		✓			Temp (°C): 4.8
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?		✓			The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?				✓	
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles:					
Aqueous: No bubble larger than a pea?				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
Air: Refer to KAS COC for canister/flow controller requirements.	√ if air included				
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved?					
Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Katahdin
ANALYTICAL SERVICES
600 Technology Way
P.O. Box 540
Scarborough, ME 04070
Tel: (207) 874-2400
Fax: (207) 775-4029

Chain of Custody

Client:	Contact:	Phone #:	Fax #:
HNTB	**John Doughty**	(207)774-5155	(207)228-0909
Address: 340 County Road Suite 6-C	City: Westbrook	State: Maine	Zip Code: 04092
Purchase Order #:	Proj. Name/No.: Turnpike Bridge Paint		Katahdin Quote #:
Bill (if different than above):		Address:	
Sampler (Print/Sign): Nick Adams /			Copies To:

LAB USE ONLY

Work Order #: **SM 0864**
Katahdin Project Number

Remarks:

Shipping Info: FEDEX UPS CLIENT
Airbill No:
Temp C Temp Blank Intact Not Intact

	Sample Description	Date/Time Collected	Matrix	No. of Containers	Analysis and Container Type Preservatives: TCLP Metals	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N	Filt. N
	MM 83.7 Grove St Underpass grab	1/25/2019 1500	S	1	1										
	MM 93.3 Route 197 Underpass grab	1/25/2019 1215	S	1	1										
	MM 95.6 Plains Road Underpass grab	1/25/2019 1240	S	1	1										
	MM 102 Exit 102 Interchange grab	1/25/2019 1315	S	1	1										

COMMENTS: Metals list: As, Ba, Cd, Cr, Pb, Se, Ag, Hg

Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:
Nick Adams	1/28/19 1025				
Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:

All laboratory and field work shall be governed by KATAHDIN's Standard Terms and Conditions, except where a Purchase Order or Contract supersede.

Katahdin
ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Jan. 29, 2019
08:34 AM

Login Number: SM0864

Account: HNTBCO001 NoWeb
HNTB Corp.

Project:

Primary Report Address:
John Doughty
HNTB Corp.
340 County Rd
Suite 6C
Westbrook,ME 04092
jdoughty@hntb.com

Primary Invoice Address:
Accounts Payable
HNTB Corp.
340 County Rd
Suite 6-C
Westbrook,ME 04092

Report CC Addresses:
Invoice CC Addresses:

Quote/Incoming:

Login Information:

ANALYSIS INSTRUCTIONS	:	
CHECK NO.	:	
CLIENT PO#	:	
CLIENT PROJECT MANAGE	:	
CONTRACT	:	
COOLER TEMPERATURE	:	4.8
DELIVERY SERVICES	:	KAS
EDD FORMAT	:	
LOGIN INITIALS	:	JCB
PM	:	GN
PROJECT NAME	:	Turnpike Bridge Paint
QC LEVEL	:	II
REPORT INSTRUCTIONS	:	Email PDF and invoice to John, no HC.
SDG ID	:	
SDG STATUS	:	
VERBAL TAT	:	

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SM0864-1	MM 83.7 GROVE ST U-PASS GRAB	25-JAN-19 15:00	28-JAN-19			04-FEB-19	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SAMPLING				
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

SM0864-2	MM 93.3 ROUTE 197 U-PASS GRAB	25-JAN-19 12:15	28-JAN-19			04-FEB-19

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

SM0864-3	MM 95.6 PLAINS RD U-PASS GRAB	25-JAN-19 12:40	28-JAN-19			04-FEB-19	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

SM0864-4	MM 102 EX102 INTERCHANGE GRAB	25-JAN-19 13:15	28-JAN-19			04-FEB-19	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	P	TCLP-METALS		8oz Glass		

SW1311-EXT, SW3010-PREP, TCLP-ARSENIC, TCLP-BARIUM, TCLP-CADMIUM, TCLP-CHROMIUM, TCLP-LEAD, TCLP-MERCURY, TCLP-SELENIUM, TCLP-SILVER

Total Samples: *4* ***Total Analyses:*** *5*

February 12, 2019

Mr. Jay Clement
U.S. Army Corps of Engineers, Maine Project Office
442 Civic Center Drive, Suite 350
Augusta, Maine 04330

RE: Self-Verification Notification for Pleasant River Culvert Repair in Gray, Maine

Dear Jay,

The Maine Turnpike Authority is planning to inspect and repair an existing two-barrel concrete box culvert located at Mile 62.3 along the Maine Turnpike in the Town of Gray, Maine. Inspection and repair work will require the use of a temporary sandbag cofferdam or comparable system in the channel of the Pleasant River. During construction, stream flow will be diverted through one barrel of the culvert while work is completed in the second barrel to maintain downstream flows. As described in the Maine General Permit, this temporary in-stream work is eligible as a Category 1 activity and requires filing a Self-Verification Notification Form. In accordance with the General Permit conditions, all in-stream construction work will be conducted within the annual low flow period between July 15 to September 30th.

A completed Self-Verification Notification Form is included in Attachment A along with the following supporting documentation:

- USGS Locus Map in Attachment B;
- U.S. Fish and Wildlife Service (USFWS) Official Species List in Attachment C;
- Wetland Delineation Map for Pleasant River and wetlands in Attachment D; and
- Project Plan with Limits of Disturbance in Attachment E.

According to the U.S. Fish and Wildlife Service (USFWS) official species list obtained through the online USFWS Information, Planning, and Conservation System (IPaC), the project area occurs within the range for federally-listed northern long-eared bat (*Myotis septentrionalis*) and small whorled pogonia (*Isotria medeoloides*) (Attachment C). However, the work will not involve tree clearing, so MTA believes the project is not likely to adversely affect the northern

long-eared bat. The project work will occur in the channel of the Pleasant River with a limited area of equipment access on the mowed grass highway embankment between the pavement and Pleasant River and adjacent wetlands, so habitat suitable for small whorled pogonia (forested land) will not be affected by the scope of work.

Please let me know if you have any questions about this submittal or the work associated with this Category 1 activity. I can be reached at 207-482-8275 or sdonohue@maineturnpike.com.

Sincerely,
Maine Turnpike Authority

Sean Donohue, CSS
Permitting Coordinator/ Environmental Liaison

Cc: Ralph Norwood, MTA
Daniel Meyers, TY Linn
Rich Jordan, TRC

ATTACHMENT A

Self-Verification Notification Form

US Army Corps of Engineers®
New England District

Appendix B: Self-Verification Notification Form

(for all tidal and non-tidal projects in Maine subject to Corps jurisdiction)

At least two weeks before work commences, complete **all** fields (write "none" if applicable) below or use the fillable form at www.nae.usace.army.mil/missions/regulatory.aspx. Send this form, a location map, any project plans, and an Official Species List (See GC 8) to the address noted below; fax to (207) 623-8206; or email to jay.l.clement@usace.army.mil. The two-week lead time is not required for emergency situations (see page 4 for definition). Please call (207) 623-8367 with questions.

Maine Project Office
U.S. Army Corps of Engineers
New England District
675 Western Avenue #3
Manchester, Maine 04351

State Permit Number: NAE-2019-00432
Date of State Permit: 2/13/2019
State Project Manager: N/A

Permittee: The Maine Turnpike Authority, Sean Donohue
Address, City, State & Zip: 2360 Congress Street, Portland, ME 04102
Phone(s) and Email: (207) 482-8275 / sdonohue@maineturnpike.com

Contractor: to be determined
Address, City, State & Zip:
Phone(s) and Email:

Consultant/Engineer/Designer: TY Lin International
Address, City, State & Zip: 12 Northbrook Drive, Falmouth, ME 04105
Phone(s) and Email: (207) 347-4376 / daniel.myers@tylin.com

Wetland/Vernal Pool Consultant: TRC Environmental
Address, City, State & Zip: 6 Ashley Drive, 1st Floor, Scarborough, ME 04074
Phone(s) and Email: (207) 274-2624 / rjordan@trcsolutions.com

Project Location/Description: An existing double barrel concrete box culvert located at Mile 62.3 along the Maine Turnpike in Gray, Maine
Address, City, State & Zip: none
Latitude/Longitude Coordinates: 43.910, -70.340 Tax Map/Lot: none
Waterway Name: Pleasant River
Work Description: A temporary sandbag cofferdam (or comparable system) will be installed in the stream during repair of the culvert. Work will be completed in one culvert barrel at a time to maintain stream flow through the second culvert barrel.
Provide any prior Corps permit numbers: none
Proposed Work Dates: Start: No sooner than July 15, 2019 Finish: Not later than September 30, 2019

Area of wetland impact: 400 SF (leave blank if work involves structures & no fill in Navigable Waters)
Area of waterway impact: 565 SF (leave blank if work involves structures & no fill in Navigable Waters)
Area of compensatory mitigation provided: 0 SF

Work will be done under the following Appendix A categories (circle all that apply):

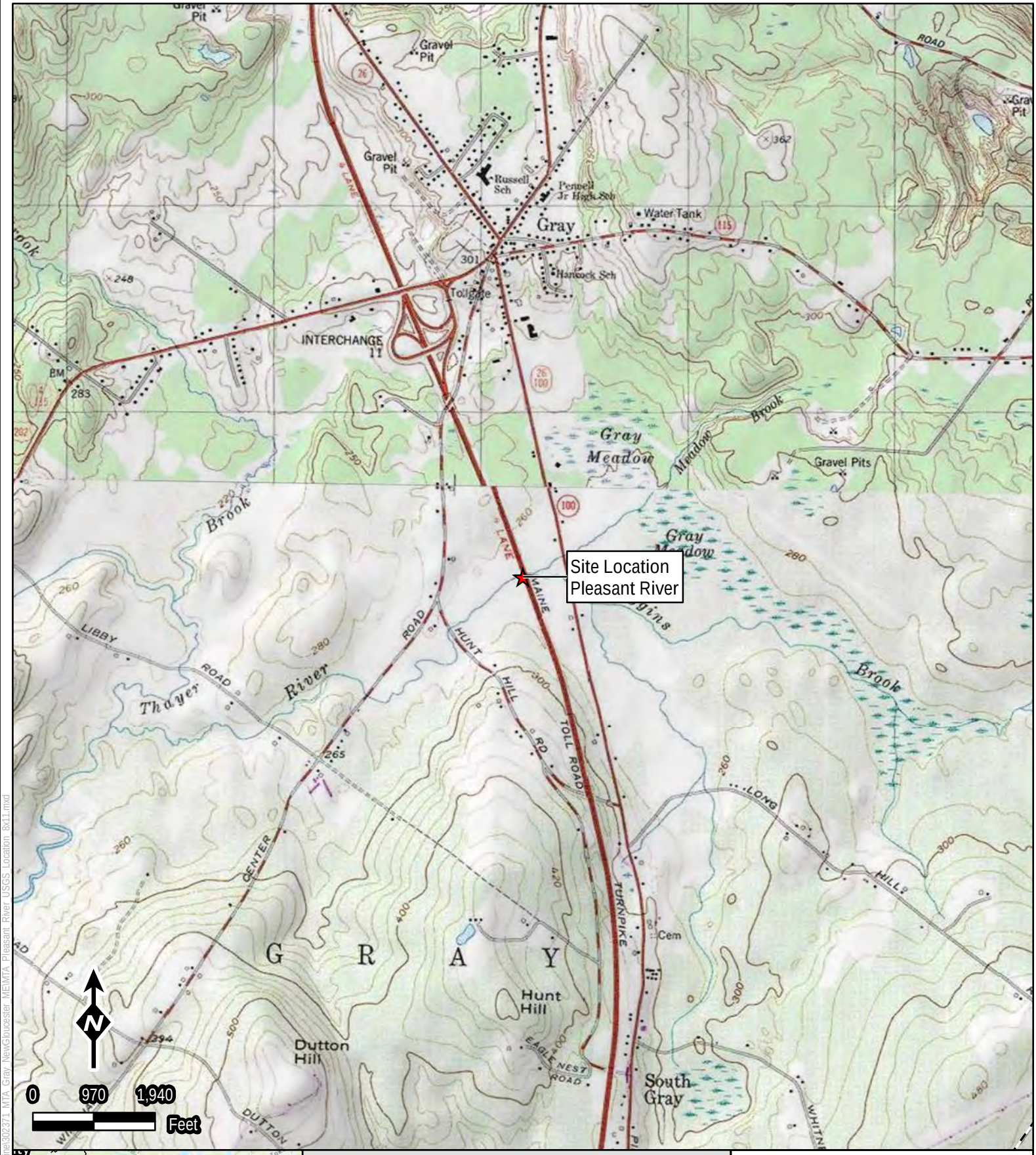
I. Inland Waters and wetlands: (1) 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 (23) 24
II. Navigable Waters: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

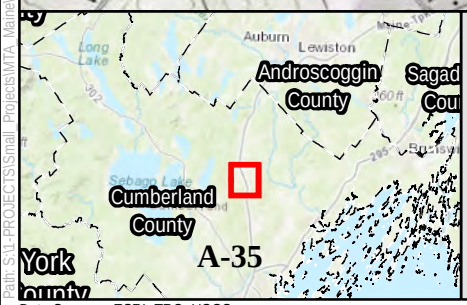
Your name/signature below, as permittee, indicates that you accept and agree to comply with the terms, eligibility criteria, and general conditions of Category 1 of the Maine General Permit.

Permittee Printed Name: Sean Donohue, MTA
Permittee Signature: [signature], MTA Date: 02-12-2019

ATTACHMENT B

USGS Locus Map





Legend

Site Location

Town Boundary

Maine Turnpike Authority

Gray, Cumberland County, ME

USGS Locus Map

Created: 2/6/2019

TRC

6 Ashley Drive
Scarborough, ME 04074

Data Sources: ESRI, TRC, USGS

Coordinate System: NAD 1983 UTM Zone 19N

Path: S:\1_PROJECTS\Small_Projects\MTA_Maine\302371_MTA_Gray_NewGloucester_ME\MTA_Pleasant_River_USGS_Location_8x11.mxd

ATTACHMENT C

USFWS IPaC Threatened and Endangered Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588
http://www.fws.gov/mainefieldoffice/index.html

In Reply Refer To:
Consultation Code: 05E1ME00-2019-SLI-0353
Event Code: 05E1ME00-2019-E-00675
Project Name: Northern Bridge Repairs Pleasant River

February 01, 2019

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: http://www.fws.gov/mainefieldoffice/Project%20review4.html

Additionally, wind energy projects should follow the wind energy guidelines: http://www.fws.gov/windenergy/ for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g.,

cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm and at: http://www.towerkill.com; and at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2019-SLI-0353

Event Code: 05E1ME00-2019-E-00675

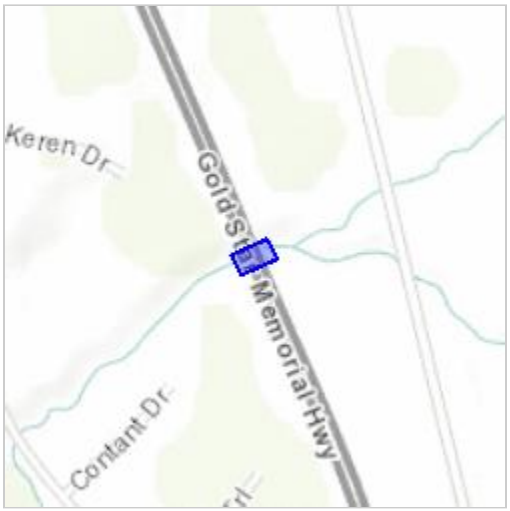
Project Name: Northern Bridge Repairs Pleasant River

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: Replace existing culvert

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/43.87111893180101N70.32869547999562W



Counties: Cumberland, ME

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Flowering Plants

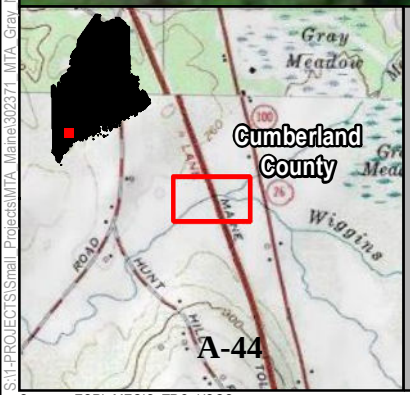
NAME	STATUS
Small Whorled Pogonia *Isotria medeoloides* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1890	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

ATTACHMENT D

Wetland Delineation Map for Pleasant River and Associated Wetlands



Legend

- Delineated Stream Top Of Bank
- Delineated Surface Water
- Delineated Wetland Boundary
- Delineated Wetland
- Survey Boundary

N

0 100 200

Feet

Note: Aerial may not be representative of what was collected in the field.

MTA

Pleasant River
Study Location

Gray,
Cumberland County, ME

Resource Figure
Page 1 of 5

Created: 9/25/2018

TRC

6 Ashley Drive
Scarborough, ME 04074

Sources: ESRI, MEGIS, TRC, USGS

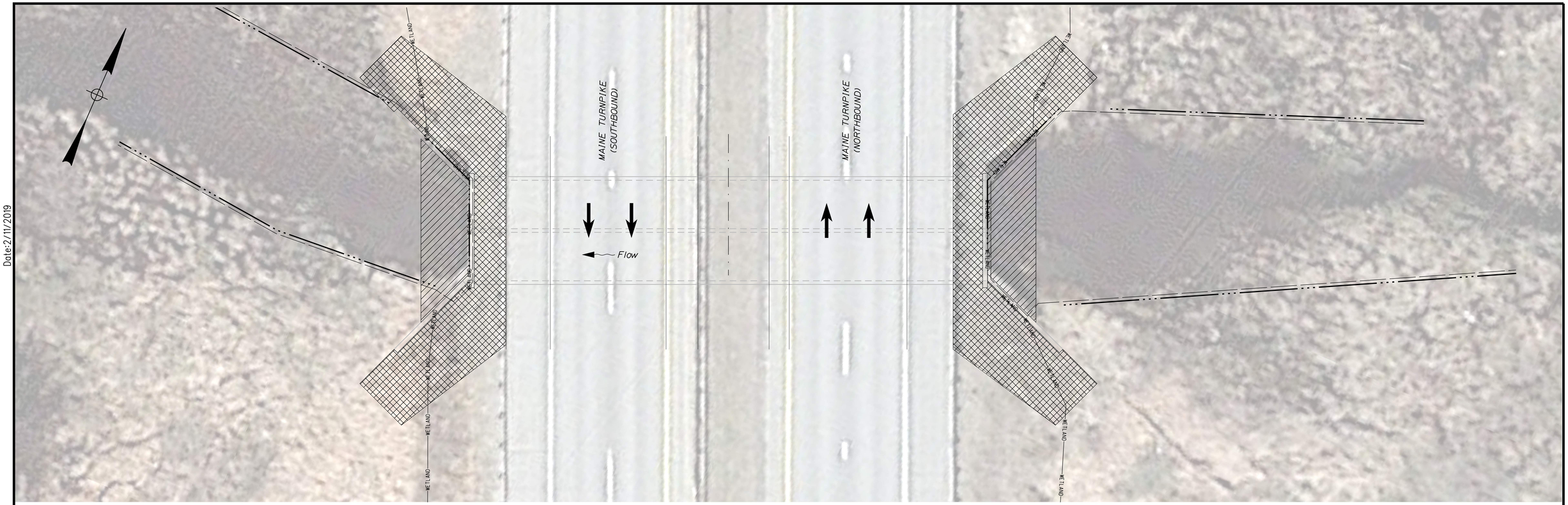
Coordinate System: NAD 1983 UTM Zone 19N

S:\1-PROJECTS\Small Projects\MTA_Maine\302371_MTA_Gray_NewGloucester_ME\4-MXD\MTA_Gray_NewGloucester_Resource_Map_20180918_8x11.mxd

ATTACHMENT E

Project Plan with Limits of Disturbance

Date:2/11/2019



LIMIT OF DISTURBANCE PLAN - PLEASANT RIVER CULVERT

LEGEND:

- COFFERDAM LIMIT OF DISTURBANCE
- CONTRACTOR'S LIMIT OF DISTURBANCE AREA FOR ACCESS AND STORAGE

AREAS:

COFFERDAM LIMIT OF DISTURBANCE:

PLEASANT RIVER CULVERT = 0.013 ACRES

CONTRACTOR'S LIMIT OF DISTURBANCE AREA FOR ACCESS AND STORAGE:

PLEASANT RIVER CULVERT = 0.046 ACRES

NOTES:

1. EROSION AND SEDIMENT CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.
2. SEE SPECIFICATIONS FOR CONTRACTOR'S SUBMITTAL REQUIREMENTS IF INCREASING THE LIMITS OF DISTURBANCE TO THE PROJECT ESTIMATED QUANTITIES.

Scale: 1" = 10'

No.	Revision	By	Date

Designed by: T.Y.LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	TSK	1/2019	Checked	DSM	1/2019
Drawn	JJL	1/2019	In Charge of	DSM	1/2019

T.Y. Lin International
12 Northbrook Drive
Building A, Suite One
Falmouth, Maine 04105
TEL: (207) 781-4721
FAX: (207) 781-4753

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV

NORTHERN BRIDGE REPAIRS &
BENNETT ROAD EMERGENCY VEHICLE RAMPS
PLEASANT RIVER CULVERT (MILE 62.3)
LIMIT OF DISTURBANCE

SHEET NUMBER: PC-02

CONTRACT:2019.11

89 OF 102

Filename: ...\MSTA\XXX_LODPlan_62.3.dgn

LEGEND:

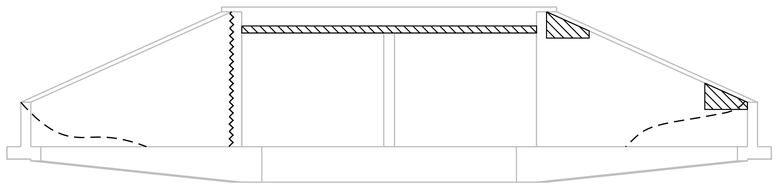
- LIMIT OF CONCRETE SURFACE REPAIRS
- LIMIT OF EPOXY INJECTED CRACK REPAIRS
- EXISTING CONCRETE
- EXISTING AND PROPOSED GROUND

NOTE:

1. FOR PROCEDURAL NOTES SEE SHEET "BRIDGE GENERAL NOTES"

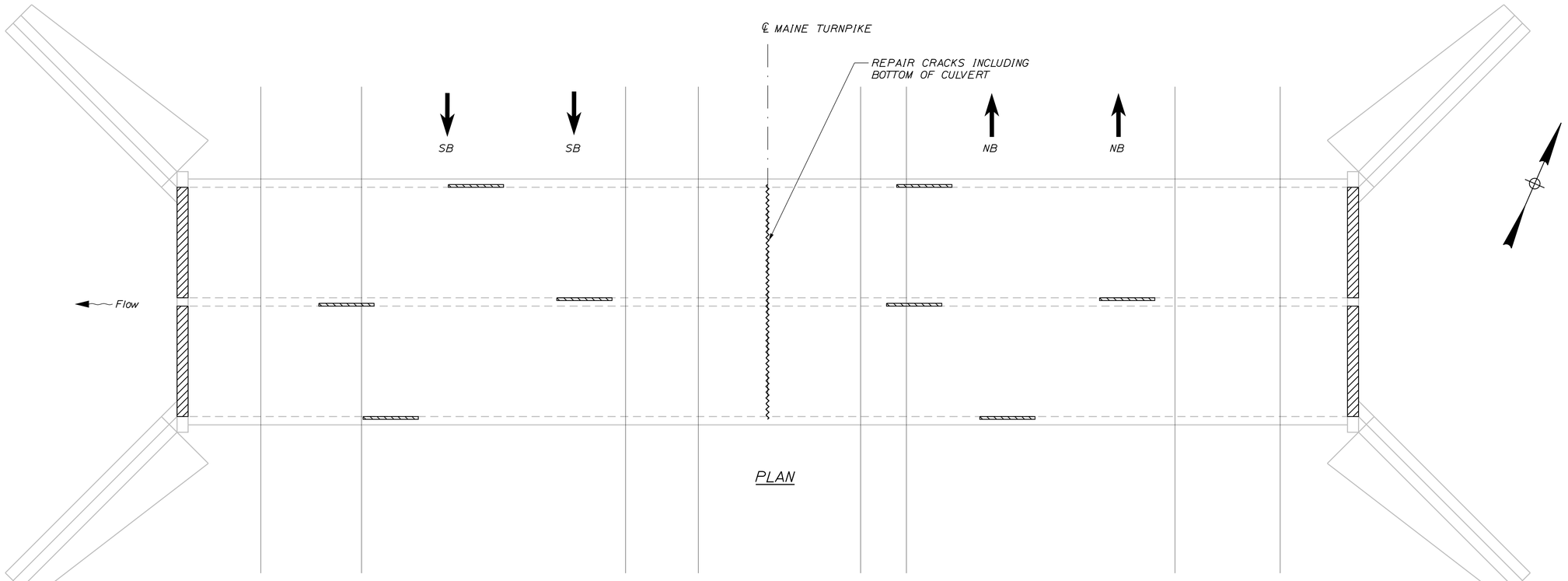
PLEASANT RIVER CULVERT (MILE 62.3)
ESTIMATED QUANTITY OF REPAIRS

	HEADWALLS	WINGWALLS	CULVERT BARRELS	TOTAL
CRACK REPAIRS	0 L.F.	12 L.F.	108 L.F.	48 L.F.
CONCRETE REPAIRS	30 S.F.	5 S.F.	90 S.F.	125 S.F.



WEST END VIEW

EAST END VIEW



PLAN

Date:2/1/2019

Filename: ...\XXX_MM_62.3_Existing_Structures.dgn

Scale: 3/16" = 1'-0"			
No.	Revision	By	Date

Designed by: T.Y.LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	DSM	9/2018	Checked	BLT	12/2018
Drawn	RK	9/2018	In Charge of	DSM	1/2019

T.Y. Lin International
12 Northbrook Drive
Building A, Suite One
Falmouth, Maine 04105
TEL: (207) 781-4721
FAX: (207) 781-4753

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV

NORTHERN BRIDGE REPAIRS &
BENNETT ROAD EMERGENCY VEHICLE RAMPS
PLEASANT RIVER CULVERT (MILE 62.3)
CULVERT REPAIRS

SHEET NUMBER: PC-03

CONTRACT:2019.11

February 12, 2019

Mr. Jay Clement
U.S. Army Corps of Engineers, Maine Project Office
442 Civic Center Drive, Suite 350
Augusta, Maine 04330

RE: Self-Verification Notification for Cole Brook Culvert Repair in Gray, Maine

Dear Jay,

The Maine Turnpike Authority is planning to inspect and repair an existing two-barrel concrete box culvert located at Mile 65.2 along the Maine Turnpike in the Town of Gray, Maine. Inspection and repair work will require the use of a temporary sandbag cofferdam or comparable system in the channel of Cole Brook. During construction, stream flow will be diverted through one barrel of the culvert while work is completed in the second barrel to maintain downstream flows. As described in the Maine General Permit, this temporary in-stream work is eligible as a Category 1 activity and requires filing a Self-Verification Notification Form. In accordance with the General Permit conditions, all in-stream construction work will be conducted within the annual low flow period between July 15 to September 30th.

A completed Self-Verification Notification Form is included in Attachment A along with the following supporting documentation:

- USGS Locus Map in Attachment B;
- U.S. Fish and Wildlife Service (USFWS) Official Species List in Attachment C;
- Wetland Delineation Map for Cole Brook and associated wetlands in Attachment D; and
- Project Plan with Limits of Disturbance in Attachment E.

According to the U.S. Fish and Wildlife Service (USFWS) official species list obtained through the online USFWS Information, Planning, and Conservation System (IPaC), the project area occurs within the range for federally-listed northern long-eared bat (*Myotis septentrionalis*) and small whorled pogonia (*Isotria medeoloides*) (Attachment C). However, the work will not involve tree clearing, so MTA believes the project is not likely to adversely affect the northern long-eared bat. The project work will occur in the channel of Cole brook with a limited area of

February 12, 2019
Jay Clement
Cole Brook Culvert Repair SVN

equipment access on the mowed grass highway embankment between the pavement and Cole Brook and adjacent wetlands, so habitat suitable for small whorled pogonia (forested land) will not be affected by the scope of work.

Please let me know if you have any questions about this submittal or the work associated with this Category 1 activity. I can be reached at 207-482-8275 or sdonohue@maineturnpike.com.

Sincerely,
Maine Turnpike Authority

Sean Donohue, CSS
Permitting Coordinator/ Environmental Liaison

Cc: Ralph Norwood, MTA
Daniel Meyers, TY Lin
Rich Jordan, TRC

ATTACHMENT A

Self-Verification Notification Form

Appendix B: Self-Verification Notification Form

(for all tidal and non-tidal projects in Maine subject to Corps jurisdiction)

US Army Corps of Engineers ®
New England District

At least two weeks before work commences, complete **all** fields (write "none" if applicable) below or use the fillable form at www.nae.usace.army.mil/missions/regulatory.aspx. Send this form, a location map, any project plans, and an Official Species List (See GC 8) to the address noted below; fax to (207) 623-8206; or email to jay.l.clement@usace.army.mil. The two-week lead time is not required for emergency situations (see page 4 for definition). Please call (207) 623-8367 with questions.

Maine Project Office
U.S. Army Corps of Engineers
New England District
675 Western Avenue #3
Manchester, Maine 04351

State Permit Number: NAE-2019-00433
Date of State Permit: 2/13/2019
State Project Manager: N/A

Permittee: Maine Turnpike Authority, Sean Donohue
Address, City, State & Zip: 2360 Congress Street, Portland, ME 04102
Phone(s) and Email: (207) 482-8275 / sdonohue@maineturnpike.com

Contractor: to be determined
Address, City, State & Zip:
Phone(s) and Email:

Consultant/Engineer/Designer: TY Lin International
Address, City, State & Zip: 12 Northbrook Drive, Falmouth, ME 04105
Phone(s) and Email: (207) 347-4376 / daniel.myers@tylin.com

Wetland/Vernal Pool Consultant: TRC Environmental
Address, City, State & Zip: 6 Ashley Drive, 1st Floor, Scarborough, ME 04074
Phone(s) and Email: (207) 274-2624 / rjordan@trcsolutions.com

Project Location/Description: An existing double barrel concrete box culvert located at Mile 65.3 along the Maine Turnpike in Gray, Maine
Address, City, State & Zip: none
Latitude/Longitude Coordinates: 43.910, -70.340 Tax Map/Lot: none
Waterway Name: Cole Brook
Work Description: A temporary sandbag cofferdam (or comparable system) will be installed in the stream during repair of the culvert. Work will be completed in one culvert barrel at a time to maintain stream flow through the second culvert barrel.
Provide any prior Corps permit numbers: none
Proposed Work Dates: Start: Not before July 15, 2019 Finish: No later than September 30, 2019

Area of wetland impact: 170 SF (leave blank if work involves structures & no fill in Navigable Waters)
Area of waterway impact: 430 SF (leave blank if work involves structures & no fill in Navigable Waters)
Area of compensatory mitigation provided: _____ SF

Work will be done under the following Appendix A categories (circle all that apply):

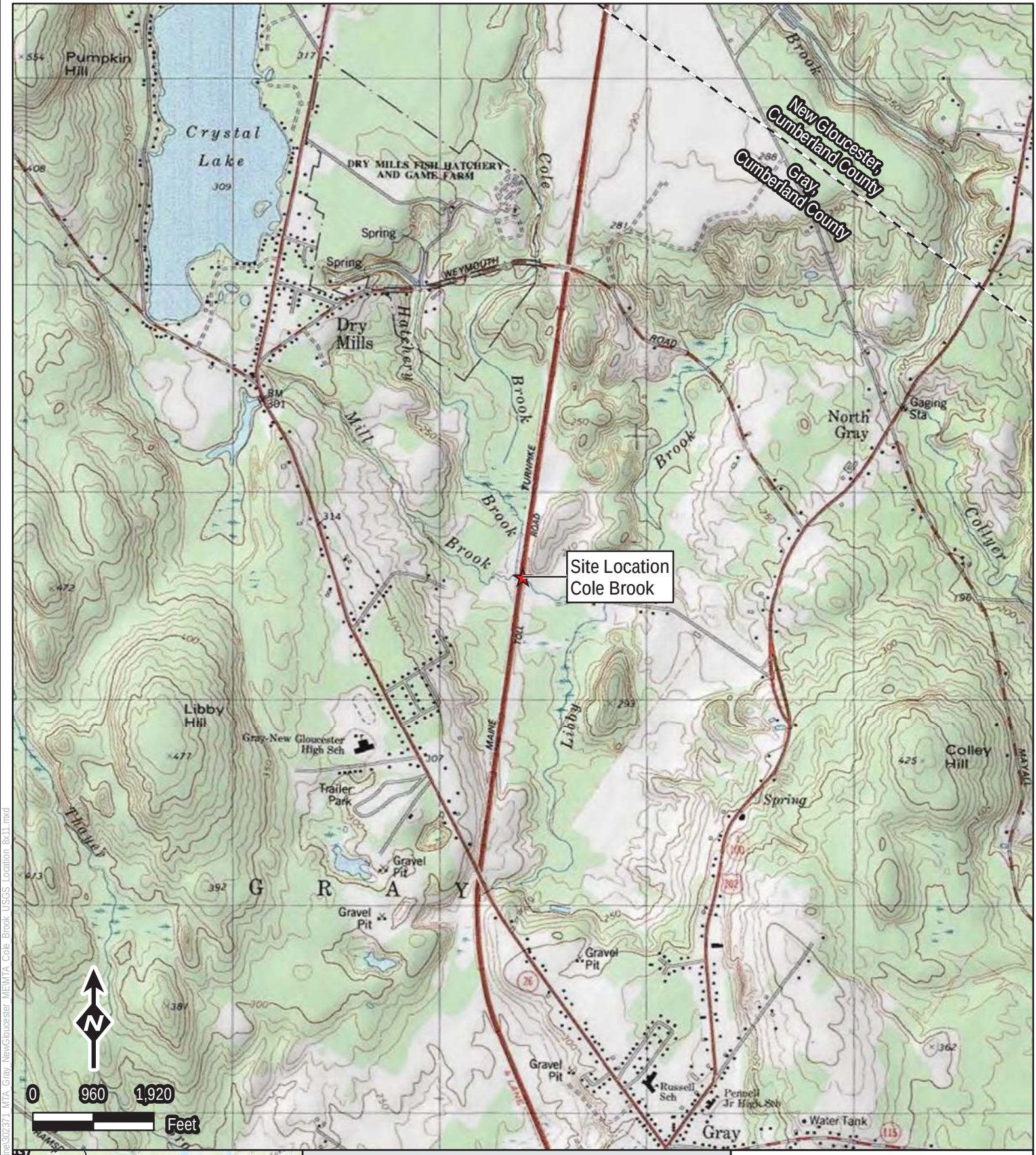
I. Inland Waters and wetlands: (1) 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 (23) 24
II. Navigable Waters: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Your name/signature below, as permittee, indicates that you accept and agree to comply with the terms, eligibility criteria, and general conditions of Category 1 of the Maine General Permit.

Permittee Printed Name: Sean Donohue
Permittee Signature: [signature] Date: 02-12-2019

ATTACHMENT B

USGS Locus Map



Legend

Site Location

Town Boundary

Maine Turnpike Authority

Gray, Cumberland County, ME

USGS Locus Map

Created: 2/6/2019

TRC

6 Ashley Drive
Scarborough, ME 04074

Data Sources: ESRI, TRC, USGS

Coordinate System: NAD 1983 UTM Zone 19N

Path: S:\1_PROJECTS\Small_Projects\MTA_Maine\302371_MTA_Gray_NewGloucester_ME\MTA_Cole_Brook_USGS_Location_8x11.mxd

ATTACHMENT C

USFWS IPaC Threatened and Endangered Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588
http://www.fws.gov/mainefieldoffice/index.html

In Reply Refer To: January 31, 2019
Consultation Code: 05E1ME00-2019-SLI-0345
Event Code: 05E1ME00-2019-E-00660
Project Name: Northern Bridge Repairs Cole/Mill Brook

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: http://www.fws.gov/mainefieldoffice/Project%20review4.html

Additionally, wind energy projects should follow the wind energy guidelines: http://www.fws.gov/windenergy/ for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g.,

cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm and at: http://www.towerkill.com; and at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2019-SLI-0345

Event Code: 05E1ME00-2019-E-00660

Project Name: Northern Bridge Repairs Cole/Mill Brook

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: repair culvert under Maine Turnpike in Gray

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/43.91038429186749N70.33952751066391W

Counties: Cumberland, ME

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Flowering Plants

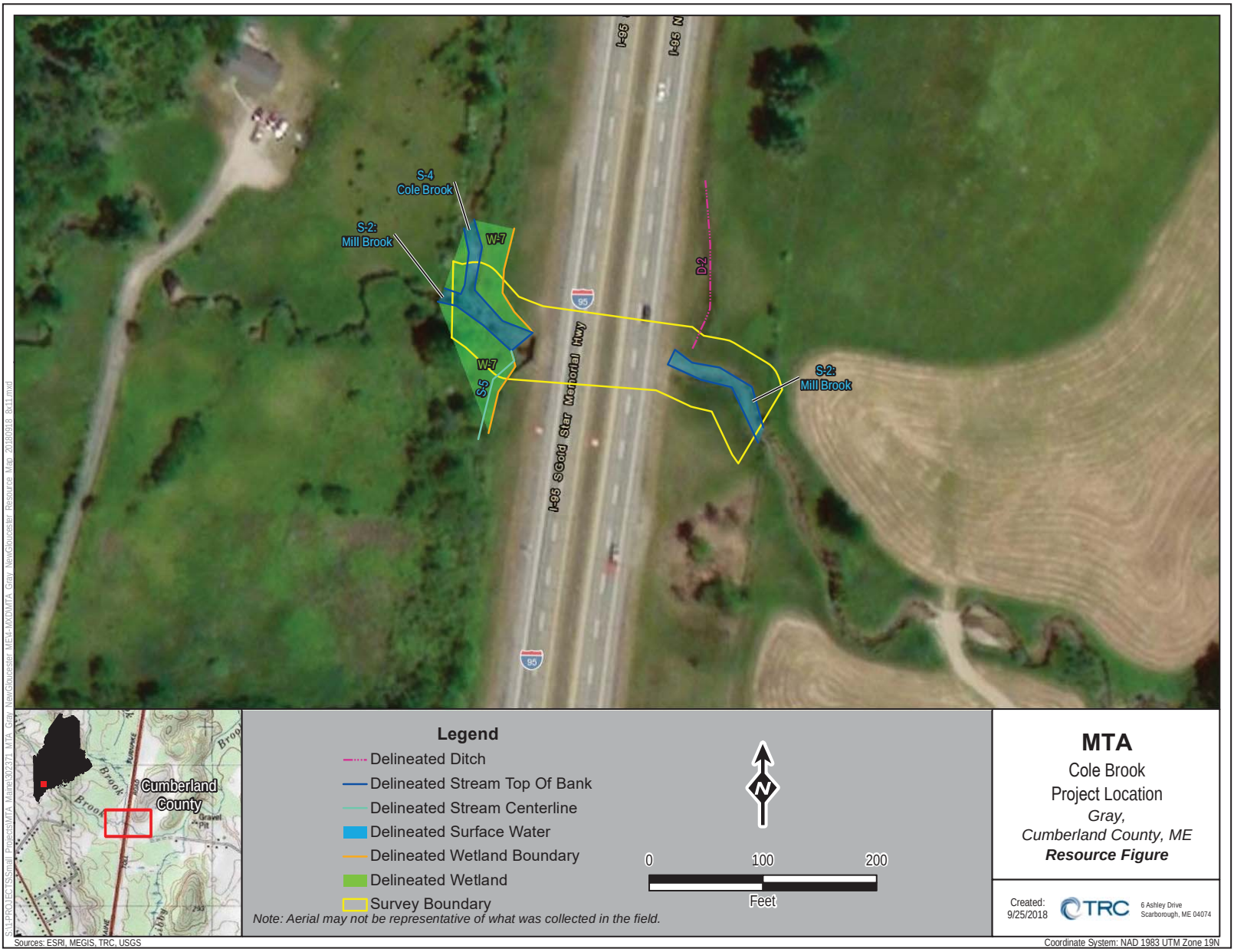
NAME	STATUS
Small Whorled Pogonia *Isotria medeoloides* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1890	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

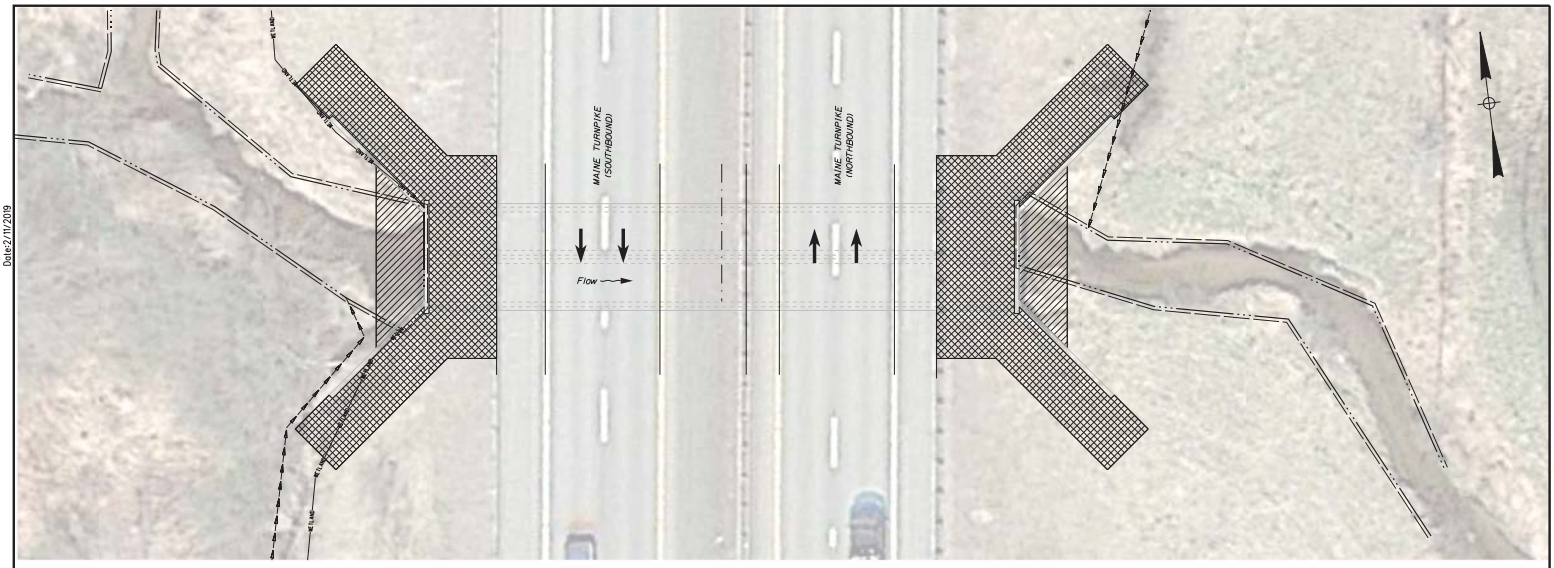
ATTACHMENT D

Wetland Delineation Map for Cole Brook and Associated Wetlands


S-4
Cole Brook
S-2:
Mill Brook
W-7
W-7
S-5
D-2
S-2:
Mill Brook
I-95
I-95 N
I-95 SGold Star Memorial Hwy
95
95
Cumberland
County
Legend
Delineated Ditch
Delineated Stream Top Of Bank
Delineated Stream Centerline
Delineated Surface Water
Delineated Wetland Boundary
Delineated Wetland
Survey Boundary
N
0
100
200
Feet
Note: Aerial may not be representative of what was collected in the field.
MTA
Cole Brook
Project Location
Gray,
Cumberland County, ME
Resource Figure
Created:
9/25/2018
TRC
6 Ashley Drive
Scarborough, ME 04074
S:\1-PROJECTS\Small Projects\MTA Maine\302371 MTA Gray NewGloucester ME\4-MXD\MTA Gray NewGloucester Resource Map 20180918 8x11.mxd
Sources: ESRI, MEGIS, TRC, USGS
Coordinate System: NAD 1983 UTM Zone 19N

ATTACHMENT E

Project Plan with Limits of Disturbance



LIMIT OF DISTURBANCE PLAN - COLE BROOK CULVERT

LEGEND:

- COFFERDAM LIMIT OF DISTURBANCE
- CONTRACTOR'S LIMIT OF DISTURBANCE AREA FOR ACCESS AND STORAGE

AREAS:

COFFERDAM LIMIT OF DISTURBANCE:

COLD BROOK CULVERT = 0.013 ACRES

CONTRACTOR'S LIMIT OF DISTURBANCE AREA FOR ACCESS AND STORAGE:

COLD BROOK CULVERT = 0.064 ACRES

NOTES:

1. EROSION AND SEDIMENT CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.
2. SEE SPECIFICATIONS FOR CONTRACTOR'S SUBMITTAL REQUIREMENTS IF INCREASING THE LIMITS OF DISTURBANCE TO THE PROJECT ESTIMATED QUANTITIES.

Date:2/11/2019

Filename: ...\MEDIA\XXL_LOD\Plan_65.25.dgn

Scale: 1" = 10'

No.	Revision	By	Date

Designed by: T-Y LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	DSM	1/2019	Checked	DSM	1/2019
Drawn	JJL	1/2019	In Charge of	DSM	1/2019

T.Y. Lin International
12 Northbrook Drive
Building A, Suite One
Falmouth, Maine 04105
TEL: (207) 781-4721
FAX: (207) 781-4753

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV

NORTHERN BRIDGE REPAIRS &
BENNETT ROAD EMERGENCY VEHICLE RAMPS
COLE BROOK CULVERT (MILE 65.25)
LIMIT OF DISTURBANCE

SHEET NUMBER: CB-02

CONTRACT:2019.11

92 OF 102

LEGEND:

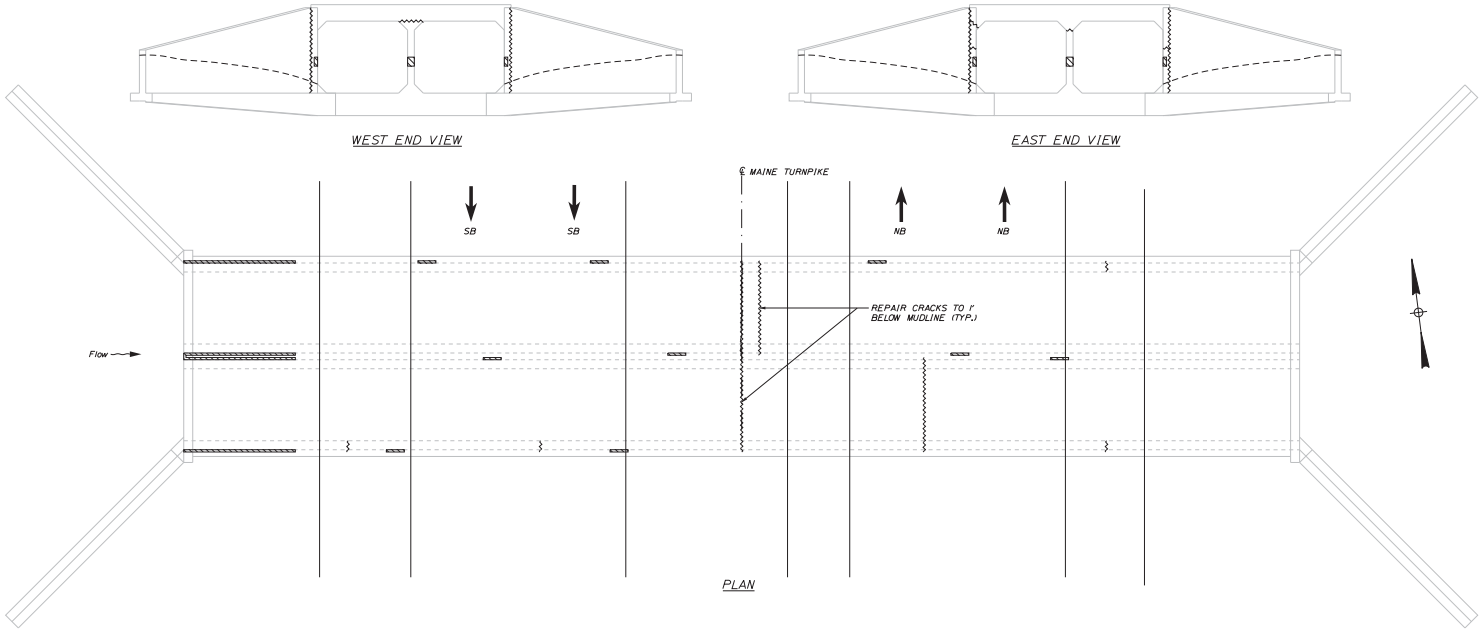
- LIMIT OF CONCRETE SURFACE REPAIRS
- LIMIT OF EPOXY INJECTED CRACK REPAIRS
- EXISTING CONCRETE
- EXISTING AND PROPOSED GROUND

NOTE:

1. FOR PROCEDURAL NOTES SEE SHEET "BRIDGE GENERAL NOTES"

COLE BROOK CULVERT (MILE 65.2)
ESTIMATED QUANTITY OF REPAIRS

	HEADWALLS	WINGWALLS	CULVERT BARRELS	TOTAL
CRACK REPAIRS	10 L.F.	43 L.F.	222 L.F.	275 L.F.
CONCRETE REPAIRS	0 S.F.	0 S.F.	100 S.F.	100 S.F.



Date:2/1/2019

Filename: ...\XXX_MM_65.25_Existing_Structures.dgn

Scale:

No.	Revision	By	Date

Designed by:

T-Y LIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Daniel S. Myers

	By	Date		By	Date
Designed	BLT	12/2018	Checked	DSM	12/2018
Drawn	BLT	12/2018	In Charge of	DSM	1/2019

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MTA PROJECT MANAGER: Ralph C. Norwood, IV

NORTHERN BRIDGE REPAIRS &
BENNETT ROAD EMERGENCY VEHICLE RAMPS
COLE BROOK CULVERT (MILE 65.25)
CULVERT REPAIRS

SHEET NUMBER: CB-03

CONTRACT:2019.11

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