

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

CONTRACT DOCUMENTS

**CONTRACT 2021.05**

YORK TOLL PLAZA DEMOLITION  
AND MAINLINE RECONSTRUCTION  
MILE 7.3

NOTICE TO CONTACTORS

PROPOSAL

CONTRACT AGREEMENT

CONTRACT BOND

FINAL LIEN AND CLAIM WAIVER AND AFFIDAVIT

SPECIFICATIONS

MAINE TURNPIKE AUTHORITY

SPECIFICATIONS

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

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

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MAINE TURNPIKE AUTHORITY

NOTICE TO CONTRACTORS

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

CONTRACT 2021.05

YORK TOLL PLAZA DEMOLITION  
AND MAINLINE RECONSTRUCTION  
MILE 7.3

at the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, ME, until 1:00 p.m., prevailing time as determined by the Authority on July 15, 2021 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 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 highway and site work required to demolish the existing toll plaza and reconstruct to a highway. The work at Mile 7.3 consists of demolition of the existing 17-lane toll plaza, tunnel, removal of existing utilities, and reconstruction of the existing plaza to a three (3) lane highway southbound and a four (4) lane highway northbound. The work includes earthwork, pavement, concrete, toll plaza and tunnel demolition, signing, overhead sign structures, concrete barrier, guardrail, electrical work, and lighting. The work also includes maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

Plans and Contract Documents may be examined by prospective Bidders weekdays between 8:00 a.m. and 4:30 p.m. at the office of the Maine Turnpike Authority, 2360 Congress Street, Portland, Maine. The **half size Plans** and Contract Documents may be obtained from the Authority upon payment of 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, Contract Documents and Geotechnical Report 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](mailto: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 a sealed envelope 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 in person conference will be held on Thursday July 1, 2021 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 2021.05

YORK TOLL PLAZA DEMOLITION  
AND MAINLINE RECONSTRUCTION  
MILE 7.3

MAINE TURNPIKE AUTHORITY

PROPOSAL

CONTRACT 2021.05

YORK TOLL PLAZA DEMOLITION  
AND MAINLINE RECONSTRUCTION  
MILE 7.3

TO MAINE TURNPIKE AUTHORITY:

The work consists of highway and site work required to demolish the existing toll plaza and reconstruct to a highway. The work at Mile 7.3 consists of demolition of the existing 17-lane toll plaza, tunnel, removal of existing utilities, and reconstruction of the existing plaza to a three (3) lane highway southbound and a four (4) lane highway northbound. The work includes earthwork, pavement, concrete, toll plaza and tunnel demolition, signing, overhead sign structures, concrete barrier, guardrail, electrical work, and lighting. The work also includes maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

This Work will be done under a Contract known as Contract 2021.05 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 2021.05  
 YORK TOLL PLAZA DEMOLITION AND MAINLINE RECONSTRUCTION  
 MILE 7.3**

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
201.11	Clearing	AC	1				
202.071	Removing Asbestos Containing Materials	LS	1				
202.15	Removing Manhole or Catch Basin	EA	11				
202.151	Abandoning Existing Manhole or Catch Basin	EA	7				
202.16	Removing Existing Pipe	LF	310				
202.161	Abandoning Existing Pipe	LF	650				
202.202	Removing Pavement Surface	SY	52,000				
202.205	Rumble Strips - Shoulder	LF	17,500				
203.20	Common Excavation	CY	45,400				
203.21	Rock Excavation	CY	400				
203.24	Common Borrow	CY	5,997				
203.245	Clay Borrow	CY	45				
<b>CARRIED FORWARD:</b>							



Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
203.25	Granular Borrow	CY	409				
203.35	Crushed Stone Fill 3/4-Inch	CY	550				
304.10	Aggregate Subbase Course – Gravel	CY	18,750				
304.14	Aggregate Base Course - Type A	CY	6,350				
403.207	Hot Mix Asphalt, 19.0 mm Nominal Maximum Size	T	14,170				
403.208	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size	T	600				
403.2081	Hot Mix Asphalt - 12.5 mm Nominal Maximum Size (Polymer Modified)	T	6,000				
403.211	Hot Mix Asphalt (Shim)	T	4,500				
403.213	Hot Mix Asphalt 12.5 mm Nominal Maximum Size (Binder)	T	4,500				
409.15	Bituminous Tack Coat - Applied	G	4,470				
409.152	Bituminous Tack Coat NTSS-1HM Trackless - Applied	G	4,200				
419.30	Saw Cutting Bituminous Pavement	LF	16,200				
502.234	Structural Concrete. Basement Closure Wall	CY	2				
<b>CARRIED FORWARD:</b>							

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
503.12	Reinforcing Steel, Fabricated and Delivered	LB	400				
503.121	Reinforcing Steel, Placing	LB	400				
508.14	High Performance Membrane Waterproofing	LS	1				
511.091	Temporary Earth Support Systems	SY	100				
526.306	Temporary Concrete Barrier Type I - Supplied by the Authority	LS	1				
526.351	Median Barrier Type I -Precast	LF	2,700				
526.352	Median Barrier Type I - Supplied By MTA	LF	240				
526.361	Median Barrier Transition Type I - Precast	EA	2				
526.362	Median Barrier Transition Type I - Supplied By MTA	EA	1				
527.307	Center Barrier Crash Attenuator (Smart Cushion)	EA	2				
527.34	Work Zone Crash Cushions	UNIT	1				
527.341	Work Zone Crash Cushions - TL-3	UNIT	4				
602.4	Pumped Grout Fill	CY	30				
<b>CARRIED FORWARD:</b>							

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
603.159	12 Inch Culvert Pipe Option III	LF	150				
603.165	15 Inch Reinforced Concrete Pipe Class III	LF	680				
603.169	15 Inch Culvert Pipe Option III	LF	340				
603.175	18 Inch Reinforced Concrete Pipe Class III	LF	100				
604.09	Catch Basin Type B1	EA	9				
604.0901	Catch Basin Type B1 with Flat Top	EA	12				
604.1521	48 Inch Manhole Type 6 with Flat Top	EA	2				
604.1542	72 Inch Outlet Control Structure	EA	4				
604.1561	96 Inch Doghouse Manhole	EA	1				
604.161	Altering Catch Basin	EA	1				
605.09	6 Inch Underdrain Type B	LF	720				
605.105	8 Inch Underdrain Outlet	LF	800				
606.1301	31" W-Bm Gr, Mid-Way Splice-Sgl Faced	LF	1,450				
<b>CARRIED FORWARD:</b>							

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
606.1305	31" W-Bm Gr, Md-Wy Splc Flared Term	EA	1				
606.1351	31" W-Bm Gr, Mid-Way Splice Terminal End-Anchored End	EA	1				
606.1724	Bridge Transition - Type III Modified	EA	2				
606.352	Reflectorized Beam Guardrail Delineator	EA	2				
606.353	Reflectorized Flexible Guardrail Marker	EA	3				
606.356	Underdrain Delineator Post	EA	43				
606.3561	Delineator Post - Remove and Reset	EA	50				
606.3562	Delineator Post - Remove and Stack	EA	31				
606.3611	Guardrail - Remove, Modify, and Reset Thrie Beam, Double Rail	LF	25				
606.3631	Guardrail - Remove and Stack or Dispose	LF	4,810				
606.48	Single Galvanized Steel Post	EA	2				
606.64	Gr - Thrie Beam - Dbl Rail	LF	638				
606.65	Gr - Thrie Beam - Sgl Rail	LF	525				
<b>CARRIED FORWARD:</b>							

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
606.754	Widen Shoulder for Energy Absorbing End Terminal	EA	1				
608.08	Reinforced Concrete Sidewalk	SY	30				
610.08	Plain Riprap	CY	200				
610.181	Temporary Stone Check Dam	CY	150				
610.182	Permanent Stone Check Dam	CY	8				
615.07	Loam	CY	7,700				
618.13	Seeding Method Number 1	UN	420				
619.1201	Mulch	UN	420				
619.1202	Temporary Mulch	LS	1				
620.56	Drainage Geotextile	SY	300				
620.58	Erosion Control Geotextile	SY	10,500				
626.122	Quazite Junction Box (18"x11")	EA	14				
626.22	Non-Metallic Conduit	LF	3,100				
<b>CARRIED FORWARD:</b>							

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
626.341	Light Standard Foundation	EA	11				
627.18	12" Solid White Pavement Marking	LF	1,200				
627.4072	Pref Pave Mark Tape Line, Groove Install	SF	725				
627.681	Temporary 6 Inch Painted Pavement Marking Line -Yellow or White	LF	145,000				
627.73	Temporary 6 Inch Pavement Marking Tape	LF	1,800				
627.731	Temporary 6 Inch Black Pavement Marking Tape	LF	2,000				
627.744	6" White or Yellow Painted Pavement Marking Line	LF	26,600				
627.745	6" White Or Yellow Polyurea Pavement Mrl Line	LF	5,000				
627.77	Remove Existing Pavement Marking	SF	3,400				
627.812	Temporary Raised Pavement Markers	EA	300				
627.94	Pavement Marking Tape	LF	1,250				
627.941	Pavement Marking Tape - Dotted White Lane Line, 6-Inch Width	LF	110				
629.05	Hand Labor, Straight Time	HR	20				
<b>CARRIED FORWARD:</b>							

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
631.10	Air Compressor (Inc Operator)	HR	20				
631.11	Air Tool (Inc Operator)	HR	20				
631.115	Jackhammer (Inc Operator)	HR	20				
631.12	All Purpose Excavator (Inc Operator)	HR	20				
631.171	Truck - Small (Including Operator)	HR	20				
631.18	Chain Saw Rental (Inc Operator)	HR	20				
631.32	Culvert Cleaner (Inc Operator)	HR	20				
631.36	Foreperson	HR	25				
631.51	Bucket Truck	HR	20				
631.52	Scissor Lift	HR	20				
631.53	Electrician	HR	20				
631.54	Electrician's Apprentice	HR	20				
634.16	Highway Lighting	LS	1				
<b>CARRIED FORWARD:</b>							

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
634.2042	LED Luminaries	EA	2				
634.2082	Remove Existing Light Standard	EA	31				
634.21	Conventional Light Standard	EA	2				
643.63	Flashing Beacon - Solar Powered	EA	5				
645.105	Remove and Stack Sign	EA	68				
645.1051	Remove and Stack Ground Mount Guide Sign and Structure	EA	18				
645.1052	Remove and Stack Overhead or Cantilever Guide Sign and Structure	EA	2				
645.107	Remove and Discard Canopy Mounted Sign	EA	12				
645.1071	Remove and Discard Canopy Mounted Dynamic Message Sign	EA	1				
645.109	Remove and Reset Highway Signs	EA	5				
645.251	Roadside Guide Signs, Type I	SF	650				
645.271	Regulatory, Warning, Confirmation and Route Assembly Sign, Type I	SF	102				
645.28	Wood Post	EA	5				
<b>CARRIED FORWARD:</b>							



Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
645.289	Steel H-Beam Poles	LB	6,150				
652.30	Flashing Arrow Board	EA	6				
652.312	Type III Barricade	EA	10				
652.33	Drum	EA	400				
652.34	Cone	EA	200				
652.35	Construction Signs	SF	1,125				
652.351	Construction Signs - Supplied By Authority	LS	1				
652.361	Maintenance of Traffic Control Devices	LS/CD	1				
652.410	Portable-Changeable Message Sign	EA	3				
652.450	Truck Mounted Attenuator	CD	200				
652.451	Automated Trailer Mounted Speed Limit Sign	EA	2				
656.50	Baled Hay, In Place	EA	50				
656.632	30" Temporary Silt Fence	LF	12,000				
<b>CARRIED FORWARD:</b>							

Item No.	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
<b>BROUGHT FORWARD:</b>							
659.10	Mobilization	LS	1				
800.31	Toll Plaza and Tunnel Demolition	LS	1				
801.03	Test Pits	EA	8				
<b>TOTAL:</b>							

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  
CONTRACT AGREEMENT  
CONTRACT 2021.05  
YORK TOLL PLAZA DEMOLITION  
AND MAINLINE RECONSTRUCTION  
MILE 7.3

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:

\_\_\_\_\_

MAINE TURNPIKE AUTHORITY  
CONTRACT BOND  
CONTRACT 2021.05  
YORK TOLL PLAZA DEMOLITION  
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KNOW ALL MEN BY THESE PRESENTS that \_\_\_\_\_  
of \_\_\_\_\_ in the County of \_\_\_\_\_ and State of \_\_\_\_\_  
as Principal, and \_\_\_\_\_ a Corporation duly organized under  
the laws of the State of \_\_\_\_\_ and having a usual place of business in \_\_\_\_\_  
\_\_\_\_\_

As Surety, are held and firmly bound unto the Maine Turnpike Authority in the sum of  
\_\_\_\_\_ Dollars (\$\_\_\_\_\_.\_\_\_\_),  
to be paid to said Maine Turnpike Authority, or its successors, for which payment, well and truly  
to be made, we bind ourselves, our heirs, executors, successors and assigns jointly and severally  
by these presents.

The condition of this obligation is such that the Principal, designated as Contractor in the  
foregoing Contract No. \_\_\_\_\_, shall faithfully perform the Contract on his part and  
satisfy all claims and demands incurred for the same and shall pay all bills for labor, material,  
equipment and all other items contracted for, or used by him, in connection with the Work  
contemplated by said Contract, and shall fully reimburse the Obligee for all outlay and expense  
which the Obligee may incur in making good any default of said Principal, then this Obligation  
shall be null and void; otherwise it shall remain in full force and effect.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, A.D., 202\_\_\_\_

Witnesses:

CONTRACTOR

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (SEAL)  
\_\_\_\_\_ (SEAL)  
\_\_\_\_\_ (SEAL)

SURETY

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (SEAL)  
\_\_\_\_\_ (SEAL)  
\_\_\_\_\_ (SEAL)

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

MAINE TURNPIKE AUTHORITY  
FINAL LIEN AND CLAIM WAIVER AND AFFIDAVIT  
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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: \_\_\_\_\_



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MAINE TURNPIKE AUTHORITY

PART I – SUPPLEMENTAL SPECIFICATIONS

CONTRACT 2021.05

YORK TOLL PLAZA DEMOLITION  
AND MAINLINE RECONSTRUCTION  
MILE 7.3

The Supplemental Specifications are not included in these  
Contract Documents but are available at  
[Maine Turnpike.com](http://MaineTurnpike.com) for download.

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MAINE TURNPIKE AUTHORITY  
MAINE TURNPIKE

PART II – SPECIAL PROVISIONS

CONTRACT 2021.05

YORK TOLL PLAZA DEMOLITION  
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MAINE TURNPIKE AUTHORITYSPECIFICATIONSPART 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 Project consists of highway and site work required to demolish the existing toll plaza and reconstruct to a highway. The work at Mile 7.3 consists of demolition of the existing 17-lane toll plaza, tunnel, removal of existing utilities, and reconstruction of the existing plaza to a three (3) lane highway southbound and a four (4) lane highway northbound.

The work includes earthwork, pavement, concrete, toll plaza and tunnel demolition, signing, overhead sign structures, concrete barrier, guardrail, electrical work, and lighting. The work also includes maintenance of traffic and all other work incidental thereto in accordance with the Plans and Specifications.

The general limits of work are from Mile 7.0 (Station 245+82) to Mile 7.9 (Station 295+00) in York.

Plans

The drawings included in these Contract Documents, and referred to as the Plans, show the general character of the work to be done under this Contract. They bear the general title “Maine Turnpike – Contract 2021.05 – York Toll Plaza Demolition and Mainline Reconstruction Mile 7.0 to Mile 7.9”. 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 DefinitionHolidays

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

Independence Day 2021 (Fourth of July)	12:01 a.m. (Midnight) preceding Friday to 6:00 a.m. the following Tuesday
Christmas Day 2021	12:01 a.m. (Midnight) preceding Friday to 6:00 a.m. the following Tuesday

New Year's Day 2022	12:01 a.m. (Midnight) preceding Friday to 6:00 a.m. the following Tuesday
Independence Day 2022 (Fourth of July)	12:01 a.m. (Midnight) preceding Friday to 6:00 a.m. the following Tuesday

103.4 Notice of Award

The following sentence is added:

The Maine Turnpike Authority Board is scheduled to consider the Contract Award on July 22, 2021.

104.2.2 Furnishing of Permits

The Contractor shall obtain the following permits:

State Electrical permits.

The Contractor will not obtain permits from the Town of York.

104.3.8 Wage Rates and Labor Laws

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

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

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

**1State 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.**

**2021 Fair Minimum Wage Rates  
Highway & Earth York County**

Occupation Title	Minimum			Occupation Title	Minimum		
	Wage	Benefit	Total		Wage	Benefit	Total
Asphalt Raker	\$ 19.80	\$ 1.01	\$ 20.81	Ironworker - Reinforcing	\$ 28.36	\$ 0.00	\$ 28.36
Backhoe Loader Operator	\$ 25.46	\$ 4.33	\$ 29.79	Laborer - Skilled	\$ 24.37	\$ 0.81	\$ 25.18
Boom Truck (Truck Crane) Operator	\$ 25.00	\$ 5.86	\$ 30.86	Laborers (Helpers & Tenders)	\$ 19.50	\$ 0.94	\$ 20.44
Bulldozer Operator	\$ 24.97	\$ 3.50	\$ 28.47	Loader Operator - Front-End	\$ 21.00	\$ 4.60	\$ 25.60
Carpenter - Rough	\$ 30.76	\$ 19.72	\$ 50.48	Mechanic- Maintenance	\$ 24.00	\$ 4.13	\$ 28.13
Cement Mason/Finisher	\$ 20.50	\$ 1.42	\$ 21.92	Millwright	\$ 25.75	\$ 5.41	\$ 31.16
Communication Equip Installer	\$ 22.00	\$ 0.00	\$ 22.00	Painter	\$ 19.50	\$ 0.00	\$ 19.50
Crane Operator =>15 Tons)	\$ 29.00	\$ 6.68	\$ 35.68	Paver Operator	\$ 28.52	\$ 5.06	\$ 33.58
Crusher Plant Operator	\$ 20.00	\$ 2.43	\$ 22.43	Pipelayer	\$ 24.75	\$ 2.94	\$ 27.69
Electrician - Licensed	\$ 28.00	\$ 5.90	\$ 33.90	Reclaimer Operator	\$ 26.83	\$ 13.25	\$ 40.08
Electrician Helper/Cable Puller	\$ 18.50	\$ 2.39	\$ 20.89	Roller Operator - Earth	\$ 19.83	\$ 0.00	\$ 19.83
Excavator Operator	\$ 25.00	\$ 4.31	\$ 29.31	Roller Operator - Pavement	\$ 22.77	\$ 4.42	\$ 27.19
Fence Setter	\$ 18.50	\$ 2.00	\$ 20.50	Screed/Wheelman	\$ 24.60	\$ 4.02	\$ 28.62
Flagger	\$ 16.00	\$ 0.00	\$ 16.00	Stone Mason	\$ 25.00	\$ 1.88	\$ 26.88
Grader/Scraper Operator	\$ 27.89	\$ 8.90	\$ 39.79	Truck Driver - Heavy	\$ 20.00	\$ 1.83	\$ 21.83
Highway Worker/Guardrail Installer	\$ 24.87	\$ 1.36	\$ 26.23	Truck Driver - Light	\$ 24.15	\$ 0.38	\$ 24.53
Hot Top Plant Operator	\$ 23.91	\$ 13.25	\$ 37.16	Truck Driver - Medium	\$ 20.91	\$ 2.55	\$ 23.46
Industrial Truck (Forklift) Operator	\$ 26.83	\$ 1.48	\$ 28.31	Truck Driver - Tractor Trailer	\$ 20.25	\$ 0.72	\$ 20.97

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.

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

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

A true copy

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

Expiration Date: 12-31-2021  
 Revised 2-25-2021



#### 104.4.6 Utility Coordination

This Subsection is amended by the addition of the following:

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

#### General

The existing toll plaza and Administration Building is served by overhead and underground utilities which are to remain to serve the Administration Building. No new utility work is anticipated.

The Contractor must comply with all OSHA regulations pertaining to work adjacent to utility wires. The Contractor shall plan and conduct his work accordingly.

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

#### **AERIAL UTILITIES**

##### ELECTRIC:

Central Maine Power Company  
Timothy Laney, Project Manager  
57 Old Winthrop Road  
Augusta, ME 04330  
E-mail: [timothy.laney@cmpco.com](mailto:timothy.laney@cmpco.com)

##### COMMUNICATION:

Consolidated Communications  
5 Davis Farm Road; Portland, Maine 04103  
Phone: 207-878-0854  
E-mail: [mdot\\_request@fairpoint.com](mailto:mdot_request@fairpoint.com)

##### CABLE TELEVISION:

Charter Communications  
118 Johnson Road; Portland, Maine 04103  
Phone: 207-620-3410  
E-mail: [dlpormeconstleadership@charter.com](mailto:dlpormeconstleadership@charter.com)

## UNDERGROUND UTILITIES

### WATER:

On-site well  
Maine Turnpike Authority

### SEWER:

On-site septic  
Maine Turnpike Authority

### GAS (PROPANE):

On Site above ground propane (with underground lines)  
Maine Turnpike Authority

### 104.4.7 Cooperation with Other Contractors

This Subsection is amended by the addition of the following:

Adjacent contracts currently scheduled for the 2021 and 2022 construction season include:

MTA Contract 2018.20 – York Toll Plaza (2018 – 2021)  
MTA Contract 2022.xx – Bridge Repairs, MM 1.25 Route 236, MM 1.6 Ramp H, MM 2.0 Wilson Road, MM 2.2 Spruce Creek, MM 17.3 Littlefield Road, Ramp M, Ramp J  
Maine DOT High Level Bridge Project, MM 0.0 – 2.0  
NHDOT/Maine DOT/MTA ITS Project  
MaineDOT I-95 Maine/New Hampshire Bridge Wearing Surface project.

The following Subsection is added:

### 105.2.4.2 Lead Paint

The Contractor shall note that portions of the existing toll booth structures contains lead-based paint. Based on the year of construction and extent of renovation conducted over the years, it is reasonable to assume that some lead paint (LP) is present. The Hazardous Building Material survey conducted limited spot testing of paint and LP was confirmed to be present on various interior and exterior building components. The intent of the lead testing was for potential lead hazardous waste disposal screening purposes only. A copy of the York Toll Plaza Building Survey Findings Report is attached in Part IV – Appendices, Appendix A. The Contractor shall institute every precaution when working with materials coated with lead-based paints.

### Lead Paint Removal

Current State of Maine Lead Poisoning regulations consider any paint that contains greater than 1.0 mg/cm<sup>2</sup> to be lead-based paint. However, the intent of the Hazardous Building Materials inspection was for demolition purposes only and preliminary demolition waste stream implications, not for compliance with ME Lead Poisoning regulations, HUD, or any regulatory abatement order.

Any surfaces with lead present should be managed in accordance with current rules and guidelines, including but not limited to OSHA worker safety rules and State and EPA waste handling and disposal regulations. U.S. Occupational Safety and Health Administration (OSHA) construction rules do not specify any "safe" or acceptable levels of lead within paint for the purposes of occupational exposures. Therefore, construction work involving paint found to contain lead must be completed in accordance with OSHA regulations, not limited to the lead standard, 29 CFR 1926.62. Contractors completing work in areas found to contain lead, or where it is reasonable to assume lead may be present, should be notified of the presence (and potential presence) of lead and proper work protocols should be used.

As lead was found to be present in the screening, proper waste testing with TCLP extraction for lead and potentially other toxic materials should also be completed prior to disposal of any waste generated in accordance with current EPA requirements. Often times it is recommended that pre-demolition TCLP testing be completed such that waste can be segregated as required during demolition activity. Construction/demolition waste that is found to contain lead greater or equal to 5.0 milligrams per liter (mg/L) by TCLP analysis must be handled and treated as hazardous waste.

#### 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 2003)
- 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.

#### 105.2.4.3 Asbestos

The Contractor shall note that the existing structure(s) have undergone Hazardous Building Material inspection and have tested positive for asbestos containing materials. A copy of the Hazardous Building Material inspection report is attached as Appendix A. The removal and disposal of the asbestos containing materials is specified in Special Provision 202, Removing Structure and Obstructions (Removing Asbestos Containing Materials).

Whereas no Asbestos Containing Material Determination Survey is 100 percent accurate, building demolition activities shall be accomplished under the supervision of a "competent person", as defined by OSHA, to evaluate whether materials uncovered/exposed are asbestos containing materials. If the "competent person" observes, or believes he has observed, asbestos containing materials while demolition is underway, the "competent person" shall immediately stop the demolition, secure the site and notify the Project Resident/Inspector.

The Owner shall have the area sampled and analyzed for asbestos containing materials. No work will be permitted in the area until samples show that no asbestos containing materials exists, or if asbestos containing materials are present, the conditions are abated. Compensation for delays resulting from stopping the demolition, testing for asbestos containing materials, and abating asbestos containing materials, if they exist, shall be limited to a time extension.

#### 105.2.4.4 Polychlorinated Biphenyls

The Contractor shall note that the existing structure(s) have undergone Hazardous Building Material inspection and based on the visual observations conducted during the inspection, polychlorinated biphenyl (PCB) containing light ballasts, and fluorescent light bulbs are present throughout the Administration Building and Toll Booths. However, visual spot checks of accessible fixture ballasts were not feasible as the lighting systems were still energized during the survey. As such, the ballasts observed should be assumed to potentially have PCB containing ballasts until proper inspections of the ballasts can be conducted for a "No PCBs" label. Unmarked ballasts and ballasts without date stamps are assumed to be PCB containing.

During demolition of the lights, additional inspections should be performed as noted above. PCB and non-PCB ballasts should be segregated and packaged for waste disposal in accordance with State and Federal requirements. It is also recommended that prior to proceeding with site work, it be requested that the Building Owner provide documentation of PCB ballasts removed and replaced in the building, if available.

PCBs have been shown to cause chronic toxic effects and are a human carcinogen. PCBs are toxic according to the U.S. EPA and are a regulated material. The two primary federal laws that affect the handling of PCBs are the Toxic Substance Control Act and the Superfund Law (CERCLA). Other regulations include various State requirements, Department of Transportation, U.S. OSHA, and the Resource Conservation and Recovery Act. The regulations establish various requirements for the removal, handling, storage and disposal of PCBs.

With regard to light ballasts, approximately half were manufactured prior to 1979 and nearly all pre-1979 ballasts contain PCBs. Ballasts manufactured after July 1, 1978 and that do not contain PCBs are required to be clearly marked "No PCBs". Please note that it is possible that post 1979 ballasts may contain some PCBs in the capacitor oils and more information should be requested if needed for applicable State and federal agencies. PCBs may also be present in common household appliances with small capacitors and as dielectric fluids; other electric equipment such as transformers, switches and voltage regulators; and recent studies have shown PCB content in caulk and some paints.

105.2.7 Use of Explosives – Subsection 105.2.7 of the Supplemental Specifications is DELETED and REPLACED with the following.

The use of explosives is permitted. Blasting shall be completed in accordance with the standards the Maine Revised Statutes Performance Standards for Quarries 38 M.R.S.A 490-Z (14). Prior to any blasting the Contractor must submit a detailed blasting plan to the Resident at least three (3) weeks prior to commencing drilling and blasting operations. The pre-blast survey radius shall be 2000 feet, unless the radius can be reduced using the formula at 38 M.R.S. §490-Z(14)(F)(3). The blasting plan shall contain the following information:

- a. Site plan with location of nearest structures and abutters. Plan shall also show the location of all public and private wells.
- b. Plan of each blast showing hole-spacing and delay pattern;
- c. Diameter and depth of each hole;
- d. Amount of explosive per hole;
- e. Total pounds of explosives per delay;
- f. Total amount of explosives per blast;
- g. Type of non-electric delays to be used;
- h. Amount of stemming in each hole;
- i. Type of explosive to be used;
- j. Soil and rock profile in blast zone;
- k. Scale distance to the nearest abutting structure;
- l. Type and location of seismograph to be used;
- m. Size of blasting mats and cover to be used; and,
- n. Safety precautions to be followed.

After submission of the blasting plan, but prior to the start of the blasting program, the blasting Contractor shall meet with the Resident, Maine Turnpike Authority officials, State Police (turnpike barracks), and affected utility representatives. The purpose of the meeting is to advise them of their blasting plan and schedule, accept feedback on the proposed plan, and coordinate the blasting effort.

Should field conditions warrant a change in the general blasting plan, the blasting Contractor shall provide a sketch and blasting plan details based on the actual field conditions prior to the blast for inclusion in the Project records.

The following general requirements are to be adhered to:

- A. Blasting permits shall be obtained by the Contractor from all State and Federal agencies having jurisdictions. Blasting will not be authorized by the Resident without proper permits.

The Contractor shall comply with all applicable laws, rules, ordinances, and regulations of the Federal Government, the State of Maine, and the city or town governing the transportation, storage, handling, and the use of explosives including 38 M.R.S.A 490-Z (14). All labor, materials, equipment, and services necessary to make the blasting operations comply with such requirements shall be provided at no additional costs to the Authority.

The Contractor shall obtain and pay for all permits and licenses required to complete the work of this Section.

In case of conflict between regulations or between regulations and Specifications, the Contractor shall comply with the strictest applicable codes, regulations or Specifications.

The Contractor shall notify all abutters within a 2000 foot radius of the blasting site in accordance with the requirements of the DEP permit.

- B. Obtain the services of a qualified vibration and blasting expert to monitor the blasting. All seismographic instruments shall be capable of producing a permanent record of the information required to determine the particle velocity at any time during all phases of the blasting operation. A copy of all recording shall be furnished to the Authority within two (2) working days after a blast. Seismographic recordings shall be taken at the critical locations and additional instruments shall be furnished, located and operated as deemed necessary by the Resident.

Persons responsible for blasting shall be Licensed Blasters in the State of Maine and shall have had acceptable experience in similar excavations in rock and controlled blasting techniques.

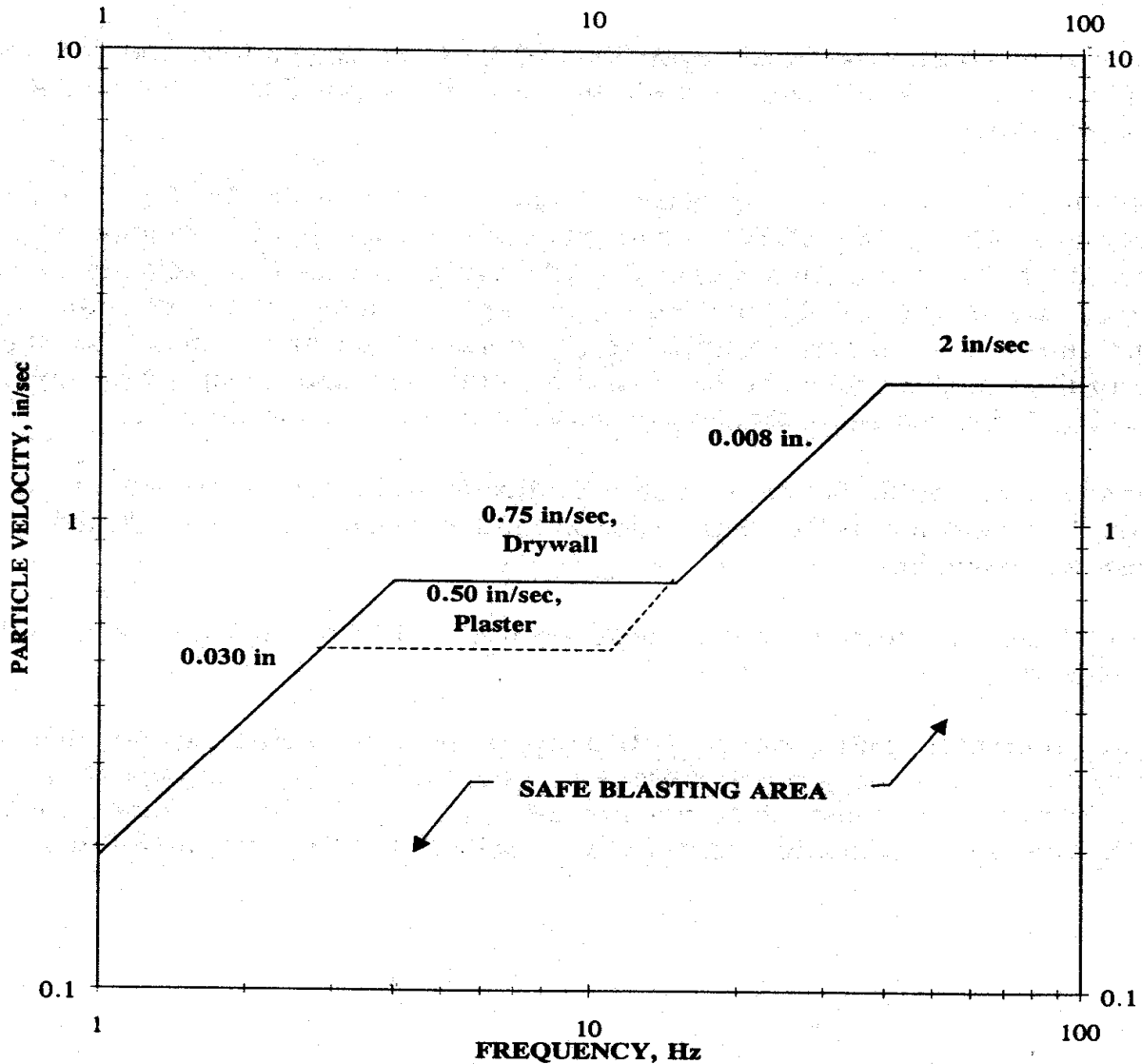
- C. Non-electric detonation systems shall be used. Electric blasting caps will not be permitted.

- D. The Contractor shall conduct all blasting activity in such a manner that the peak particle velocity of ground vibration, measured at the locations of the nearest structures to the blast, does not exceed the “safe limits” recommended by the U.S. Bureau of Mines in

FIGURE B-1 of BUMINES RI 8507, as follows:

FIGURE B-1

BUMINES RI 8507



**Figure B-1 - Safe levels of blasting vibration for houses using a combination of velocity and displacement**



ALTERNATIVE BLASTING LEVEL CRITERIA

- E. The Contractor shall conduct all blasting activity in such a manner that the sound from blasting measured at the locations of the nearest above ground occupied structures to the blast does not exceed the following limits:

<u>Number of Blasts Per Day</u>	<u>Sound Level Limit</u>
1	129 decibels
2	126 decibels
3	124 decibels
4	123 decibels

- F. Scaled distance factors permitted for various distances from blast:

<u>Distance from blast site (ft)</u>	<u>Scaled distance factor to be used without seismic monitoring (ft)</u>
0 to 300	50
300 to 5000	55
5000 and beyond	65

- G. The Contractor shall advise the Resident at least five (5) working days in advance of the dates on which he proposes to perform blasting operations, providing an approximate hour for the Resident's approval. The Authority will provide police at the turnpike site, who will stop traffic in both directions while the blast is detonated. The Contractor will be responsible for providing all traffic control required to close local streets during periods of blasting.

H. Safety Precautions

1. Clearing Danger Area Before Blasting - no blasting shall be permitted until *all* personnel in the danger area have been removed to a place of safety. A loud, audible warning system, devised and implemented by the Contractor, shall be sounded before each blast. The Contractor shall familiarize all personnel on the Project, Authority, Police Officers, Residents, and the general public with the implemented system. The danger area shall be patrolled before each blast to make certain that it has been completely cleared, and guards shall be stationed to prevent entry until the area has been cleared by the blaster following the blast.
2. Explosives shall be stored, handled and employed in accordance with Federal and State regulations.
3. No explosives, caps, detonators or fuses shall be stored on-site during non-working-hours.
4. The Contractor shall use sufficient stemming, matting or natural protective cover to prevent flyrock from leaving property owned or under control of the

Maine Turnpike Authority or from entering protected natural resources or natural buffer strips. Crushed rock or other suitable material must be used for stemming when available; native gravel, drill cuttings or other material may be used for stemming only if no other suitable material is available. Blasting mats shall be used to cover the top and vertical face of all blasts in order to minimize the possibility of excessive throw of rock.

5. The Contractor is advised that the Authority's Maintenance Forces and State Police use two-way radios in the vicinity of the Project. These radios cannot be turned off during loading operations. Therefore, non-electric detonation systems shall be used. Electric blasting caps will *not* be permitted.
6. The Contractor shall be responsible for determining any other safety requirements unique to blasting operations at these particular sites so as not to endanger life, property, utility services, any existing or new construction, or any property adjacent to the site.
7. No requirements of, or omissions to, require any precautions under this Contract shall be deemed to limit or impair any responsibility or obligations assumed by the Contractor under or in connection with this Contract; and the Contractor shall at all times maintain adequate protection to safeguard the public and all persons engaged in the work, and shall take such precautions as will accomplish such end, without undue interference to the public. The Contractor shall be responsible for and pay for any damage to adjacent roadways or structures resulting from work executed under this Section.
8. The Contractor is required to secure all travel ways, entrances and exits within 300 feet of the blast zone. No vehicles or pedestrians will be allowed within the 300-foot-zone until the blast is complete, all debris is cleaned from the roadways, and the site is deemed safe by the blasting contractor and the Resident.

#### I. General Blasting Procedures

1. Explosives will be restricted to non-peak periods per Special Provision 652. The use of explosives is not permitted on Friday, weekends (Saturday and Sunday), holidays, on the eve of a holiday, or during non-daylight-hours unless approved in writing by the Resident. A blast may be allowed early on a Friday morning before 6:00 a.m. if it can be completed during daylight-hours. Specific allowable blasting times are outlined in Special Provision 652 Maintenance of Traffic (Allowable Blasting Time). In order to minimize traffic disruptions, the Contractor shall schedule blasting such that all disrupted traffic shall be cleared between any two successive blasts detonated anywhere on the Project. The Contractor will be allowed as many mainline traffic stoppages as can be cleared in the designated blasting window, provided the blast schedule can be safely coordinated. Each stoppage will be counted as one complete stoppage of mainline traffic. The Authority may withhold permission to blast if, in the opinion of the Authority, actual or anticipated traffic volumes will produce mainline or local road congestion that cannot be cleared in a reasonable amount

of time. The Contractor's blasting operations shall be performed using extreme care to minimize the inconvenience and interruption to traffic and damage to the existing pavement, structures and surrounding areas.

2. The Contractor shall have sufficient equipment available on-site to clear the pavement of blast rock, if it is necessary. At a minimum, the Contractor shall have a vehicle to sweep the pavement and a half-ton pickup equipped with a plow. The blast will not be allowed to occur if this equipment is not present.
3. The Contractor shall coordinate all blasting with the Resident on-site who shall determine in advance when the charges may be set.
4. Blast hole diameter shall not be greater than three inches.
5. No free flowing, pourable or pumpable explosives shall be used unless approved by the Resident. All explosives shall be in cartridges or other semi-rigid containers.
6. Mainline traffic control during blasting periods shall be in accordance with the Plans and Specifications. Traffic control signs shall meet the requirements of Section 652 and will be paid for under Item 652.35, Construction Signs. The setup and removal of signs and the coordination with State Police for mainline blasting is incidental to Subsection 652.361, Maintenance of Traffic Control Devices.
7. Local traffic control during blasting periods shall be in accordance with MUTCD and local requirements. All temporary signage shall be removed when the daily blasting period is over. Local traffic control signs shall meet MUTCD requirements and will be measured for payment as construction signs. Providing flaggers on local roads, if required for blasting, will be measured for payment.
8. The Contractor shall report to the Resident, in writing, all blasting complaints received by the Contractor within 24-hours of receipt. Each blast complaint report shall include the name and address of the complainant, time received, date and time of blast complained about, and a description of the circumstances which led to the complaint. Upon receipt of a written complaint alleging damage from the blasting, the Contractor's vibration and blasting consultant and/or a representative of the blaster's insurance company shall investigate the claim and a written report shall be issued to the complainant, with a copy to the Resident, of the results of the investigation and the response of the Contractor. This written report shall be received by the complainant and Resident within 15 work days of receipt of the written complaint.
9. The maximum time for which traffic may be stopped at any single time shall be six (6) minutes. This duration shall be measured as the time between the time that the last car passes the Resident, until the time the Resident determines that all travel lanes are cleared of blast debris. The Contractor shall reduce the size of the blast, change the design and method of the blast, use more mats, or otherwise alter the blasting so that the traffic is not stopped for

more than six minutes. If, due to the throw of rock onto the highway or other blasting related activities, traffic is stopped for more than six minutes, the Contractor shall pay a penalty of \$1000.00 per minute for every minute traffic is stopped in excess of the six minute limit. The penalty shall be measured separately on the northbound and southbound roadway (or eastbound and westbound roadway). Total penalties will be deducted from the next pay estimate. Whenever the volume of traffic is excessive such that a six minute interruption would cause objectionable congestion, in the opinion of the Authority, the hours during which blasting may occur may be further restricted.

#### J. Pre-Blast Condition Survey

The Contractor shall provide a pre-blast survey as described below:

Prior to start of blasting work, the Contractor shall conduct a pre-blast condition survey of all existing structures and conditions on the site, adjacent to the site, or in the vicinity of the site. This survey shall extend to such structures or conditions as may be affected by the Contractor's construction operations. Surveys shall be performed on all structures within 2000 feet of anticipated blasting areas unless the radius can be reduced using the formula at 38 M.R.S. §490-Z(14)(F)(3). As a minimum condition surveys shall be performed on all structures within 500 feet of anticipated blasting. The Contractor is responsible for the following:

1. Coordinate activities, issue notices, obtain clearances and provide whatever photographic and secretarial assistance is necessary to accomplish the survey.
2. Give notice, in writing, to the owner of the property concerned and tenants of the property. Advise in notice, the dates on which surveys are to be made so that they may have representatives present during the examination. Provide copies of all notices to the Resident.
3. The survey shall consist of a description of the interior and exterior conditions of the various structures examined. Descriptions shall locate any existing cracks, damage or other defects existing, and shall include such information so as to make it possible to determine the effect, if any, of the construction operations on the defect. Where significant cracks or damage exist, or for defects too complicated to describe in words, photographs shall be taken and made part of the record.
4. The survey shall include a test of all public and private wells in the area. Water quality tests shall be obtained so that a baseline condition may be developed.

Contractor's record of the pre-blast condition survey shall consist of written documentation and photographs of the conditions identified, or a good quality videotape survey with appropriate audio description of conditions and defects. Prior to start of work, one copy of the Contractor's record of conditions survey shall be submitted to the Resident for review and retention.

Upon completion of all excavation (earth/rock) and blasting work, the Contractor shall make an examination similar to the pre-construction survey of any properties, structures, and conditions where complaints of damage have been received or damage claims have been filed. Notice shall be given to all interested parties so that they may be present during the final examination. Records of the final examination shall be distributed the same as the original preconstruction survey.

K. Payment

No separate measurement or payment will be made for the work outlined in this Section including the detailed blasting program, pre-blast and post-blast surveys, blasting and permit acquisitions. All cost associated with this work shall be incidental to the Rock Excavation item(s).

L. Indemnity

Notwithstanding full compliance with these Specifications, approval of blasting plan, and successful limitation to maximum peak particle velocity noted above, the Contractor shall be solely responsible for any damage, direct or indirect, arising from blasting and shall hold the Authority and Resident harmless from any costs, liens, charges, claims or suits, including the costs of defense, arising from such damage, real or alleged. The Authority and Resident shall be additionally-named insured on any insurance policy covering blasting carried by the Contractor, and this requirement shall also be enforced on any subcontractor.

The Contractor shall provide a pre-blast and post-blast survey including photographs. An inspection of all facilities within and adjacent to the Contract limits shall be made to determine any changes that may occur due to the blasting operations.

The Resident's approval shall not relieve the Contractor of any responsibility for any hazards or damages related to this work. The use of explosives shall conform to all Federal and State laws and regulations. Explosives must not be stored within the turnpike right-of-way. Explosives shall be in the care of competent watchmen at all times, and placement and detonation shall be performed under the direction of a qualified blaster licensed in the State of Maine.

105.8.2 Permit Requirements

The Project is permitted under the Maine Department of Environmental Protection (MDEP) Site Location of Development Act General Permit for the Maine Turnpike Authority (MTA GP) which authorizes the MTA to construct or cause to be constructed or operate or cause to be operated all developments under the MTA's authority for which approval is required pursuant to the Site Law, 38 M.R.S.A 481-490, after the approval by the DEP of the Notice of Intent as set forth in 38 M.R.S.A. 486-B (3). A copy of the MTA GP is attached in Appendix D. A copy of the MDEP Approval Order is attached in Appendix E.

The project is permitted under a Tier 3 Natural Resources Protection Act (NRPA) issued by MDEP. A copy of the permit MDEP Approval Order is attached in Appendix E.

The Project is permitted under Section 404 of the Clean Water Act, through the US Army Corps of Engineers Programmatic General Permit, Category 2. The Project is subject to the General Conditions of the Category 2 Authorization dated October 13, 2015 through October 13, 2020. A copy of the USACE General Permit Authorization Letter is attached in Appendix F and a copy of the Maine General Permit is attached in Appendix G.

The Contractor shall prepare a Limit of Disturbance (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 Notice of Intent (NOI), has been estimated to be 34 acres.

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. Changes in the limit of disturbance may require resubmittal of the NOI for MaineDEP approval and/or modifications to ACOE Permit, MDEP Tier III permit and MaineDEP General Permit. Any re-approvals that are necessary, will take several weeks or longer to complete and the Contractor shall not go outside the approved limits until such time that the re-approvals are issued. The Contractor shall not be entitled to any additional compensation for time delays to acquire any re-approvals.

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 Maine Department of Environmental Protection Site location of Development General Permit Notice of Decision, NRPA Permit 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). 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 substantially complete on or before September 30, 2022. Substantial completion shall be defined as all work complete except for punch list items. Supplemental liquated damages will be applied in accordance with Section 107.8 for every calendar day that the project is not substantially complete beyond September 30, 2022.

All work shall be completed on or before October 7, 2022. The contract completion shall include completion of all contract work and all punch list items.

107.4.6 Prosecution of Work

The following is a summary of the Construction Stages and key dates:

All work at the existing toll plaza shall be completed in 4 (four) Phases.

Work on this contract cannot impact toll collection operations at the mile 7.3 toll plaza until the new toll plaza at mile 8.8 is fully operational. The new toll plaza is being constructed under Contract 2018.20 and is anticipated to be operational/collecting tolls on September 8, 2021 at 12:01 a.m. with a rain date of September 9, 2021 at 12:01 a.m. Contractor will be required to provide maintenance of traffic for a main line stoppage during the transition of toll collection from the MM 7.3 toll plaza to the new MM 8.8 toll plaza. During the stoppage the contractor shall install "DO NOT STOP" signs at all toll lanes at the mile 7.3 toll plaza. In addition, the contractor shall remove all advance signage for the mile 7.3 plaza within 5 calendar days. If the signs are not removed within 5 calendar days then supplemental liquated damages in accordance with Section 107.8 will be applied. Once the new toll plaza is operational, the existing toll plaza at mile 7.3 will stop collecting tolls and decommissioning can begin.

The Contractor shall provide the Authority five (5) working days to decommission the existing toll plaza and administration building, during which the Contractor shall not commence the demolition of the existing toll plaza, unless specifically authorized by the Authority. The contractor may begin establishing traffic control for the subsequent phase during this period.

After the decommissioning, the Contractor shall begin the demolition of the existing toll plaza and tunnel, and begin highway construction. Work includes the demolition of the existing toll plaza and tunnel, excavation, granular subbase and base pavement materials, HMA pavement, proposed drainage improvements, median barrier, highway lighting, pavement markings and signs, and traffic control.

Pre-Phase 1: Remove canopy completely using temporary toll lane closures as necessary while maintaining a minimum of five (5) southbound and four (4) northbound lanes, unless otherwise authorized by the Authority. Northbound and Southbound existing highway lighting shall remain functional. Replace flashing yellow beacons at end of toll islands used for phase 1 with solar powered unit to remain operational until traffic is shifted out of toll lanes.

Phase 1: Shift the three northbound lanes and on-ramp lane into the four outside toll lanes, and shift the three southbound lanes into the five outside toll lanes. Place trailer mounted

lighting in work zone to illuminate toll islands as shown on plans, move lighting as necessary for tunnel removal. Contractor shall complete work which includes; sheet piling along both northbound and southbound at tunnel, demolition of the seven toll booths; excavation; granular subbase and base pavement materials; temporary HMA pavement to temporary phase 2 grade both northbound and southbound; temporary signing and striping. The Contractor shall complete this work within 40 calendar days with incentive/disincentive payments.

Phase 2: Shift the three northbound lanes to inside lanes and on-ramp lane onto the outside existing toll lane, and shift the three southbound lanes onto the three inside lanes. Contractor shall complete work which includes; demolition of the toll plaza, and tunnel; excavation; granular subbase and base pavement materials; permanent HMA pavement to intermediate grade and temporary pavement ramps; temporary signing and striping.

Phase 3 and 4: This work shall be performed sequentially upon completion of Phase 1 and 2. Work includes excavation; granular subbase and base pavement materials; permanent HMA pavement to intermediate grade and temporary pavement ramps; temporary signing and striping. This work shall be substantially complete by September 30, 2022.

#### Incentive/Disincentive Payments

Incentive/Disincentive payment for Phase 1:

The Incentive/Disincentive activity is for the duration when 4 northbound lanes and 5 southbound lanes of traffic is passing through the non-operating existing toll booths, as shown in Phase 1 Maintenance of Traffic Plans.

The total duration period for this activity is 40 calendar days. The “day” begins at 12:01 a.m. and ends at 12:00-midnight. The duration begins when the traffic is restricted to 4 lanes northbound, 5 lanes southbound, through the existing non-operating toll booths in either the northbound or southbound direction. The duration ends when both the northbound and the southbound traffic are shifted to the travel lanes as shown in Phase 2 Maintenance of Traffic Plans.

An Incentive payment for early completion of Five Thousand (\$5,000.00) Dollars per calendar day shall be paid for each calendar day (up to a maximum of 5 days) that activity listed above are completed prior to a 40 calendar day total duration. Incentive will only be paid for days prior to October 30<sup>th</sup>, 2021. This is separate and distinct from the Liquidated Damages and Supplemental Liquidated Damages.

A Disincentive penalty of Five Thousand (\$5,000.00) Dollars per calendar day shall apply for each calendar day that the activity is not completed beyond the 40 calendar day total duration and for each day beyond October 30<sup>h</sup> that Phase 1 is not completed. There is no limit on the disincentive.

#### 107.4.7 Limitations of Operations

Work at the existing toll plaza MM7.3 cannot begin until the new toll plaza and ORT at MM 8.8 is complete and in full operation for toll collection.



Lane and shoulder closures required to perform daily and short term operations, as well as overhead operations and equipment moves, shall be allowed in accordance with the tables provided in Special Provision 652 – Maintenance of Traffic - Specific Project Maintenance of Traffic Requirements. The Contractor shall provide strict adherence to lane and shoulder closures in accordance with these tables unless authorized by Authority.

Lane closures and highway construction signing may overlap the MM 8.8 ORT project limits. When there is a conflict, the Authority shall decide which project has priority to perform the work.

Wide loads must be able to safely pass all daytime work areas, with the exception of Pre-Phase 1 when wide loads are prohibited. All traffic passes through a standard width existing toll lane in toll plaza to accommodate canopy removal.

The Contractor shall submit the proposed staging and storage areas for approval by the Resident. All equipment and material storage must be located no closer than 30 feet from the edge of travel way, unless protected by temporary barrier. Proposed material and equipment storage locations shall be selected based on (1) proximity to UIS/Protected Natural Resources; (2) minimizing rutting or other actions that may hinder sheet flow from roadway; and (3) spill control and prevention, in the event of a fluid release from the equipment.

Material and equipment and vehicles stored behind temporary barrier must be located beyond the maximum barrier system deflection to allow for proper barrier deflection.

Any active travel lanes that are milled must be paved within one week of being milled. A maximum mill depth of 4" is required. Longitudinal joints adjacent to active traffic or where traffic drives over joint shall use a safety edge. At no time shall a vertical edge of more than 1" be left in areas open to traffic.

Care shall be taken when working near catch basins to ensure foreign material and contaminants do not enter the stormdrain systems. If foreign material and/or contaminants enter a catch basin(s), such material shall be removed prior to the material exiting the catch basin and into the stormdrain system and waterway. The Contractor shall remove and properly dispose of this material to the satisfaction of the Resident. Payment shall be incidental to the Contract.

The Contractor shall not install sheet piling or other driven or hammered systems for temporary excavation support or permanent installations during non-daylight hours or within 10 feet of an active traffic lane.

Contractor vehicle and equipment access to and from the mainline shall be completed in a manner that minimizes disruption to mainline traffic flow to the extent possible at all times.. The Contractor shall locate access locations to the work area(s) which provide adequate acceleration/deceleration length and sight distance to and from the mainline, including appropriate warning signs. The Contractor may use the existing shoulders if available for acceleration/deceleration length, but at no time shall active shoulders be used for queuing construction vehicles. When existing shoulders are not available, the Contractor shall establish, construct and maintain facilities within the work area for acceleration/deceleration and merging with the mainline traffic. When access or egress points are not active, all warning signs shall be

covered or removed, and appropriate traffic control devices shall close the access locations. When access or egress points are no longer necessary, signage shall be removed and appropriate traffic control devices shall close the access locations.

The Contractor shall use the I-95 mainline for the hauling and delivery of materials and equipment for the construction of this project. Chases Pond Road and Chases Pond Road / Sewall's Pasture Road emergency vehicle ramps shall not be used by the Contractor for hauling and delivery of materials and equipment for construction of this contract.

The length of temporary barrier installed during each Phase of work shall be limited to the Contractor's active work area, unless additional barrier is specifically required in the contract documents. The Contractor shall sequence the work within each Phase in a logical manner that minimizes the length temporary barrier along one or both sides any active travel lane. When construction or operations in a work area is complete and matches existing pavement surface, the temporary barrier shall be removed or moved away from the active lane. If the temporary barrier is removed, appropriate traffic control devices will be employed to delineate the mainline edge of shoulder.

Temporary pavement ramps will be constructed at the ends of the pavement work transverse to direction of traffic. The pavement ramps shall be constructed prior to opening the lane(s) to traffic. This work shall not be measured separately, but shall be incidental to Item 403.

SPECIAL PROVISIONSECTION 202REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Asbestos Containing Materials)

202.01 Description

The following paragraphs are added:

The work shall also consist of removing and disposing of all asbestos containing materials (ACM) identified in the Hazardous Building Material inspection prior to the demolition of the existing York Toll Plaza toll booth infrastructure.

The work shall also consist of removing and disposing of suspected asbestos containing materials consisting of toll booth transite countertops, gypsum board joint compound, , caulk (gray), and damp proof coating of the Administration building foundation.. Table 1 of Appendix A within the Hazardous Building Material inspection report includes a list of ACBM and accessible asbestos identified in the building, EPA category listings, and asbestos content. A listing of the different homogenous groups of suspect material identified, samples collected, and analytical results is included in Appendix A within the Hazardous Building Material inspection report.

All asbestos containing materials shall be removed by a licensed asbestos abatement Contractor prior to the general demolition of the identified structures. All asbestos containing materials shall be disposed of at licensed asbestos containing material disposal sites in compliance with current EPA and MaineDEP regulations. The Contractor shall submit to the Resident the original disposal receipts acknowledging proper disposal of asbestos containing materials prior to the payment of Removing Asbestos Containing Material pay items.

All non-asbestos containing materials shall become the property of the Contractor and shall be removed from the site prior to the completion of the Project. 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.

202.021 Removing Asbestos Containing Materials

The Maine Turnpike Authority had a Hazardous Building Material Survey performed at the York Toll Plaza in February 2016. The location of asbestos is documented in **Appendix A – York Toll Plaza Building Survey Findings Report**, dated February 16, 2016. The Hazardous Building Material Survey is not intended to be used as an abatement specification or work plan.

The Hazardous Building Material Survey did not include demolition of the structure or equipment to locate asbestos containing materials. Should additional suspect asbestos containing materials be observed during the demolition process, the provisions of Special Provision Subsection 105.2.4.5 shall apply.

A licensed asbestos abatement Contractor shall properly abate and dispose of all asbestos containing materials identified in the Hazardous Building Material Survey Report and as specified in this Special Provision.

The General Contractor or building demolition Contractor may sub-contract the removal of the asbestos containing material (ACM) to a licensed asbestos abatement Contractor or use his own trained and licensed personnel. The licensed asbestos abatement Contractor must prepare a work plan for the removal of the ACM and submit a copy to the Maine Turnpike Authority.

No asbestos containing materials may be removed without a Maine Turnpike Authority approved removal and disposal plan; and proper notifications and filings with the Maine Department of Environmental Protection.

The licensed asbestos abatement Contractor shall restrict access around the building perimeters by installing barrier tape at minimum 40 feet offsets to the building lines and barricading entrances that lead into asbestos abatement areas.

Disposal of all ACM shall comply with current EPA and Maine DEP regulations. The Contractor shall submit to the Maine Turnpike Authority the original disposal receipts acknowledging proper disposal of ACM prior to the payment of Removing Asbestos Containing Material pay items.

The licensed asbestos abatement Contractor will be responsible for all work associated with the asbestos removal, including the Asbestos Removal Plan, MaineDEP Notification, demolition, final clearances, legal disposal and abatement certification.

The licensed asbestos abatement Contractor shall obtain any and all permits or licenses necessary for the performance of the work and shall familiarize himself with, and conform to, all State and Federal laws, regulations or ordinances applicable to the work.

#### 202.05 Method of Measurement

The first and third sentences of the first paragraph are deleted and replaced with the following:

Removing Asbestos Containing Materials will be measured as one lump sum.

#### 202.06 Basis of Payment

This Subsection is amended by the addition of the following:

Removing Asbestos Containing Materials will be paid for at the Contract lump sum price which shall be full compensation for the legal removal and disposal of all asbestos containing meeting materials and shall include all materials, labor, tools and equipment necessary to complete this work.

Preparation of work plans for the removal of the ACM is incidental and no separate payment will be made.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
202.071	Removing Asbestos Containing Materials	Lump Sum

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Existing Manholes or Catch Basins)  
(Abandoning Existing Manhole or Catch Basin)

202.05 Removing Manholes or Catch Basins

The following sentence is added:

Frames and grates shall be removed, transported and stacked at the York Maintenance Facility.

Contractor shall remove existing manhole or catch basin whenever the center of an existing structure is located within 10 feet center to center distance of a proposed manhole, catch basin, or other similar structure. If the center of existing structure that is not incorporated in the proposed structure is more than 10-feet from a proposed structure, the structure shall be abandoned in place as described below.

Add the following section:

202.051 Abandoning Existing Manhole or Catch Basin

Existing manholes or catch basins to be abandoned as indicated on the plans or as directed by the Resident shall be have the frame and grate/removed, transported and stacked at the York Maintenance Facility. The top of the structure shall be removed such that no part of the structure is within three-feet of proposed finish grade and then completely filled with flowable fill meeting the requirements of Special Provision 602.

202.07 Method of Measurement

The last paragraph is deleted and replaced with the following:

Removing Manholes or Catch Basins will be measured by each unit satisfactorily removed.

Abandoning Existing Manhole or Catch Basin will be measured by each unit satisfactorily abandoned.

202.08 Basis of Payment

The following is added after the first sentence of the fourth paragraph:

Removing, transporting and stacking the frames and grates will not be paid for separately, but shall be incidental to the Removing Existing Manholes or Catch Basin item.

The following paragraph is added after the fourth paragraph:

The accepted quantity of Abandoning Existing Manhole Catch basin will be paid for at the contract unit bid price each, which price shall include all work, materials, labor and equipment. Removing, transporting and stacking the frames and grates/covers will be paid for separately, but shall be incidental to the Abandoning Existing Manhole or Catch Basin item.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
202.15	Removing Manhole or Catch Basin	Each
202.151	Abandoning Existing Manhole or Catch Basin	Each

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Existing Pipe)  
(Abandoning Existing Pipe)

202.01 Description

The following paragraphs are added:

This work shall consist of removing wholly or in part, and satisfactory disposing of all designated pipe to be removed and abandoning existing pipes in places as designated as part of the contract documents.

The following Subsection is added:

202.052 Removing Existing Pipe

When an existing pipe not part of the proposed project is within 10-feet as horizontally measured, of a proposed pipe, Contractor shall remove wholly or in part, existing pipe as indicated within contract documents. Contractor shall backfill and compact, level with adjacent grade, entire void space with material meeting the gradation of gravel borrow, unless area is subject to other improvements; i.e. pavement section, structure, etc.

Add the following section:

202.053 Abandoning Existing Pipe

As designated on the plans or as directed by the Resident, existing pipes shall be abandoned by installing a cap or masonry plug on the downgradient outlet of the pipe and completely filling with flowable fill meeting the requirements of Special Provision 602. Once the pipe is completely filled, a cap or masonry plug shall be installed on the upstream end of the pipe.

202.07 Method of Measurement

The following paragraphs are added:

Removing Existing Pipe shall be measured by the length in linear feet along the centerline of the pipe removed.

Abandoning Existing Pipe shall be measured by the length in linear feet along the centerline of the pipe abandoned.



202.08 Basis of Payment

The following are added after the last paragraph:

Payment for Removing Existing Pipe will be made at the contract unit price per linear foot, which price shall include all work, materials, labor, and equipment to satisfactorily perform the work.

Payment for Abandoning Existing Pipe will be made at the contract unit price per linear foot, which price shall include all work, materials, labor, and equipment to satisfactorily perform the work.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
202.16	Removing Existing Pipe	Linear Foot
202.161	Abandoning Existing Pipe	Linear Foot

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Pavement Surface-Mainline)  
(Removing Existing Pavement Surface)

202.01 Description

The following sentences are added:

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

Removal of the pavement and membrane surface from the bridge decks shall be completed by scraping or other methods that will not damage the existing concrete deck surface. Milling of bridge deck pavement shall not be allowed.

Removal of mainline bridge approach pavement shall be completed using a milling machine meeting the requirements in the first two paragraphs of section 202.061. Removal of pavement on local roads bridge approaches shall be completed using a milling machine meeting the requirements in the first two paragraphs of Section 202.061 or as called out on the plans or other methods approved by the Authority.

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

This work shall also consist of construction of temporary ramps at all butt joints as shown in the MaineDOT Standard Details, November 2014 Edition – Pavement Overlay Butt Joint Detail (Roadways), Page 202(01) or as approved by the Resident. The length of the temporary ramp shall be at least 1/2 L.

The following subsection is added:

202.032 Removing Bridge Pavement Surface and Membrane

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

The following paragraph is added:

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

202.061 Removing Pavement Surface

This Subsection is deleted and replaced with the following:

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

The rotary drum on the machine shall be a minimum of 7 feet in width and utilize carbide tipped tools at a maximum 8mm tooth spacing pattern and a minimum triple wrap configuration. The difference in height from the top of any ridge to the bottom of the groove adjacent to that ridge shall not exceed  $\frac{1}{4}$  inch. The carbide tipped tools on the rotary drum shall be continually maintained and shall be replaced as warranted to provide a uniform milled pavement texture. The forward operating speed shall be limited to a maximum speed of 50 feet per minute (fpm). The limited speed is not to be calculated on an average basis over time but shall be the actual limitation at any moment during the milling operation.

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

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

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

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

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

If a milled safety wedge is required by the contract, it shall not be removed any sooner than 48 hours prior to paving. In no case will a vertical milled edge be permitted over a weekend or holiday. The contractor shall schedule the wedge removal accordingly.

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

202.07 Method of Measurement

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

The following sentences are added:

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

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

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

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

202.08 Basis of Payment

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

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
202.202      Removing Pavement Surface – Mainline	Square Yard

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Rumble Strips)

202.01 Description

The following sentences are added after the first paragraph:

This work shall consist of cutting a pattern of rumble strips from MM 7.0 to MM 7.9 on the northbound and southbound roadways at the locations shown on the Plans. Rumble strips shall not be placed across ramp openings or on bridges.

The following Subsections are added:

202.065 Rumble Strips

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

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

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

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

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

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

202.07 Method of Measurement

The following paragraph is added:

Rumble Strips will be measured by the actual number cut, completed and accepted.

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

202.08 Basis of Payment

The following sentences are added:

Rumble Strips will be paid for at the Contract unit price per each, which price shall be full compensation for all labor, materials, equipment and incidental items of work for a complete installation.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
202.205	Rumble Strips - Shoulder	Each

SPECIAL PROVISIONSECTION 203EXCAVATION AND EMBANKMENT

(Clay Borrow)

203.01 Description

The following sentence is added:

This work shall include furnishing, placing, grading and densifying clay borrow as shown on the Plans or as approved by the Resident.

203.02 Materials

The following sentence is added:

Clay borrow shall meet the following requirements:

Sieve Size	Max % Passing by Weight
1/2"	100
no.10	95-100
no.40	90-100
no.60	85-100
no.100	75-100
no.200	50-100

The clay material shall have a maximum permeability of 1.0 e-5 cm/s.

203.04 General

The following paragraph is added:

Clay borrow shall be placed and graded to a uniform slope as shown on the Plans. Densification shall be achieved with an approved manually-operated power compactor or as directed by the Geotechnical Consultant.

203.18 Method of Measurement

The following sentence is added:

Clay Borrow shall be measured by the cubic yard complete and accepted in place.

203.19 Basis of Payment

The following sentences are added:

Clay Borrow will be paid for at the Contract unit price per cubic yard which shall be full compensation for all labor, materials, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
203.245	Clay Borrow	Cubic Yard



SPECIAL PROVISIONSECTION 203EXCAVATION AND EMBANKMENT

This Section is amended as follows:

All references to “waste storage areas” shall be deleted.

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 within the limits of full depth pavement excavation 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 third paragraph is deleted and replaced with the following:

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

Any temporary earth support required to install or remove drainage structures and utilities and support existing or proposed utilities will not be measured separately for payment, but shall be incidental to the Excavation items.

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.

### 203.11 Construction of Earth Embankment - Layer Method

The second, third, and fourth paragraphs are deleted and replaced with the following:

Layers shall be placed in lifts not to exceed 12 inches after compaction. Common borrow shall be compacted using vibratory compaction equipment to 92 percent of the material's maximum dry density as determined by ASTM D-1557. The compacted material shall appear firm and stable. Strict moisture control shall be utilized by the Contractor when using a cohesive fill material and the moisture content of the compacted material should not exceed four percent above the material's optimum moisture content.

The first sentence of the fourth paragraph is amended as follows:

Satisfactory compaction of granular borrow is defined as not less than 95 percent of the maximum density.

### 203.12 Construction of Earth Embankment with Moisture and Density Control

The last sentence of the second paragraph is amended as follows:

Each granular borrow layer placed with controlled moisture shall be compacted to not less than 95 percent of the maximum density.

The following paragraph is added:

Common borrow shall be placed in lifts not to exceed 12 inches after compaction. Common borrow shall be compacted using vibratory compaction equipment to 92 percent of the material's maximum dry density as determined by ASTM D-1557. The compacted material shall appear firm and stable. Strict moisture control shall be utilized by the Contractor when using a cohesive fill material and the moisture content of the compacted material should not exceed four percent above the material's optimum moisture content.

### 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

Any reference to borrow will be deleted from the first paragraph.

The pay quantity of common borrow and granular borrow shall be 115 percent of the compacted quantity measured in place.

The following sentence is added:

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

SPECIAL PROVISION

SECTION 203

EXCAVATION AND EMBANKMENT

(Rock Excavation)

203.04 General

The following paragraphs are added:

The quantity of rock excavation is approximate and based on a subsurface exploration program. The exploration locations are illustrated on the Plans. The actual limits of ledge shall be determined by probing without the removal of the overburden or by cross section after the removal of the overburden. The Contractor shall propose a method of verifying the quantities to the Resident for approval.

203.19 Basis of Payment

The following paragraphs are added:

The Contractor shall not be compensated for any additional costs associated with verifying quantities by the method approved by the Resident. The Contractor shall be compensated for the actual quantity of ledge excavated at the unit price submitted. No unit price adjustment will be considered if the actual rock excavation quantity differs from the estimated quantity.

SPECIAL PROVISION

SECTION 206

STRUCTURAL EXCAVATION

206.02 Construction Methods

The following paragraphs are added:

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

SPECIAL PROVISIONSECTION 401HOT MIX ASPHALT PAVEMENTS

(HMA using Hydrated Lime)

The following sections of Section 400 have been revised with following additional requirements.

401.01 Description

The Contractor shall compose Hot Mix Asphalt (HMA) Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), hydrated lime, and mineral filler if required. Hydrated Lime shall be utilized in all mixtures so denoted in Special Provision 403 - Hot Mix Asphalt Pavement.

401.02 Materials

Materials shall meet the requirements specified.

Hydrated Lime

AASHTO 216

401.03 Composition of Mixtures

The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), hydrated lime 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).

Hydrated lime shall be used in all HMA at a rate of one percent (1%) by weight of the total dry aggregate including RAP aggregate, if used. The Contractor shall obtain a shipping ticket for each shipment of hydrated lime. The Contractor shall provide the Resident with a copy of each shipping ticket from the supplier, including the date, time and weight of hydrated lime shipped and used in HMA production. The Contractor shall submit a material data sheet for the hydrated lime to the Resident for approval.

The Contractor shall provide the following information with the proposed JMF:

Safety Data Sheets (SDS) for hydrated lime

Supplier and source for Hydrated Lime

401.13 Preparation of Aggregates

The Contractor shall add water to the aggregates as required to maintain a minimum total aggregate moisture content of 3 percent. The Contractor shall mix the lime uniformly with the aggregate before introducing the aggregate into the dryer or dryer drum. Hydrated lime introduction systems must be controlled by a proportioning device to the amount required on the JMF plus or minus 0.1% of the target.

The Contractor shall add lime to the aggregate by one of the following methods:

- A. The Contractor shall add lime to the combined cold feed aggregate using an enclosed in-line cold feed mechanical pugmill mixer. The Contractor shall use a twin-shaft, continuous mixing pugmill with mixing paddles to thoroughly blend the lime with the aggregate. The Contractor shall adjust the retention time of the mixture in the pugmill so no unmixed lime is visible after the lime and aggregate exit the pugmill.
- B. The Contractor shall add lime to the combined cold feed aggregate by introducing the lime between aggregate layers as the aggregate flows from the cold feed bins. The Contractor shall thoroughly mix the lime and aggregate on the conveyor belt. The Contractor shall provide a lime introduction system so that no unmixed lime is visible before the lime and combined aggregate enter the drum.

The cold storage for hydrated lime shall be a separate bulk storage bin with a vane feeder or other approved feeder system which can be readily calibrated. The system shall provide a means for convenient sampling of the hydrated lime additive and verifying the quantity of lime dispensed. If the hydrated lime is to be introduced directly into the plant then the additive equipment shall be synchronized with the cold feed controls to operate concurrently with the cold feed operation. The system will be configured to automatically adjust the hydrated lime feed to variations in the cold aggregate feed. The hydrated lime system shall have out-of-tolerance sensing ability by weight and have a means to indicate the out-of-tolerance condition.

#### 401.14 Mixing

Hydrated lime shall be added into the HMA aggregate mixture prior to the aggregate blend mixing with the PGAB. Aggregate feed rate, or pugmill mixing times shall be adjusted to ensure complete blending of Hydrated Lime and aggregate before the PGAB is added.

#### 401.18 Quality Control

The Contractor shall provide a written supplement to the project specific QCP outlining the proposed methods of adding and mixing the hydrated lime for approval by the Authority. This written summary shall also provide information describing how the Contractor will perform quality control on the addition of hydrated lime, specifically the method of introduction and how the lime use will be measured to assure that the specified percentage is consistently added, and appropriately mixed. The supplemental QCP covering hydrated lime introduction shall be provided to the Authority at least one week prior to the prepave meeting.

SPECIAL PROVISIONSECTION 401HOT 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 [140°F]	3.0mm [1/8 in] max
Bond, non-immersed	Three 12.7mm [1/2 in] specimens pass 3 cycles @ 200% extension @ -29°C [-20°F]
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 [140°F].

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

#### Section 401.021 Recycled Asphalt Materials

Delete the second paragraph and replace with the following:

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

#### Section 401.03 Composition of Mixtures

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

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

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

The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), and mineral filler if required. HMA shall be designed and tested according to AASHTO R35 and the volumetric criteria in Table 1. The Contractor shall size, uniformly grade, and combine the aggregate fractions in proportions that provide a mixture meeting the grading requirements of the Job Mix Formula (JMF). The Contractor may use a maximum of 15 percent reclaimed asphalt pavement (RAP) in any mainline surface course.

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



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

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

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

At the time of JMF submittal, the Contractor shall identify and make available the stockpiles of all proposed aggregates at the plant site. There must be a minimum of 150 ton for coarse aggregate stockpiles, 75 ton for fine aggregate stockpiles before the JMF may be submitted. The Authority shall obtain samples for laboratory testing. The Contractor shall also make available to the Authority the PGAB proposed for use in the mix in enough quantity to test the properties of the asphalt and to produce samples for testing of the mixture. Before the start of paving, the Contractor and the Authority's representative shall test a production sample in the

Contractor's laboratory for evaluation. If the Authority finds the mixture acceptable, an approved JMF will be forwarded to the Contractor. The Authority will then notify the Contractor that paving may commence. The first day's production shall be monitored, and the approval may be withdrawn if the mixture exhibits undesirable characteristics such as checking, shoving or displacement. The Contractor shall be allowed to submit aim changes within 24 hours of receipt of the first Acceptance test result for an individual JMF. Adjustments will be allowed of up to 2% on the percent passing the 2.36 mm sieve through the 0.075 mm and 3% on the percent passing the 4.75 mm or larger sieves. Adjustments will be allowed on the %PGAB of up to 0.2 percent. Adjustments will be allowed on GMM of up to 0.010.

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

The Contractor shall submit a new JMF for approval each time a change in material source or materials properties is proposed. The same approval process shall be followed. The cold feed percentage of any aggregate except natural sand may be adjusted up to 10 percentage points from the amount listed on the JMF, however no aggregate listed on the JMF shall be eliminated. Natural sand may be adjusted up to 5 percent from the amount listed on the JMF but shall not exceed 10% by weight of total aggregates. The cold feed percentage for RAP may be reduced up to five percentage points from the amount listed on the JMF and shall not exceed the percentage of RAP approved in the JMF or for the specific application.

**TABLE 1**  
**VOLUMETRIC DESIGN CRITERIA**

Design ESAL's (Millions)	Required Density (Percent of $G_{mm}$ )			Voids in the Mineral Aggregate (VMA)(Minimum Percent)				Voids Filled with Binder (VFB) (Minimum %)	Fines/Eff. Binder Ratio
				Nominal Maximum Aggregate Size (mm)					
	$N_{initial}$	$N_{design}$	$N_{max}$	19	12.5	9.5	4.75		
10 to <30	$\leq 89.0$	96.0	$\leq 98.0$	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 (°C)	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 5°F with the use of WMA except for HMA being placed over bridge deck membrane.

Section 401.04 Temperature Requirements

Add the following line item after the third bullet:

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

Add the following paragraph:

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

Section 401.06 Weather and Seasonal Limitations

The first paragraph shall be deleted and replaced with:

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

### Section 401.08 Hauling Equipment Trucks for Hauling HMA

Add the following paragraphs:

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

The contractor shall supply enough haul units such that paving is continuous and without any stops or paver speed changes during the installation of ramp or mainline wearing courses utilizing an MTV. or any course placed on a bridge deck. The contractor will be charged a fee of \$1000 for every occurrence if paving is either stopped or the paver must slow down to avoid stopping due to inadequate number of haul units at the sole discretion of the Authority.

### Section 401.09 Pavers

Add the following to the end of the fourth paragraph:

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

### Section 401.091 Material Transfer Vehicle (MTV)

The first paragraph shall be deleted and replaced with:

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

The fourth paragraph shall be deleted and replaced with:

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

### Section 401.11 Preparation of Existing Surface

Add the following paragraph:

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

Section 401.111 Layout

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

Section 401.165 Longitudinal Joint Density

The first paragraph shall be deleted and replaced with:

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

The eighth paragraph shall be deleted and replaced with:

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

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

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

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

Section 401.17 Joints

Delete the following sentence from the third paragraph:

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

The fourth paragraph shall be deleted and replaced with:

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

#### Section 401.18 Quality Control

Add the following paragraph v. to the QCP requirements

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

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

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

#### Section 401.191 Inspection/Testing

In paragraph nine delete and replace Item #8 with:

8. Secure High-Speed Internet Access

#### 401.21 Method of Measurement

The second paragraph shall be deleted and replaced with:

A reduction in payment will occur when the voids, asphalt content, and density are other than the limits specified below for 100 percent payment. The payment reduction for voids and PGAB content and density will be based upon each subplot (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 subplot for core density only. The original core density and the recut core density shall be averaged together to determine payment for the subplot. 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 PROVISIONSECTION 403HOT MIX ASPHALT PAVEMENT403.01 Description

This work shall also consist of the construction, maintenance and removal of all temporary bituminous ramps at locations as shown on the Plans or as directed by the Resident.

403.02 General

The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), and mineral filler if required. The Performance Graded Asphalt Binder (PGAB) shall be polymer modified as detailed in this special provision and shall conform to the requirements of AASHTO M 332 (including Appendix 1). The PG64E-28 Binder shall contain a minimum of 2.25% Styrene-Butadiene-Styrene (SBS) polymer {BWT} in a homogeneous blend with a minimum average percent recovery of 75% as determined by AASHTO T350 @ 3.2 kPA (R3.2) on RTFO residue at 64°C to assure significant polymer load and performance. The stability of the modified binder shall be verified in accordance with ATSM D7173 using the Dynamic Shear Rheometer (DSR). The DSR  $G^*/\sin(\delta)$  results from the top and bottom sections of the ATSM D7173 test shall not differ by more than 10%. The results of ASTM D7173 shall be included on the Certified Test Report.

When required PG70E-34 Binder shall be modified with Styrene-Butadiene-Styrene (SBS) polymer {BWT} in a homogeneous blend with a minimum average percent recovery of 75% as determined by AASHTO T350 @ 3.2 kPA (R3.2) on RTFO residue at 70°C to assure significant polymer load and performance. The stability of the modified binder shall be verified in accordance with ATSM D7173 using the Dynamic Shear Rheometer (DSR). The DSR  $G^*/\sin(\delta)$  results from the top and bottom sections of the ATSM D7173 test shall not differ by more than 10%. The results of ASTM D7173 shall be included on the Certified Test Report.

403.03 Construction

All areas which have been milled or overlaid shall have a minimum length temporary ramp constructed as determined by the Resident at the milled or overlaid limits prior to opening the roadway to traffic. Temporary ramps shall be constructed using the same material as being placed on that day or as directed by the Resident. All temporary ramps are to be constructed on a sand joint. The Contractor shall be responsible for all repairs and maintenance required for the temporary ramps.

The Contractor shall be responsible for the layout of the longitudinal centerline between the travel lanes.

The sand and loose debris adjacent to the median guardrail shall be removed and disposed of by the Contractor off of Turnpike property.

The forty-five degree pavement safety edge needed between adjacent lanes shall be incidental to the 202 pay items.

#### 403.04 Method of Measurement

The construction and removal of temporary ramps on sand joints, and maintaining the ramps will not be measured separately for payment, but shall be incidental to Items 403.

The removal of sand and loose debris will not be measured separately for payment, but shall be incidental to paving items.

Hot Mix Asphalt, 12.5 mm (Polymer Modified pavement with (up to) 15% RAP, placed as a wearing surface will be measured under Item 403.2081 Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP.

Hot Mix Asphalt, 12.5 mm (Polymer Modified pavement with (up to) 15% RAP, placed as a wearing surface will be measured under Item 403.20811 Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP.

#### 403.05 Basis of Payment

Hot Mix Asphalt, 12.5 mm (Polymer Modified) pavement with (up to) 15% RAP, placed as a wearing surface will be paid under Item 403.2081 Hot Mix Asphalt, 12.5 mm (Polymer Modified) – RAP.

Hot Mix Asphalt, 12.5 mm (Polymer Modified) pavement with (up to) 15% RAP, placed as a wearing surface will be paid under Item 403.20811 Hot Mix Asphalt, 12.5 mm (Polymer Modified) – RAP.

The following pay items are added:

<u>Pay Item</u>		<u>Pay Unit</u>
403.2081	Hot Mix Asphalt, 12.5 mm (Polymer Modified) – RAP	Ton
403.2084	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (sidewalks, drives, islands& incidentals)	Ton



SPECIAL PROVISIONSECTION 403HOT MIX ASPHALT PAVEMENT  
(Pavement Table)

<b>Course</b>	<b>HMA Grading</b>	<b>Item Number</b>	<b>Total Thickness</b>	<b>No. of Layers</b>	<b>Complimentary Notes</b>
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Northbound and Southbound Mill and Pave

<b>Wearing</b>	<b>12.5mm</b>	<b>403.2081</b>	<b>1.5"</b>	<b>1</b>	<b>A,D,E,F,G,H,I,J,K</b>
<b>Shim</b>	<b>4.75</b>	<b>403.211</b>	<b>½"</b>	<b>1</b>	<b>C,I</b>

Northbound and Southbound Shim and Pave

<b>Wearing</b>	<b>12.5mm</b>	<b>403.2081</b>	<b>1.5"</b>	<b>1</b>	<b>A,D,E,F,G,H,I,J,K</b>
<b>Intermediate</b>	<b>12.5mm</b>	<b>403.213</b>	<b>1.5"</b>	<b>1</b>	<b>C,I</b>
<b>Base</b>	<b>19.0 mm</b>	<b>403.207</b>	<b>Varies</b>	<b>2 ½"</b> <b>max. lift</b>	<b>C,I</b>
<b>Shim</b>	<b>4.75mm</b>	<b>403.212</b>	<b>Varies</b> <b>1/2" to 1½"</b>	<b>VARIES</b>	<b>C,I</b>

Northbound and Southbound Full Depth Construction and Full Depth Pavement Removal

<b>Wearing</b>	<b>12.5mm</b>	<b>403.2081</b>	<b>1.5"</b>	<b>1</b>	<b>A,D,E,F,G,H,I,J,K</b>
<b>Intermediate</b>	<b>12.5mm</b>	<b>403.213</b>	<b>1.5"</b>	<b>1</b>	<b>C,I</b>
<b>Base</b>	<b>19.0 mm</b>	<b>403.207</b>	<b>7.5"</b>	<b>3</b>	<b>C,I</b>

Exit 7 On and Off Ramp

<b>Wearing</b>	<b>12.5mm</b>	<b>403.208</b>	<b>1.5"</b>	<b>1</b>	<b>A,D,E,F,G,H,I,J,K</b>
<b>Intermediate</b>	<b>12.5 mm</b>	<b>403.213</b>	<b>1.5"</b>	<b>1</b>	<b>C,I</b>
<b>Base</b>	<b>19.0 mm</b>	<b>403.207</b>	<b>2.5"</b>	<b>1</b>	<b>C,I</b>

COMPLEMENTARY NOTES

- A. The required PGAB for this mixture shall be **64E-28**.
- B. RAP may not be used.
- C. The Maine DOT will conduct the job mix verification. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract. Minimum and Maximum PGAB content limits from 402.21 shall not apply.
- D. The MTA will conduct the job mix verification. The aggregate qualities shall meet the design traffic level of 10 to <30 million ESALS for mix placed under this contract. The design verification, Quality Control, and Acceptance tests for this mix will be performed at **75 gyrations**. (N design)
- E. A material transfer vehicle (MTV) shall be used for the placement of Hot Mix Asphalt wearing surface on all roadways including acceleration and deceleration lanes and all ramps.
- F. Joints shall be constructed as the “notched wedge” type in accordance with Subsection 401.17.
- G. Joint density will be measured in accordance with Subsection 401.165.
- H. PGAB shall conform to the provisions of 403.02 – Polymer Modified PGAB for HMA
- I. The contractor shall furnish a quality control technician equipped with an approved densometer to ensure density requirements are met.
- J. Hydrated Lime shall be incorporated into the mixture.
- K. The antistrip additive Zycotherm SP manufactured by Zydex Industries shall be incorporated into the PGAB at a rate of 0.1%.

SPECIAL PROVISIONSECTION 409BITUMINOUS TACK COAT409.01 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<sup>2</sup>

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

409.05 Equipment

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

409.06 Preparation of Surface

The following paragraph is added:

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

409.08 Method of Measurement

The following paragraphs are added:

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

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

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

409.09 Basis of Payment

The following pay items are added:

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

SPECIAL PROVISIONSECTION 419SAWING 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:

<u>Pay Item</u>	<u>Pay Unit</u>
419.30 Saw Cutting Bituminous Pavement	Linear Foot

SPECIAL PROVISION  
SECTION 502  
STRUCTURAL CONCRETE

This specification amends Maine Turnpike Authority Supplemental Specification 502.

502.01 Description

The following is added:

This work shall consist of furnishing and placing Portland Cement Concrete for structures and incidental construction in accordance with these Specifications and in conformity with the lines, grades and dimensions shown on the Plans.

502.03 Materials

The following paragraph is added:

Waterstop strips along the perimeter of the cast-in-place concrete closure wall as shown on the Plans shall consist of the following:

- 1) Hydrophilic waterstops shall be non-bentonite, modified chloroprene rubber. The waterstop shall have a delay coating to inhibit initial expansion due to moisture present in fresh concrete. Install in accordance with manufacturer's requirements. Hydrophilic waterstops shall be one of the following:
  - a. Hydrotite by Greenstreak, 3400 Tree Court Industrial Blvd., St. Louis, MO 63122, Tel: (800) 325-9504
  - b. Aquafin Waterstop by Aquafin, Inc., 505 Blue Ball Rd. #160, Elkton, MD 21921, Tel: (410) 392-2300

502.04 Shipping and Storage

The following paragraph is added:

Store waterstops under tarps to protect from oil, dirt, sunlight, and premature exposure to water.

502.18 Method of Measurement

Paragraph B of this section shall be replaced with the following:

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

1. Structural Concrete, Basement Closure Wall The limits will be the wall opening dimensions at the existing basement tunnel and concrete infill above the existing grade beam.

502.19 Basis of Payment

The following is added:

All work required for furnishing and installing waterstop strips and saw-cutting to neat lines will not be measured separately for payment, but shall be incidental to the work provided under the pay item listed below.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
502.234	Structural Concrete, Basement Closure Wall	Cubic Yard

SPECIAL PROVISION

SECTION 508

HIGH PERFORMANCE WATERPROOFING MEMBRANE

(Basement Closure Wall)

508.01 Description

Revise this section to read as follows:

“This work shall consist of furnishing and applying an approved high performance (exterior) waterproofing membrane system to: the exterior face of the new basement closure wall and lapping a minimum of 12 inches over the existing basement wall waterproofing. The high performance waterproofing membrane system and its installation shall be in accordance with this specification, other applicable Contract documents and the manufacturer’s published recommendations, complete, in place and accepted. The high performance waterproofing membrane system shall be spray or liquid applied as opposed to a peel and stick (sheet) membrane.

508.02 Materials

Revise this section to read as follows:

“High performance membrane shall include all materials, as recommended by the manufacturer, to produce a waterproof barrier on the specified concrete surface. In addition to the membrane, these materials may include primer, protection board, etc. The following systems have been pre-approved for use on this project:

- 1) Eliminator by Sterling Lloyd Products, Inc., 152 Rockwell Road, Newington, CT 06111, Tel. (860) 666-5008.
- 2) Monolithic Membrane (MM) 6125 by American Hydrotech, Inc., 303 E. Ohio Street, Chicago, IL 60611, Tel. (800) 877-6125
- 3) Procor Composite Waterproofing System by GCP Applied Technologies, Inc., 62 Whittemore Avenue, Cambridge, MA 02140, Tel. (866) 333-3726

The following paragraph is added:

508.07 Installation – Spray Applied High Performance Membrane

The following paragraphs are added:

“Concrete surfaces shall have a uniform, fine-textured finish that is free of protrusions prior to application of the high performance waterproofing membrane system. All honeycombed areas and surface cavities in new and existing concrete



shall be cleaned and filled with approved patching materials. All surfaces to be membraned shall be clean and free of laitance, oil and foreign materials.

Immediately prior to application of the primer, the surface shall be cleaned by brooms and compressed air. The concrete surface shall be inspected and approved by the Resident prior to priming.

Damaged membrane shall be repaired in accordance with manufacturer’s recommendations.”

508.08 Method of Measurement

Revise this section to read as follows:

“High Performance Waterproofing Membrane System for the new basement closure wall shall be measured by the square yard, complete in place and accepted.”

508.09 Basis of Payment

Revise this section to read as follows:

“High Performance Waterproofing Membrane will be paid for at the Contract unit price, which shall be payment in full for furnishing all materials, labor and equipment, including cleaning of concrete surfaces and providing a moisture meter, and all incidentals necessary to provide a waterproof barrier on the specified concrete surface that is properly adhered to the concrete substrate. Adhesive primer, protection board, etc. provided as part of the waterproofing membrane manufacturer’s system shall be included in the unit price for waterproofing membrane. Cleaning and filling of all honeycombed areas and surface cavities in new and existing concrete surfaces to which membrane is to be applied with approved patching materials shall be included in the unit price for High Performance Waterproofing Membrane. Damage to new or existing concrete surfaces, resulting from the Contractor’s placement or curing operations, or any damage caused by the Contractor’s operations shall be repaired at no cost to the Authority.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
508.14      High Performance Waterproofing Membrane	Square Yard

SPECIAL PROVISIONSECTION 511COFFERDAMS

(Temporary Earth Support Systems)

Section 511, Cofferdams, is deleted in its entirety and replaced with the following:

511.01 Description

This work shall consist of the complete design, construction, maintenance and removal of temporary earth support systems and other related work, including dewatering and inspection, required to protect structures to remain during demolition, to protect adjacent roadways, adjacent public or private rights-of-way, embankments, or other structural units, in accordance with the Contract.

Temporary earth support structures may require pumping or dewatering to complete the Project work. The locations of temporary earth support structures may, or may not, be shown on the Plans whether required for the completion of the Contract or not. Temporary earth support structures do not require seal concrete.

511.02 Materials

The Contractor shall submit Working Drawings for the proposed temporary earth support systems for review and acceptance. The submission shall include plans, details and calculations designed and sealed by a Professional Engineer licensed in the State of Maine. This Professional Engineer may be directly employed by, or otherwise retained by, the Contractor. Working drawings shall consist of plan views and cross sections to illustrate clearances, limits, and retainment heights as applicable at roadway cuts and phased construction areas. Construction shall not be started on temporary earth support systems until such submittals are accepted. Any review of or comment on, or any lack of review of or comment on, these Working Drawings by the Department shall not result in any liability upon the Department and it shall not relieve the Contractor of the responsibility for the satisfactory functioning of the cofferdam.

Temporary earth retaining structures shall be designed to support all appropriate combinations of earth, hydrostatic, and surcharge loads (from traffic, construction equipment, material stockpiles, and other sources) imposed on the system during all phases of construction. Temporary earth support systems adjacent to traveled ways, shall additionally be designed to resist any vibration or impact forces due to traffic and shall incorporate sufficient protection against impact by errant vehicles. Sufficient redundancy shall be designed into the support system so that failure of one member will not cause the collapse of the entire system. The Contractor's design shall consider the means and methods and construction sequencing proposed by the Contractor.

The Working Drawings shall also show the Contractor's proposed method of excavation, water diversion and dewatering methods (sumps, wells, seal concrete, or well points) to

minimize the flow of groundwater into the excavation. Such methods should preserve the undisturbed condition of the subgrade and permit foundation construction in-the-dry.

Design computation shall be in accordance with the AASHTO LRFD Bridge Design Specifications, Latest Edition.

Following construction of each temporary earth support system the Professional Engineer responsible for the design of the system shall inspect the installation and provide a certification to the Resident stating that construction was completed in conformance with the accepted working drawings. The certification shall be signed and sealed by the Professional Engineer responsible for the design of the system.

#### 511.03 Temporary Earth Support System Construction

Temporary earth support systems shall, in general, be carried well below the elevation of the bottom of the structure to be demolished and shall be well braced and watertight.

Temporary earth support systems, including all sheeting and bracing involved, shall be completely removed after the completion of the work unless otherwise noted on the Contract Drawings.

#### 511.04 Pumping

Pumping from the interior of any excavated enclosure shall be done in such a manner as to prevent any current of water that would carry away or segregate the concrete.

Pumping to dewater a sealed temporary earth support system shall not commence until the seal concrete has set sufficiently to withstand the hydrostatic pressure. In no case will pumping be permitted until a minimum of five (5) days has elapsed since the completion of the installation of the seal concrete, when the temperature of the water body outside the temporary earth support system is greater than 4°C [40°F], or a minimum of seven (7) days has elapsed since the completion of the installation of the seal concrete, when the temperature of the water body outside the temporary earth support systems is less than 4°C [40°F].

Sediment laden water will not be allowed to leave the Project area. The Contractor shall be required to install appropriate erosion and sedimentation control devices as approved by the Resident. Erosion and sedimentation control devices may include plain riprap, haybales, silt fence and sedimentation basins.

All water and materials pumped from excavation shall be pumped into a sedimentation basin which is of sufficient volume to detain the pumped water and materials. The water and materials removed from the excavation shall be pumped at a rate that permits infiltration of the water into the earth, preventing any overland flow or direct discharge into a stream or other waterbody.

#### 511.05 Method of Measurement

Temporary Earth Support Systems shall be measured for payment as one lump sum per Contract, regardless of the number of Temporary Earth Support structures required at the Project

site or sites, which price shall include full compensation for design, furnishing materials, excavation beyond the pay limits, installation, removal, tools, equipment and labor necessary to construct, maintain and remove the work in accordance with the Plans or as called for in the Contract.

If Temporary Earth Support Systems is not required due to the acceptance of a Value Engineering Proposal in accordance with Subsection 109.6, the cost of the deleted Temporary Earth Support Systems shall be included as part of the Value Engineering Proposal.

511.06 Basis of Payment

The accepted quantity of Temporary Earth Support Systems will be paid for at the Contract lump sum price, per Contract. Such payment shall be full compensation for furnishing and installing all materials required to construct the Temporary Earth Support Systems including, but not limited to steel sheeting and shoring, timber bracing and cribbing, seal concrete, crushed stone. Payment will also be full compensation for excavation, dewatering, erosion control and other incidentals required to construct, maintain and remove the Temporary Earth Support Systems.

All costs of constructing, maintaining and removing sedimentation basins; water testing; and pumping or transporting water and other materials to the sedimentation basin will not be measured separately for payment, but shall be incidental to the Temporary Earth Support Systems pay item.

All costs of related temporary soil erosion and water pollution controls, including inspection and maintenance, will not be measured separately for payment, but shall be incidental to the Temporary Earth Support Systems item.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
511.091      Temporary Earth Support Systems	Lump Sum

SPECIAL PROVISIONSECTION 526CONCRETE 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):

<u>Maintenance Area</u>	<u>Linear Feet of Barrier</u>
York or Kennebunk Maintenance Area	9,000

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.

526.021 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 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:

<u>Pay Item</u>	<u>Pay Unit</u>
526.306      Temporary Concrete Barrier Type I – Supplied by the Authority	Lump Sum

SPECIAL PROVISION

SECTION 526

CONCRETE BARRIER

(Temporary Barrier Markers)

526.01 Description

The following paragraphs are added:

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

526.02 Materials

The following paragraphs are added:

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

526.03 Construction Requirements

The following paragraphs are added:

Temporary barrier markers shall be mounted as follows:

1. One on top of every fourth barrier, including barriers supplied by the Authority and barriers furnished by the Contractor.
2. Delineators shall be physically adhered so as to withstand the force of throw from a snow plow.
3. If more than 25% of delineators in any 200 foot section of barrier fall off for any reason, the Contractor will be responsible for reinstalling all the delineators in that run at that their own cost.
4. Contractor is required to submit the installation method for review and approval to the Resident.

526.04 Method of Measurement

The following paragraphs are added:

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



526.05 Basis of Payment

The following paragraphs are added:

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

SPECIAL PROVISIONSECTION 526CONCRETE BARRIER

(Median Barrier Type I)  
(Median Barrier Transition Type I)

526.01 Description

This Section is deleted and replaced with the following:

This work shall consist of the furnishing, constructing, erecting, and setting permanent concrete barrier and associated elements on granular base material in accordance with these Specifications and the lines and grades shown on the Plans or established by the Resident. The length of each precast barrier segment shall be in accordance with the parameters shown on the Plans. The Contractor shall minimize the number of joints in the final barrier assembly to the extent possible.

The work shall also be completed in accordance with Supplemental Specification 502, Structural Concrete, and Standard Specification 534, Precast Structural Concrete, as referenced herein.

The work shall also include the application of Clear Protective Coating for Concrete Surfaces to all concrete surfaces exposed in the final condition in accordance with Supplemental Specification 515.

Median Barrier Type 1 - Double faced single slope precast concrete barrier 2'-0" wide at the base, 48" high and 36" minimum reveal as shown on the Plans. A structural tube and I-beam connection detail is provided at each end.

Median Barrier Type 1 – Supplied by MTA Double faced single slope precast concrete barrier 2'-0" wide at the base, 48" high and 36" minimum reveal as shown on the Plans. This barrier is stored at the York Maintenance Facility.

Median Barrier Transition Type 1 – Precast concrete barrier to transition from double faced single slope Median Barrier – Type 1 to vertical section for guardrail attachment as shown on the Plans. A structural tube and I-beam connection detail is provided at each end.

Median Barrier Transition Type 1 – Supplied by MTA Precast concrete barrier to transition from double faced single slope Median Barrier – Type 1 to vertical section for guardrail attachment as shown on the Plans. This barrier is stored at the York Maintenance Facility.

526.02 Materials

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

Concrete for precast components shall be Class P in accordance with Supplemental Specifications, Section 502.05, Composition and Proportioning, with a minimum compressive strength of 4,500 psi and an air entrainment of 6.5% ±1%. Self Consolidating Concrete (SCC) mix designs will be considered for approval provided the mix design is in conformance with the proportion limits specified in Supplemental Specification 502.05. The provisions for slump shall be waived for SCC.

Concrete for cast-in-place components shall be Class AAA-Deck (without synthetic reinforcement) in accordance with Supplemental Specifications, Section 502.05, Composition and Proportioning, with a minimum compressive strength of 4,500 psi and an air entrainment of 6.5% ±1%.

Steel components and hardware for barrier connection assemblies shall be in accordance with MaineDOT Standard Specification 504. All barrier connection assemblies shall be hot dip galvanized after fabrication in accordance with ASTM A123 or A153, as applicable.

All reinforcing steel for concrete barrier shall be epoxy coated. Reinforcing steel shall be fabricated and placed in accordance with the Standard Specifications, Section 503.

Reflective delineators for concrete median barrier shall meet the requirements of Special Provision 645, Highway Signing.

Clear Protective Coating for Concrete Surfaces shall be in accordance with Supplemental Specification 515.

### 526.03 Construction Requirements

The first paragraph, including items “a” through “c”, and the second paragraph are deleted and replaced with the following:

The Contractor shall collect any necessary field data to supplement the Plans, including ground survey and field measurements, required for the development of working drawings. The Contractor shall submit working drawings for approval showing the fabrication details of each proposed barrier section as well as layout drawings indicating station to station plan layout of the barrier, the type of barrier proposed at each location, the length of each barrier segment, the quantity of each barrier segment, and the overall length of each barrier run in accordance with Section 105.7, Working Drawings, and Section 526.031, Submittals. Additionally, working drawings for precast elements shall be submitted in accordance with Standard Specification 535.03, Drawings. Relevant field data, survey, and calculations used in the development of the barrier layout shall be included in the working drawing submittal.

All cast in place components shall be constructed in accordance with the provisions of Supplemental Specification 502, Section 502.05, Composition and Proportioning, through Section 502.15, Curing Concrete, inclusive. Concrete barrier shall not be formed using slip forming methods.

All precast components shall be constructed in accordance with the provisions of Standard Specification 534, Section 534.05, Facilities for Inspection, through Section 534.10, Forms,

inclusive, as well as Section 534.12, Inserts, through Section 534.20, Installation of Precast Units, inclusive. The provisions of Standard Specification Section 712.061, Structural Precast Concrete Units, exclusive of material requirements, shall apply. Concrete barrier shall not be formed using slip forming methods.

The following paragraphs are added at the end of this section:

- f. Sections of barrier, whether precast or concrete, shall be uniform in color and in good condition, free from cracked or spalled surfaces.

The layout and placement of the concrete barriers shall be to the alignment and elevations shown on the Plans, approved working drawings, or as directed by the Resident. Before any barrier or transitions may be placed, the subbase shall be compacted to 95 percent density and fine graded to a tolerance of  $\pm 1/2$  inch of the true grade at any location under the barrier.

All Cast-in-Place barrier adjacent to precast barriers shall include hardware for the barrier connections as detailed in the Plans.

#### 526.031 Submittals

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

- a) Complete and detailed Shop Drawings of each barrier type. Shop drawings shall include information covering materials and their properties, installation procedures, lifting devices, storage and handling requirements, reinforcing layout, protective coating information, geometric dimensions, quantity of pieces, overall length of pieces, and all other information necessary to fabricate the pieces in accordance with the Plans and Specifications.
- b) Complete and detailed layouts for all barrier runs. The layouts shall include:
  - i. A suitably formatted spreadsheet for each barrier run that includes start and end stations for all Type 1 barrier runs centered on the Turnpike median, all Type 1 barrier tapered runs, all transitions between Type 1 and transitions, fixed points including but not limited to Overhead Sign Structure Locations.
  - ii. The spreadsheet shall also include the quantity and length of all standard and custom pieces of each type in the run. Standard and custom length pieces shall be quantified and included in the Shop Drawing bill of materials. The Contractor shall minimize the number of joints and maximize the number of standard length pieces in the final barrier assembly to the extent possible.
  - iii. Contractor is responsible for surveying station locations of fixed points and other necessary features before developing final layout stationing.
  - iv. Contractor shall work from fixed points to floating points when developing barrier layout runs. See barrier detail sheets for defined fixed and floating points. Contractor shall submit a proposed construction sequence for the installation of the barrier, including the start and end stations of each barrier run. The floating

points shall be used for both maximizing the number of full length pieces as well as building in tolerance when setting the barrier.

- v. The barrier layout spreadsheet shall be formatted and contain stationing and offset information such that the Resident Engineer can check it against the requirements of the Plans and Specifications before and during construction.
  
- c) All comments made by the Resident Engineer shall be addressed by the Contractor. The resolution of all comments shall be tracked, reconciled, and submitted to the Authority for review and verification. Fabrication shall not proceed until written acceptance of the final barrier layout and shop drawings is received by the Contractor from the Authority.

526.04 Method of Measurement

The following paragraphs are added:

Median Barrier Type I will be measured for payment by the linear foot from end to end of each run of barrier measured along the centerline of the barrier complete in place. No deduction in pay length will be made for joints between abutting barrier sections.

Median Barrier Transition Type I will be measured by each barrier as shown on the Plans.

526.05 Basis of Payment

The following paragraphs are added:

The accepted quantities of Median Barrier Type I will be paid for at the Contract unit price per linear foot, as specified, complete in place. Such payment shall be full compensation for: shop drawings and layout submittal; field layout; furnishing all materials, supplies, and equipment; casting; delivery; excavation; bedding material; grading; installation; reflective delineators; application of Clear Protective Coating for Concrete Surfaces; and other all incidentals necessary to complete the work.

The accepted quantities of Median Barrier Transition Type I shall be paid for at the Contract unit price per each section and shall be full compensation for: shop drawings and layout submittal; field layout; furnishing all materials, supplies, and equipment; casting; delivery; excavation, bedding material grading; installation; reflective delineators; application of Clear Protective Coating for Concrete Surfaces; and other all incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
526.351 Median Barrier Type I - Precast	Linear Foot
526.352 Median Barrier Type I – Supplied by MTA	Linear Foot
526.361 Median Barrier Transition Type I - Precast	Each
526.362 Median Barrier Transition Type I – Supplied by MTA	Each

SPECIAL PROVISIONSECTION 527ENERGY 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 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. If crash cushion is manufactured after 2019, then it shall meet AASHTO Manual for Assessing Safety Hardware (MASH) Test Level 3 standards.

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 will be measured separately for payment by the unit.

527.05 Basis of Payment

Payment will be made under:

Pay Item

Pay Unit

527.341      Work Zone Crash Cushions – TL-3

Unit

SPECIAL PROVISIONSECTION 527ENERGY ABSORBING UNIT

(Center Barrier Crash Attenuator (Smart Cushion))

527.01 Description

The following sentences are added:

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

527.02 Materials

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

527.03 Construction Requirements

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

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

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

527.04 Method of Measurement

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

527.05 Basis of Payment

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



labor, equipment, materials and incidentals necessary to complete the work.

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

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

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
527.307	Center Barrier Crash Attenuator (Smart Cushion)	Each

SPECIAL PROVISIONSECTION 602PIPE LINING

(Pumped Grout Fill)

602.01 Description

This work shall consist of furnishing all labor, equipment, and materials to place Pumped Grout Fill into abandoned underground pipes at the locations designated on the Plans. The material shall be capable of flowing over long distances without segregation or separation of the grout materials.

602.02 Materials

Materials shall conform to the requirements specified in the following Subsections of Division 700 — Materials:

▪ Portland Cement	701.01
▪ Water	701.02
▪ Fly Ash	701.10
▪ Fine Aggregate	703.01
▪ Chemical Admixtures	701.04

Pumped Grout Fill shall meet the following properties:

Range of Cast Density, PCF	65 minimum
Compressive Strength, PSI	110 – 500

602.03 Submittals

- The Contractor shall submit a mix design for Pumped Grout Fill for review and approval prior to installation. The mix design, at a minimum, shall include materials to be used with source information, batch tests or historical test data if reusing a mix design, targets for grout density, water cement ratio, 28-day compressive strength, and air content.
- The contractor shall submit a placing plan that provides equipment and placement methods, for review and approval prior to placing. The plan shall include: equipment specifications that demonstrate sufficient capacity to place grout in a single operation, pumping port and air vent locations, target pumping pressure, description of how the pipe end bulkheads will be formed to contain and support the pumped grout, and testing procedure(s).

602.04 Placing Pumped Grout Fill

Pumped Grout Fill shall not be placed until bulkhead forms, pump injection port(s), and air vent(s) have been checked and approved.

Pumped Grout Fill shall be placed before it has taken its initial set and shall be placed in such a manner as to avoid separation and segregation of the grout materials.

Placement of Pumped Grout Fill to fill abandoned pipes shall require a pressurized pump system with PVC piping for adequate air venting. A gauge to monitor grout pressure shall be attached immediately adjacent to each injection port. Threaded injection ports shall be suitable to withstand maximum pumping pressures. A minimum of one air vent shall be installed on the upstream bulkhead form to ensure the abandoned pipe is filled in its entirety.

Unit weight density tests may be taken at the discretion of the Resident to confirm the cast density.

602.05 Method of Measurement

Pumped Grout Fill satisfactorily placed and accepted will be measured by the cubic yard based on the volume of the pipe.

602.06 Basis of Payment

The accepted quantity of Pumped Grout Fill will be paid for at the Contract unit price per cubic yard. Payment will be full compensation for furnishing and placing Pumped Grout Fill, including all labor, materials, equipment, bulkhead formwork, pumping ports and vents, dewatering and necessary incidentals.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
602.40 Pumped Grout Fill	Cubic Yard

SPECIAL PROVISION

SECTION 603

PIPE CULVERTS AND STORM DRAINS

(Reinforced Concrete Pipe)  
(Concrete Collar)  
(Corrugated Polyethylene Pipe)

603.01 Description

The following paragraphs are added:

This work shall also consist of furnishing and installing Class III or Class V reinforced concrete pipe at the locations as shown on the Plans or as approved by the Resident. These pipes shall meet the requirements of Subsection 706.02.

This work also consists of furnishing and installing a concrete collar to join existing concrete pipe to the proposed concrete or Corrugated High Density Polyethylene (HDPE) pipe in accordance with the details as shown on the Plans. The Contractor shall note that the concrete pipe ends may be of different sizes and may not fit snugly together.

This work shall also consist of furnishing and installing various sizes of corrugated HDPE pipe, including a dual wall adaptor fittings by Hancor or an approved equal as shown on the plans. No other pipe types within the Option III alternatives will be accepted.

603.02 Materials

Corrugated Steel Pipe is not allowed as an Option III pipe material.

All Corrugated High Density Polyethylene (HDPE) pipe for storm water and drainage systems shall meet the requirements of Subsection 706.06.

603.11 Method of Measurement

The following paragraph is added:

Dual Wall Adapter Fitting shall be included for payment as three additional linear feet of the largest pipe involved.

603.12 Basis of Payment

Corrugated HDPE pipe will be paid for under the appropriate sized Culvert Pipe Option III pay items.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
603.159	12 Inch Culvert Pipe Option III	Linear Foot
603.165	15 Inch Reinforced Concrete Pipe - Class III	Linear Foot
603.169	15 Inch Culvert Pipe Option III	Linear Foot
603.175	18 Inch Reinforced Concrete Pipe - Class III	Linear Foot

SPECIAL PROVISION

SECTION 604

MANHOLES, INLETS AND CATCH BASINS

(Catch Basins and Manholes)  
(Doghouse Manholes)  
(Outlet Control Structures)

604.01 Description

This Subsection is amended by the addition of the following:

The work locations are listed on the Drainage Summary sheets of the Plans.

604.02 Materials

The third paragraph should be deleted and replaced with:

Catch Basin Frames and Grates shall be as outlined below and be manufactured by EJ Company of Brockton, Massachusetts or an approved equal and shall meet or exceed the AASHTO M306 Loading Requirements.

Catch Basin Frames shall be manufactured by EJ Company of Brockton, Massachusetts (or an approved equal) with the following product numbers:

5521Z - 8 Inch Frame Product Number 00552111  
5546Z – 6 Inch Frame Product Number 00554611  
5544Z - 4 Inch Frame Product Number 00554411

Catch Basin Frames shall be 8” frames unless otherwise specified by the plans or approved by the resident.

Catch Basin Grates shall be a square holed grate as manufactured by EJ Company of Brockton, Massachusetts (or an approved equal) with the following product number:

5520M5 (170 Pound) Grate Product Number 00552060

If a cascade catch basin grate is specified on the plans then it shall be manufactured by EJ Company of Brockton, Massachusetts (or an approved equal) with the following product numbers depending on the direction of flow:

5520M8 (257 Pound) Product Number 00552084 or 5520M8 Product Number 00552085

604.04 Altering, Adjusting, and Rebuilding Catch Basins and Manholes

This Subsection shall be amended with the addition of the following paragraphs:

When adjusting the existing catch basins they shall be dismantled sufficiently to allow reconstruction in accordance with the following requirements and as shown on the Plans:

Any frame or grate damaged by the Contractor’s operations shall be replaced by the Contractor at no additional cost to the Authority. Replacement frame and grate shall meet the requirements of Subsection 604.02. Damaged frames and grates shall become the property of the Contractor and shall be removed from Turnpike property.

604.05 Method of Measurement

Section shall be deleted in its entirety and replaced as follows:

Catch basins, manholes, and accessories of the respective types will be measured by the number of units, measures as follows, complete, and accepted in place.

- a. Complete Structures Each structure (catch basin, manhole, inlet, or other) will be measured per each complete and accepted in place.
- b. Existing Structures Existing structures to be altered, adjusted, or modified or rebuilt will be measured per each, regardless of the number of modification, alterations, adjustments made.
- c. Abandon Existing Structures Each existing structure to be abandoned will be incidental to the contract.
- d. Pipe Stub Installation of pipe stubs to connect new structures to existing pipes to remain, will be incidental to the cost of the new structure.
- e. Pipe Caps/Plugs Installation of masonry plugs and caps (for pvc pipes) in existing pipes to be abandoned at proposed structures shall be incidental to the cost of the new structure.

604.06 Basis of Payment

The second paragraph is deleted and replaced with the following:

Excavation and backfill will not be measured separately for payment, but shall be incidental to the following pay items.

Sawing bituminous pavement will not be measured separately for payment, but shall be incidental to the related drainage items.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
604.09      Catch Basin Type B1	Each
604.0901    Catch Basin Type B1 with Flat Top	Each
604.1521    48 Inch Manhole Type 6 with Flat Top	Each
604.1542    72 Inch Outlet Control Structure	Each
604.1561    96 Inch Doghouse Manhole	Each

SPECIAL PROVISION

SECTION 605

UNDERDRAINS

(8" Underdrain Outlet)

Standard Provisions Apply

605.07 Basis of Payment

The following is added:

Pay Item

Pay Unit

605.105      8 Inch Underdrain Outlet

Linear Foot



SPECIAL PROVISION

SECTION 606

GUARDRAIL

(Bridge Transition - Type III, Modified)

606.01 Description

The following sentence is added:

This work shall consist of furnishing and installing Bridge Transitions - Type III, Modified at concrete median barrier ends along the Turnpike as shown in the Contract Documents.

The following Subsection is added:

606.071 Guardrail Attachments at Concrete Median Barriers

Bridge Transitions - Type III, Modified shall be used at concrete median barrier end locations as shown on the plans.

606.08 Method of Measurement

The following sentence is added:

Bridge Transition- Type III, Modified 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, Modified 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 lates, 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:

<u>Pay Item</u>	<u>Pay Unit</u>
606.1724      Bridge Transition - Type III, Modified	Each

SPECIAL PROVISIONSECTION 606GUARDRAIL

(Reflectorized Beam Guardrail Delineator)

606.01 Description

The following paragraphs are added:

Reflectorized beam guardrail delineators shall be installed on existing guardrail to remain in place, guardrail noted to be removed, modified and reset (single and/or double rail) or new guardrail, at the locations noted on Maintenance of Traffic plans or as approved by the Resident. The delineators shall be installed prior to traffic being shifted closer to the identified guardrail run. The color for the reflective sheeting shall be silver (white) when installed on the outside shoulder and yellow when installed on the inside shoulder.

Reflectorized beam guardrail delineators shall be mounted as follows:

1. Delineators on guardrail adjacent to a shifted detour should be spaced every other guardrail post and located at the bolt in the valley of the guardrail beam.
2. On existing steel bridge rail, the delineators shall be mechanically attached towards the top, every 10 feet, and bottom, every 20 feet. Delineators shall also be mechanically attached in a similar pattern to concrete endposts that are 10 feet or longer.
3. If more than 25% of delineators in any 50 feet of guardrail, bridge rail, or endposts fall off for any reason, the Contractor will be responsible for reinstalling all delineators in that run at that their own cost.
4. In no instance shall delineators be installed on guardrail which deviates substantially from the alignment (horizontal or vertical) of the roadway or which is located more than eight feet from the edge of pavement.
5. On Tangents, mount delineators every 62.5-feet or every 10<sup>th</sup> post.
6. On Curves, mount delineators every 31.25-feet or every 5<sup>th</sup> post.

Exceptions and/or modifications will only be made with the approval of the Resident.

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

606.02 Materials

The fourth paragraph is deleted and replaced with the following:

The reflectorized beam guardrail delineators shall be fabricated from galvanized steel.

Reflective sheeting shall meet the requirements of Subsection 719.01, Reflective Sheeting – minimum ASTM Type XI; 3M™ Diamond Grade™ DG<sup>3</sup> Reflective Sheeting Series 4000 or approved equal.

606.08 Method of Measurement

The following paragraph is added:

Reflectorized Beam Guardrail Delineators will be measured by each unit of the kind specified and installed. Maintenance and replacement of delineators will not be measured separately for payment unless otherwise approved by the Resident.

606.09 Basis of Payment

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

Reflectorized Beam Guardrail Delineators will be paid for at the Contract unit price each when installed on existing guardrail, complete in place, which price shall be full payment for furnishing and installing all components and for all incidentals necessary to complete the installation. Reflectorized Beam Guardrail Delineators will not be paid for on new guardrail.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
606.352      Reflectorized Beam Guardrail Delineator	Each

SPECIAL PROVISIONSECTION 606GUARDRAIL

(Underdrain Delineator Post)  
(Delineator Post – Remove and Stack)

606.01 Description

The following paragraphs are added:

This work shall also consist of furnishing and installing new delineator posts and/or removing and resetting and/or removing and stacking existing delineator posts at the Kennebunk Maintenance Facility. The existing reflectorized delineator panels shall be removed and replaced with new reflectorized delineator panels as required 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 associated 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 Energy Absorbing End Terminal installations and shall not be installed behind the terminal end 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 guardrail markers shall be a minimum of 2-inches in diameter, a maximum of 36" 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" x 3".

#### 606.03 Posts

The following paragraphs are added:

The top of delineator posts shall be installed 4' - 6" (54") above edge of pavement elevation. Delineators shall be installed four feet from edge of pavement except those delineating end treatments, 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 operations 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 paragraphs are added:

Delineator Posts shall be measured by each unit satisfactorily installed. Delineator Posts – Removed and Reset shall be measured by each unit satisfactorily removed and reset. Delineator Posts – Removed and Stacked shall be measured by each unit satisfactorily removed and stacked.

Mile Marker post shall be measured for payment as Delineator Post. The breakaway supports shall be incidental to the Underdrain Delineator Post pay item.

606.09 Basis of Payment

The following sentences 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 price shall be full compensation for the post and specified delineator or mile marker panel, complete in place.

The accepted quantity of Delineator Post – Removed and Reset will be paid for at the Contract unit price per each, which price shall be full compensation for removing and resetting the delineator panel or mile marker panel and post and all incidentals necessary to complete the work.

The accepted quantity of Delineator Post – Removed and Stacked will be paid for at the Contract unit price per each, which price shall be full compensation for removing and stacking the delineator panel or mile marker panel and post and all incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
606.356      Underdrain Delineator Post	Each
606.3562     Delineator Post – Remove and Stack	Each

SPECIAL PROVISION

SECTION 606

GUARDRAIL

(Guardrail – Remove, Modify and Reset Thrie Beam, Single Rail)

606.01 Description

The following paragraphs are added:

This work shall also consist of removing existing single and double guardrail elements, component parts and hardware suitable for replacement as approved by the Resident. Any guardrail elements, posts, component parts and hardware unsuitable for reuse shall become property of the Contractor.

Stockpiled materials, suitable for reuse, shall be utilized on Remove, Modify and Reset items prior to new materials being paid for.

Guardrail materials may be temporarily stockpiled at the York Maintenance Facility.

This work shall consist of removing, disposing of existing guardrail elements, component parts and hardware, as directed by the Resident. All materials shall become the property of the Contractor and shall be removed from the site at the completion of the Project. 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.

606.02 Materials

The following paragraph is added at the end of the subsection:

New non-wood offset blocks conforming to MASH Test Level 3 shall be installed on all guardrail being reset. The existing steel offset brackets and backup plates shall become the property of the Contractor.

The following Subsection is added:

606.021 General

All existing guardrail to be raised or lowered shall be completed prior to new guardrail or end treatments being attached.

Earth around each adjusted or reset post shall be raked and compacted with a minimum 8-pound hand tamper or an approved device. Holes created due to adjusting or resetting a post shall be filled with a similar surrounding material and compacted.

606.08 Method of Measurement

The following paragraphs are added:

Raking and compacting the earth around each reset post with a minimum 8-pound hand tamper or an approved device, and infilling and compacting holes created due to resetting posts with a similar surrounding material will not be paid separately, but shall be incidental to the Guardrail - Remove, Modify and Reset pay items.

Guardrail removed and not reset or stacked shall be incidental to Contract Items and include all removal, disposal, equipment and labor necessary to satisfactorily complete the work.

Steel posts to replace damaged posts shall come from the stockpile of guardrail components to be disposed of, from this Contract and will not be measured separately for payment. If, in the opinion of the Resident, there are no suitable steel posts in the stockpile then steel posts will be measured for payment.

W-beam rail elements to replace damaged rail elements shall come from the stockpile of guardrail from the Remove and Stack or the guardrail to be disposed of from this Contract and will not be measured separately for payment. If, in the opinion of the Resident, there are no suitable W-beam rail elements in the stockpile then the W-beam rail elements will be measured for payment.

606.09 Basis of Payment

The following paragraphs are added:

The removing and disposing of all guardrail elements, component parts and hardware not used for resetting the guardrail shall be included in the Contract Unit Price bid for Remove, Modify, and Reset guardrail items. Stockpiling existing rail elements, posts, and component parts will not be measured separately for payment, but shall be incidental to the guardrail items.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
606.3611      Guardrail – Remove, Modify, and Reset Thrie Beam, Double Rail	Linear Foot



SPECIAL PROVISIONSECTION 606GUARDRAIL

(Guardrail – Remove and Stack or Dispose)

606.01 Description

The following paragraph is 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

606.8 Method of Measurement

The following paragraph is 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.

606.9 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 ItemPay Unit

606.3631	Guardrail – Remove and Stack or Dispose	Linear Foot
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SPECIAL PROVISIONSECTION 606GUARDRAIL

(Widen Shoulder for Energy Absorbing End Terminal)

606.01 Description

The following sentence is added:

Widen Shoulder for Energy Absorbing End Terminal work shall consist of widening the existing shoulder at specified Energy Absorbing End Terminal locations by excavating, furnishing, grading and compacting new shoulder aggregate subbase course gravel, granular borrow, common borrow, and asphalt grindings in accordance with the thickness and typical sections as shown on the Plans or as approved by the Resident.

The following Subsections are added:

606.021 Granular Borrow

Granular borrow shall be material meeting the requirements of Subsection 703.19.

606.022 Fill Material

Fill material shall be existing excavation or common borrow from an outside source.

606.023 Asphalt Grindings

Asphalt grindings shall consist of pavement millings created by the cold planning process. The asphalt grindings stockpile must be viewed and approved by the Resident prior to any grindings being placed at any location.

The grindings shall be reprocessed (crushed) to meet the following gradation:

SIEVE DESIGNATION	GRADING
3/4"	100
1/2"	95 - 100
No. 4	50 - 80
No. 50	18 - 28
No. 200	3 - 10

606.024 Aggregate Subbase Course-Gravel

Aggregate subbase course-gravel shall be material meeting the requirements of Subsection 703.06.

606.051 Compaction - Asphalt Grindings

The asphalt grindings shall be placed and compacted to a minimum thickness of three inches unless otherwise designated by the Resident.

606.08 Method of Measurement

Widen Shoulder for Energy Absorbing End Terminal will be paid at the contract unit price per each.

Common borrow will be measured in accordance with Section 203 of these Specifications.

Loam, seed and mulch will not be measured separately but shall be incidental to the Widen Shoulder for Energy Absorbing End Terminal pay item and the Modify Widened Shoulder for Energy Absorbing End Terminal.

606.09 Basis of Payment

The following paragraphs are added:

The accepted quantity of Widen Shoulder for Energy Absorbing End Terminal shall also include the excavation, asphalt grindings, aggregate subbase course gravel, granular borrow, loam, seed, fertilizer, and mulch.

Common borrow will be measured in accordance with Section 203 of these Specifications.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
606.754	Widened Shoulder for Energy Absorbing End Terminal	Each

SPECIAL PROVISIONSECTION 608SIDEWALKS(Reinforced Concrete Sidewalks)

The provisions of Section 608 of the Standard Specifications shall apply with the following additions and modifications.

608.01 Description

Delete this section in its entirety and replace as follows:

This work shall consist of furnishing all materials for and constructing sidewalks and site slabs of concrete, in conformance with this specification and all other applicable Contract Documents.

608.021 Sidewalk Materials

Revise this section by removing the second paragraph which begins with “Portland cement concrete shall...” in its entirety and replace with “Portland cement concrete shall be Class A and meet the requirements of Supplemental Specification Section 502 – Structural Concrete.”

608.031 Portland Cement Concrete Sidewalks

## Subsection “c.” – Placing Concrete

Revise this section by removing the second sentence which begins with “The proportioning, mixing, and placing...” in its entirety and replace with “The proportioning, mixing, and placing of the concrete shall be in accordance with the requirements of Supplemental Specification Section 502 – Structural Concrete.”

608.035 Construction Sidewalk

Revise this by adding the following at the end of the first sentence, “This work shall be considered incidental to the 608.08 item and no separate measurement or payment will be made.”

608.05 Method of Measurement

Section shall be deleted in its entirety and replaced as follows:

Reinforced Concrete Sidewalks will be measured by the square-yard of finished surface, complete in place. Construct sidewalks is incidental to the sidewalk item and no separate measures will be made.

The construction of a new entrance slab and frost walls at the Administration Building is incidental to the sidewalk item and no separate measurement will be made.

608.06 Basis of Payment

Section shall be deleted in its entirety and replaced as follows:

The accepted quantity of concrete sidewalk will be paid for at the contract unit price per square yard. Expansion joint material, joint filler, and other related items will not be paid for separately but the cost, thereof, shall be included in the cost of the sidewalk.

The Contractor is responsible for protecting cast-in-place concrete from vandalism until it is cured. No payment will be made for concrete that has been vandalized by inscribed initials, footprints and hand prints, embedded items or other acts of vandalism.

For constructing sidewalk, the cost for excavation, furnishing and placing new aggregate and necessary incidentals to bring the grade to pre-pave/pre-placement grade is incidental to the sidewalk items and no separate payment will be made.

The cost for construction of a new entrance slab and frost walls at the Administration Building is incidental to the sidewalk item and no separate payment will be made.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
608.08      Reinforced Concrete Sidewalk	Square Yard

SPECIAL PROVISION

SECTION 610

STONE FILL, RIPRAP, STONE BLANKET AND STONE DITCH PROTECTION

(Temporary Stone Check Dams)

(Permanent Stone Check Dams)

610.01 Description

Paragraphs (g) and (h) are added as follows:

(g) Temporary Stone Check Dams – Machine placed stone, including the placement, removal and storage of the stone used for temporary stone check dams.

(h) Permanent Stone Check Dams – Machine placed stone used for temporary stone check dams.

610.032.e. Stone Check Dams

The following paragraph is added:

Stone check dams shall be constructed in accordance with the details as shown on the Plans, detailed in the MaineDOT's latest Best Management Practices, or as approved by the Resident. The stone shall be placed in one operation without special handling or handwork except to create a low point along the top gradient above the ditch flow lines.

The following Subsection is added:

610.033 Removing Stone

The stone for temporary stone check dams shall be removed after vegetation has been established in the ditches as approved by the Resident.

Any damage to the slopes and ditches caused by the removal of the stone check dams shall be repaired by the Contractor at his own expense.

The area directly under the temporary stone check dams shall be loamed, seeded and mulched immediately after the removal of the stone check dams. The loam, seed and mulch will be measured for payment under the appropriate pay items.

Stone used for temporary stone check dams shall be removed and stored and shall become the property of the Contractor at the completion of the Project.

The following Subsection is added:

610.034 Maintenance

Stone check dams shall be maintained by the Contractor. Sediment deposits behind check

dams shall be removed when the depth of sediment reaches 50 percent of the check dam height.

610.05 Method of Measurement

The following paragraphs are added:

Stone for Temporary Stone Check Dams will be measured by the cubic yard complete in place. The removal and storage of the stone will not be measured separately for payment, but shall be incidental to the Temporary Stone Check Dam item. This shall include the transporting and unloading of the stone. If this stone is reused on the Project, it will be measured separately for payment under the appropriate pay item.

The removal and disposal of sediment from behind the Temporary Stone Check Dams will not be measured separately for payment, but shall be incidental to the Temporary Stone Check Dam pay item.

Stone for Permanent Stone Check Dams will be measured by the cubic yard complete in place. This shall include the transporting and unloading of the stone.

610.06 Basis of Payment

The following sentences are added:

The accepted quantities of stone for Stone Check Dams will be paid for at the Contract unit price per cubic yard.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
610.181      Temporary Stone Check Dam	Cubic Yard
610.182      Permanent Stone Check Dam	Cubic Yard

SPECIAL PROVISION

SECTION 619

MULCH

(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”.

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 upstation and downstation 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.

619.04 Applying Mulch

The third paragraph is deleted and replaced with the following:

Newly disturbed earth and ditches shall be mulched or otherwise stabilized by the end of each work day and maintained on a daily basis as described in Subsection 105.8.1 in the Special Provisions. The Contractor is responsible for applying temporary mulch as necessary, in accordance with the latest edition of the BMP's, to minimize soil erosion prior to the application of the final slope treatment.

Temporary mulch applied during the winter months of November 1<sup>st</sup> through April 15<sup>th</sup> shall be applied at twice the standard temporary stabilization rate or 150 lbs. per 1,000 square feet or three tons/acre. Mulch shall not be spread on top of snow and shall be anchored with mulch netting on slopes steeper than eight percent unless erosion control blankets or erosion control mix is being used on the slopes.

The Contractor shall review his construction operations and staging to determine how much temporary mulching is required.



619.06 Method of Measurement

The following sentence is added:

Temporary Mulch will be paid for by the lump sum.

619.07 Basis of Payment

The following paragraphs are added:

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      Temporary Mulch

Lump Sum

SPECIAL PROVISION

SECTION 626

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

(Non Metallic Conduit)

626.01 Description

The following paragraph is added:

“All conduit non metallic conduit provided under this contract shall be 3” Schedule 80 PVC..”

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
626.22	Non-Metallic Conduit	Linear Foot

SPECIAL PROVISIONSECTION 626FOUNDATIONS, CONDUIT, AND JUNCTION BOXES  
FOR HIGHWAY SIGNING, LIGHTING AND SIGNALS

(Quazite Junction Box (18x11))

626.02 General

The following paragraph is added:

Junction boxes for the electrical conduit shall be polymer concrete as manufactured by QUAZITE® a division of Hubbell Power Systems. The boxes shall be 18" x 11" x 18" deep. The word LIGHTING shall be stamped on the cover as noted in the Plans or directed by the Resident. The boxes shall have an 22,000 lb. load rating. All existing QUAZITE® Junction Boxes shall be abandoned as directed by the Resident Engineer.

All existing Precast Junction Boxes shall be removed and salvaged to the MTA as directed by the Resident Engineer. New boxes shall have the word LIGHTING stamped on the cover.

Where conduits enter exposed junction boxes, they shall be sloped to drain towards the conduit entrance holes, unless otherwise directed. All conduit ends in the exposed junction boxes or in concrete foundations shall be fitted with bell ends. Weep holes of ¼ inch diameter shall be placed in all pull boxes, junction boxes and fuse boxes. A 3" PVC drain pipe shall be installed projecting 3" into the gravel bedding and extend until daylight at a minimum 0.5% slope draining away from the junction box.

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 and shall have a 3" PVC drain pipe installed as shown on the plans.

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:

<u>Pay Item</u>	<u>Pay Unit</u>
626.122                      Quazite Junction Box (18 x 11)	Each

SPECIAL PROVISION

SECTION 626

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

(Light Standard Foundation)

626.02 General

The following paragraph is added:

Light standard foundations shall be pre-cast concrete as manufactured and shall be meet the requirements of the light standard manufacturer for bolt circle diameter, anchor bolt thickness, anchor bolt projection, depth, and width.

The light standard foundation shall accommodate break away devices and shall meet all MTA and Maine DOT requirements.

626.04 Method of Measurement

The light standard foundation shall be measured by each unit in place and accepted existing or new.

626.05 Basis of Payment

The light standard foundation shall be paid for by each unit in place including all excavation, backfill, equipment, material and labor to complete the installation.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
626.341	Light Standard Foundation	Each

SPECIAL PROVISION

SECTION 627

PAVEMENT MARKINGS

(Pavement Marking Tape)  
(Pavement Marking Tape – White Dotted Lane Line, 6-inch Width)

627.01 Description

The following sentence is added:

This work shall consist of furnishing and placing reflective pavement marking tape in conformity with the Plans, as specified herein and as directed by the Resident.

The pavement marking tape shall be installed at all locations.

627.02 Materials

The following sentence is added:

For the Broken White Line (BWL), Pavement Marking Tape shall be 3M Stamark™ High Performance Tape Series 380AW – High Performance pavement marking tape, color- white, six (6) inch width, as manufactured by 3M of St. Paul, Minnesota.

For the White Dotted Lane Line (WDLL), Pavement Marking Tape shall be 3M Stamark™ High Performance Tape Series 380I ES – High Performance pavement marking tape, color- white, six (6) inch wide and twelve (12) inch wide, as manufactured by 3M of St. Paul, Minnesota.

3M Traffic Safety Systems Division  
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627.04 General

The following paragraphs are added:

The tape shall be used as a supplemental broken white lane line. The tape shall be installed between the painted Broken White Line (BWL) spaced eighty (80) foot center to center as shown on the Plans. The length of the tape shall be three (3) feet.

The tape shall also be used to mark a White Dotted Lane Line (WDLL) and shall be installed on parallel deceleration and acceleration lanes at locations as noted in the Plans. On deceleration lanes, the tape shall be installed from the beginning of the full width deceleration lane and shall extend to the theoretical gore markings. On acceleration lanes, the WDLL shall extend from the theoretical gore markings to a point one-half of the total length of the acceleration lane (including the lane taper length). Layout data is noted on the Plans. White Dotted Lane Line tape

shall be three (3) foot in length and shall be spaced nine (9) feet apart. Spacing from the Solid White Line (SWL) or the Theoretical Gore Markings shall be nine (9) feet.

#### 627.05 Preparation of Surface

The following paragraph is added:

The Contractor shall mill a groove in the pavement for each tape length to be placed (“in-and-out” pattern). Continuous grooving for installation of the tape shall not be allowed. The groove length shall be the required tape length plus 12 inches on both ends. Tape length spacing shall be as shown on the plans. The groove width for inlaid tape pavement marking shall be the pavement marking width plus 1 inch, with a tolerance of  $\pm \frac{1}{4}$  inch. The groove shall have a uniform depth of 150 Mils ( $\pm 20$  Mils). Groove position shall be a minimum of 2 inches from the edge of the pavement marking to the longitudinal pavement joint. The bottom of the groove shall have a smooth, flat finished surface. The use of gang stacked Diamond cutting blades is required for asphalt pavement surfaces. The spacers between blade cuts shall be such that there will be less than a 10 mil rise in the finished groove between the blades.

Grooves shall be clean, dry and free of laitance, oil, dirt, grease, paint or other foreign contaminants. The Contractor shall prevent traffic from traversing the grooves, and re-clean grooves, as necessary, prior to application of the primer and pavement marking tape. Depth plates shall be provided by the Contractor to assure that desired groove depth is achieved.

Reference is made to 3M Information Folder 5.18 Grooving Applications, May 2011, “Application Guidelines for Pavement Marking in Grooved Pavement Surfaces.”

#### 627.09 Method of Measurements

The following paragraph is added:

The quantity of Pavement Marking Tape measured for payment will be the linear feet of tape in place and accepted. The measurement will not include the gaps. The groove shall be measured by the square foot.

#### 627.10 Basis of Payment

The following paragraphs are added:

The accepted quantity of pavement marking tape will be paid for at the Contract unit price per linear foot which price shall include all material, equipment, labor and incidentals necessary to complete the work. Pavement grooving shall be paid per square foot.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
627.4072	Pref Pave Mark Tape Line, Groove Install	Square Foot
627.94	Pavement Marking Tape	Linear Foot
627.941	Pavement Marking Tape – White Dotted Lane Line, 6-inch Width	Linear Foot

SPECIAL PROVISION

SECTION 627

PAVEMENT MARKINGS

(Temporary 6 Inch Pavement Marking Tape)  
(Temporary 6 Inch Black Pavement Marking Tape)

627.01 Description

The following sentence is added:

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

This work shall also consist of furnishing, placing, maintaining and removing temporary black pavement marking tape at locations shown on the Plans or as directed by the Resident. Temporary 6 Inch Black Pavement Marking Tape shall be used to cover conflicting existing pavement marking paint.

627.02 Materials

The following paragraph is added:

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

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

627.04 General

The following paragraphs are added:

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

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

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

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

the Authority.

#### 627.06 Application

The following paragraphs are added:

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

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

#### 627.08 Removing Lines and Markings

The following sentence is added:

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

#### 627.09 Method of Measurement

The following paragraph is added:

Temporary Pavement Markings - Tape will be measured for payment by the linear foot. The measurement of broken lines will not include the gaps.

#### 627.10 Basis of Payment

The following paragraphs are added:

Payment for the Temporary Pavement Markings - Tape will be made at the Contract bid price per linear foot, which price shall include furnishing, installing, maintaining and removing the temporary tape and all materials, labor, equipment and incidentals necessary to accomplish the work. Replacement of Temporary Pavement Markings - Tape, as described above, will be incidental and no separate payment will be made.

Payment for the Temporary 6 Inch Black Pavement Marking Tape will be made at the Contract bid price per linear foot installed, which price shall include furnishing, installing, maintaining and removing the temporary tape and all materials, labor, equipment and incidentals necessary to accomplish the work. Replacement of 6 Inch Black Temporary Pavement Marking Tape, as described above, will be incidental and no separate payment will be made.



Payment will be made under:

Pay Item

Pay Unit

627.73	Temporary 6 Inch Pavement Marking Tape	Linear Foot
627.731	Temporary 6 Inch Black Pavement Marking Tape	Linear Foot

SPECIAL PROVISIONSECTION 627PAVEMENT MARKINGS(Temporary Polyurea Pavement Marking Lines)627.01 Description

This work shall consist of furnishing and placing reflectorized temporary Polyurea pavement marking lines. The liquid marking material shall be applied by spray method onto asphalt cement concrete and Portland cement concrete surfaces. Following an application of retroreflective optics, and upon curing, the resulting marking shall be an adherent reflectorized stripe during dry and wet conditions of the specified thickness and width that is capable of resisting deformation by traffic.

Work under these items shall consist of the furnishing and installation of white and lead-free yellow polyurea reflectorized pavement markings (including edge lines, center lines, skip lines, cross walks, stop bars and symbols) on all pavement surfaces noted on the Plans or as directed by the resident engineer.

627.02 Materials

Material shall conform to the requirements identified below:

627.02.1 Polyurea Material

The Contractor shall use a polyurea paint that is classified as VERY FAST CURING POLYUREA TRAFFIC PAINT (no-track times < 10 minutes). The following paint or an approved equal shall be used:

- Change to Swarco MFUA-12 Ph, 1-931-388-5900
- (Not fast drying- this is slower dry like Epoxy)
- 3M Series 5000 LPM, Ph. 800.553.1380

At least one component shall be composed of secondary amines, pigments and fillers as needed to meet performance requirements of this specification.

These films shall be manufactured without the use of lead chromate pigments or other similar, lead-containing chemicals.

The white polyurea shall contain not less than 13% by weight rutile titanium dioxide pigment to ensure adequate opacity, hiding power and reflective properties.

The reflective media must include a first drop drop of 18/50 beads (former Utah Performance) bead blend based on manufacturers recommended drop rates. These beads shall be for drop-on application applied simultaneously with paint by pressurized or mechanical means.

### 627.03 General

The pavement markings shall be applied in accordance with the Manual on Uniform Traffic Control Devices.

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

Broken lines shall consist of alternate 10- foot painted line segments and 30 -foot gaps.

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

### 627.02.1 Polyurea Marking

Polyurea Marking equipment shall be certified by the manufacturer as suitable for the application of the polyurea and reflective media. The striping equipment shall bear a decal identifying it as manufacturer certified.

At any time throughout the duration of the project, the Contractor shall provide free access to his application equipment for inspection by the Resident, his authorized representative, or the materials representative.

### 627.4 Polyurea Performance Requirements

The preformed markings shall consist of white and yellow films with pigments selected and blended to conform to standard highway colors.

The mixed polyurea compound, both white and yellow, when applied to a 144 in<sup>2</sup> aluminum panel at 15±3 mil in thickness with no glass beads and exposed for 500 hours in a Q.U.V. Environmental Testing Chamber, as described in ASTM G-154, Cycle #1, shall conform to the following minimum requirements. The color of the white polyurea system shall not be darker than Federal Standard No. 595A-17778. The color of the yellow polyurea system shall be reasonably close to Federal Standard No. 595A-13538.

The surface of the retroreflective marking shall provide an initial average skid resistance value of 45 BPN when tested according to ASTM E303.

When tested in accordance with ASTM D-711 the polyurea marking material shall reach a track- free condition in 7 minutes or less at 15 mils with no retroreflective material.

When installed at 77° F, at a wet film thickness of 22±1 mils and reflectorized with glass beads, the polyurea markings shall reach a no-track condition in less than 6 minutes. Dry to “no-tracking” shall be considered as the condition where no visual deposition of the polyurea marking to the pavement surface is observed when viewed from a distance of 50 feet, after a traveling vehicle’s tires have passed over the line.

The polyurea pavement marking materials, when tested according to ACI Method 503, shall demonstrate 100% concrete failure in the performance of this test. The prepared specimens shall be conditioned at room temperature (75° ± 2° F) for a minimum of 24 hours and maximum of 72 hours prior to the performance of the tests indicated.

The polyurea pavement marking materials, when tested according to ACI Method 503, shall demonstrate 100% asphalt failure in the performance of this test. The prepared specimens shall be conditioned at room temperature (75° ± 2° F) for a minimum of 24 hours and maximum of 72 hours prior to the performance of the tests indicated.

The material shall have a minimum Shore D Hardness of between 70 and 100 when tested in accordance with ASTM D 2240.

The material shall have a maximum abrasion resistance of 150 mg at 15 ± 1 mil (0.375 ± 0.025 mm) when tested in accordance with ASTM D-4060 (formally ASTM C 501).

The Contractor shall furnish a certificate of compliance showing the Polyurea material conforms to all requirements of this specification.

#### 627.05 Preparation of Surfaces

At the time of Polyurea application all pavement surfaces shall be in accordance with any polyurea manufacturer’s recommended procedures. The acceptability of the surface will be decided by the Resident and/or Manufacturer’s Technical Representative prior to application.

The pavement surface temperature and the ambient temperature shall be above 30° F (or minimum per manufacturers recommendations at the time of application. The Resident shall determine the atmospheric conditions and pavement surface conditions that produce satisfactory results.

#### 627.06 Application

All work shall be done in accordance with the Material Suppliers specifications and the following:

1. The polyurea binder shall be applied at rates to achieve a minimum uniform wet thickness of 18±2 mils.

Marking Performance: The typical dry average initial retro reflectance of the markings shall be 300 [(mcd(ft-2)(fc-1)] for white and 250 [(mcd(ft-2)(fc-1)] for yellow per ASTM E1710. The average initial retro reflectance shall be determined according to the measurement and sampling procedures outlined in ASTM D 6359, using a 30 meter retro reflectometer. The 30 meter retro reflectometer shall measure the coefficient of retroreflected luminance, RL, at an

observation angle of 1.05 degrees and an entrance angle of 88.76 degrees. RL shall be expressed in units of millicandelas per square foot per foot-candle [(mcd(ft-2)(fc-1)]. The metric equivalent shall be expressed in units of millicandelas per square yard per lux [mcd(m-2)(lux-1)].

#### 627.07 Installation

The Contractor shall provide to the Department a written quality control report of the application. The report will include: a thorough summary of the application, weather, temperature, wet mil thickness, reflectivity verification tests and any corrective actions taken while applying the Polyurea. The Contractor will submit the report to the Resident within 14 days of application.

#### 627.09 Method of Measurement

The quantity of permanent pavement marking lines measured for payment will be the number of feet shown in the Schedule of Items in the contract.

Polyurea Pavement Marking Lines shall be measured by the linear foot. Double yellow centerline, broken or solid, will be considered one line for measurement purposes. Any broken or dotted white lines measurement will not include the gaps.

#### 627.12 Basis of Payment

The accepted quantity of permanent pavement marking lines will be paid for at the contract unit price per foot. This price shall include all labor and materials to furnish, install and maintain the pavement markings. No adjustment will be made to the quantity for payment, except as described under Method of Measurement above.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
627.745      6" White or Yellow Polyurea Pavement Marking Line	Linear Foot

SPECIAL PROVISION

SECTION 627

PAVEMENT MARKINGS

(Temporary Raised Pavement Markers)

627.01 Description

The following sentence is added:

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

627.02 Materials

The second paragraph is deleted and replaced with the following:

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

627.04 General

The following sentences are added:

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

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

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

627.09 Method of Measurement

The following sentence is added:

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

627.10 Basis of Payment

The following paragraphs are added:

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

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
627.812	Temporary Raised Pavement Markers	Each

SPECIAL PROVISION

SECTION 627

PAVEMENT MARKINGS

(Temporary Painted Pavement Markings)

627.01 Description

The following paragraphs are added:

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

Lines on the turnpike shall be six inches wide. Lines on local roads shall be four inches wide.

Temporary raised pavement markers will not be allowed as a substitute for temporary painted pavement marking lines unless approved by the Resident for use as a transition between the existing pavement markings and the temporary painted pavement marking lines. Temporary raised pavement markings may be used as a substitute for temporary painted pavement markings when the markings are immediately adjacent to a concrete barrier or guardrail such that the markings will not be subject to traffic. The temporary raised pavement markers will be measured for payment as temporary painted pavement markings when their use has been approved by the Resident.

627.02 Materials

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

Pavement marking paint shall be 100 percent acrylic, low VOC, fast drying, white and yellow waterborne traffic paint.

The paint shall be formulated and processed specifically for service as a binder for beads, in such a manner as to produce maximum adhesion, refraction, and reflection. Any capillary action of the paint shall not be such as to cause complete coverage of the beads. The binder shall be 100 percent acrylic, as determined by infrared analysis according to ASTM D2621. VOC levels shall comply with ASTM D3960. Lead percentage shall comply with ASTM D3335. The paint shall be rated as non-combustible.

627.04 General

The third paragraph is deleted and replaced with the following:

Broken lines shall consist of alternate 10 foot painted line segments and 30 foot gaps.

Dotted white lines (DWL) shall consist of alternate three foot painted line segments and





SPECIAL PROVISION

SECTION 631

EQUIPMENT RENTAL

(Air Compressor Including Operator)  
(Air Tool Including Operator)  
(Jackhammer Including Operator)  
(All Purpose Excavator Including Operator)  
(Truck-Small Including Operator)  
(Chain Saw Rental Including Operator)  
(Culvert Cleaner Including Operator)  
(Foreperson)  
(Bucket Truck)  
(Scissor Lift)  
(Electrician)  
(Electrician's Apprentice)

631.02 General

The following sentences are added:

Jackhammer - To be included under category of air tool.

Bucket truck - Approved one man, able to reach 30 feet high bucket truck with 10 feet lateral extension.

Scissor Lift - Hydraulic scissors lift with a minimum capacity of three workers.

Electrician - Licensed by State of Maine.

Electrician's Apprentice - Enrolled in an accredited program.

631.08 Basis of Payment

The following paragraphs are added:

Such related costs such as use of hand tools, meal and room expenses, benefits, insurance, retirement, travel time, overtime, overhead and profit will not be measured separately for payment, but shall be incidental to the unit price for the bid item.

Note: For extra materials required for miscellaneous work the General Contractor shall be allowed 15 percent overhead and profit on the cost of materials and rental equipment (not covered by miscellaneous unit items). Rates for Subcontractor owned equipment required to perform miscellaneous work, not otherwise provided for in the Contract, shall be negotiated.

The General Contractor will be allowed 10 percent overhead and profit on the subcontractor's cost of materials, and subcontractors rented equipment (not covered by

miscellaneous unit items). The General Contractor shall include his markup on the Subcontractor's labor in the pay items.

The labor hour bid items shall include labor and labor burdens, benefits, supervision, transportation, travel time and allowances, overnights, small tools and equipment, subcontractor overhead and profit, and General Contractor overhead and profit. Time will be measured from the start of work to the stoppage of work at the project site; less the time taken for lunch. No deduction of time will be taken for the standard morning "coffee break".

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
631.10	Air Compressor (including operator)	Hour
631.11	Air Tool (including operator)	Hour
631.115	Jackhammer (including Operator)	Hour
631.12	All Purpose Excavator (including operator)	Hour
631.171	Truck-small (including operator)	Hour
631.18	Chain Saw Rental (including operator)	Hour
631.32	Culvert Cleaner (including operator)	Hour
631.36	Foreperson	Hour
631.51	Bucket Truck	Hour
631.52	Scissor Lift	Hour
631.53	Electrician	Hour
631.54	Electrician's Apprentice	Hour

SPECIAL PROVISION

SECTION 634

HIGHWAY LIGHTING

(Highway Lighting)  
(Conventional Light Standard with LED Fixture)  
(LED Luminaire)  
(Remove Existing Light Standard)

634.01 Description

The following paragraph is added:

All new luminaires shall also consist of furnishing and installing disconnect fuse kits in the pole base of light standards.

The work shall also consist of furnishing, delivering to the Authority's Sign Shop at Mile 58.3 Northbound, unloading and stacking two (2) 120-240-277V Conventional Multi-Tap LED spare luminaires. The spare luminaires shall be furnished with a fuse kit photo cell, and shorting cap.

The work shall also consist of removing existing light standards including the luminaire, and any breakaway devices and stacking at a facility designated by the MTA. If the MTA decides not to accept the existing light standards and/or luminaires they shall become property of the Contractor.

The work shall include supplying two spare luminaires furnished with fuse kits, photo cells and shorting caps.

All electrical components required for the mile 7.3 lighting not included with the building electrical shall be included under this item.

634.02 General

The following paragraphs are added:

All Contract work shall be overseen by a Maine licensed Master Electrician. The lead person for the field installations shall be either a Maine licensed Master Electrician, or a Maine licensed Journeyman Electrician. Apprentice Electricians, Helper Electricians, Journeyman-In-Training Electricians, and helpers may work under the Master or Journeyman Electrician as permitted under the law.

The Contractor shall comply with National Electrical Code (NFPA 70) as applicable to construction and installation of electrical cable, wire and connectors; provide electrical cable, wire and connectors, which have been listed and labeled by Underwriters Laboratories, and comply with National Electrical Manufacturers Association/Insulated Power Cable Authorities

Association Standards publications pertaining to materials, construction and testing wire cable, where applicable.

At a minimum the Contractor shall provide the following field quality control:

- Prior to energizing, check wire for continuity of circuitry and for short circuits with ohmmeter type testing equipment. Correct malfunction when detected.
- Subsequent to wire hook-ups, energize circuitry and demonstrate functioning in accordance with requirements.

#### 634.021 Materials

The following paragraphs are added:

Disconnect fuse kits in pole bases shall be Ideal SLK Disconnect Fuse Kit 30-S2212, or similar approved Ideal SLK Disconnect Fuse Kit, matched to the pole wiring configuration. All hot and neutral wires shall be fused. Ground wires do not need to be fused.

The 120-277V Conventional Multi-Tap LED fixtures shall be one of the following:

- Model # ATB2-40BLED13 R3 HSS-series, as manufactured from American Electric Lighting

No substitute 120-277V Conventional Multi-Tap LED fixtures will be considered. All Luminaires located on the shoulders and at the administration building shall be equipped with house side shields.

Each luminaire shall be provided with a 7 pin NEMA receptacle, a photocell and a shorting cap. All "spare" photocells and shorting caps shall become property of the Authority.

The Manufacturer shall provide a minimum 5-year warranty on all fixtures, installed and spares, from the Project Completion date.

All fixtures shall be submitted and approved before the fixtures are ordered. Submittals shall include Product Data sheets clearly identifying the product and accessories being proposed, Test Reports and Certifications, and Product Warranties.

All light poles shall be labeled with their respective pole number and circuit number with a minimum 2" letter height visible from approaching traffic. All wiring in the junction boxes shall be labeled with their applicable circuit number.

#### 634.04 Cable Installation

The following paragraphs are added:

All conductors from load center to light poles shall be meggar tested and meggar sheets shall be submitted to MTA for approval.

634.092 Method of Measurement

Replace the second sentence with the following:

Conventional Light standards with LED Fixture for addition or reduction of quantity, will be measured by the each unit, complete in place and accepted. LED luminaires

634.093 Basis of Payment

Highway Lighting shall be shall be full compensation for furnishing, installing and erecting the conventional light standard and LED fixture complete wiring in underground conduit, pole wiring, and all other wiring (irrespective of the number of wires or total linear feet of wire required to complete the work), transformer enclosures, luminaires, LED fixture, break-away devices when applicable, all identification tags, light standard, bracket arm, breakaway transformer base, break away devices, bracket arm, load center components, and all materials, labor, equipment, tools, miscellaneous hardware and incidentals necessary to complete the work.

Disconnect Fuse Kit, Installation will be considered incidental

Verifying the voltage of the existing luminaire(s) before installing the new LED luminaire(s) will not be paid separately but shall be incidental to the Highway Lighting item.

Furnishing and installing photocells, wireways, breakers, and all components required for a fully functional system and all incidentals necessary to complete the work will not be paid separately, but shall be considered incidental to Conventional Light Standard with LED Fixture item.

Furnishing, delivering to the Authority's Sign Shop at Mile 58.3 Northbound, unloading and stacking two (2) 120-240-277V Conventional Multi-Tap LED spare luminaire including fuse kit, photo cell, shorting cap, and all incidentals necessary to complete the work shall not be paid separately, but shall be incidental to the Conventional Light Standard with LED Fixture item.

Payment for furnishing and installing Conventional Light Standard with LED Fixture, for addition or reduction of quantity, will be made for the accepted quantity at the contract unit price of each, which shall include: wiring in underground conduit to the junction box, pole wiring, and all other wiring (except prewired conduit), luminaires, LED fixture, fuse kit, photo cell, light standard, bracket arm, breakaway transformer base, break away devices, bracket arm, all identification tags, and all materials, labor, equipment, tools, miscellaneous hardware and incidentals necessary to complete the work.

Payment for spare luminaires shall be paid under item 634.2042 and shall be furnished with fuse kits, photo cells and shorting caps.

Payment for Remove Existing Light Standard shall include removal of the light standard with the luminaire, properly terminating the existing wiring, transporting the light standard and luminaire to a facility designated by the MTA and if not accepted by MTA disposal of the existing light standard and luminaire at no additional cost to the project.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
634.16	Highway Lighting	Lump Sum
634.21	Conventional Light Standard	Each
634.2042	LED Luminaires	Each
634.2082	Remove Existing Light Standard	Each

SPECIAL PROVISION

SECTION 643

TRAFFIC

(Flashing Beacon - Solar Powered)

643.1.1 Description

The following paragraphs are added:

This special provision provides for the installation of two dual head flashing beacons at the end of each concrete barrier separating the cash lanes from the open road tolling lanes.

All provisions of Section 652, except as modified or changed below, shall apply.

1. Contractor shall furnish (12 inch) amber flashing beacons powered by solar panel with battery backup. Units shall have internal programmable timings for flash interval.
2. The beacons shall be mounted on end of islands replacing hard wired units.

643.7 Method of Measurement

The following paragraphs are added:

Flashing beacons will be measured by each unit authorized and installed on the Project.

The following list of major materials applies:

- 2 – P & K signal pole model SP-114 or approved equal.
- 2 –12 inch amber flashing beacon powered by solar panel. Units shall be JSF Technologies FL Series -24 Hour Flashing Beacon FL -2400 or an approved equal.

643.8 Basis of Payment

The following paragraphs are added:

The accepted quantity of Flashing Beacon – Solar Powered will be paid for at the Contract unit price per unit. This price shall be full compensation for all labor, materials and equipment necessary to furnish and install Flashing Beacons.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
643.63      Flashing Beacon – Solar Powered	Each

SPECIAL PROVISION



SECTION 645HIGHWAY SIGNING

(Remove and Discard Canopy Mounted Sign)  
 (Remove and Discard Canopy Mounted DMS Sign)

645.01 Description

The following paragraph is added:

Existing canopy mounted signs are defined as signs fabricated from sheet aluminum as identified in the Plans. Each sign is mounted on framing supports on top of the toll plaza canopy with an attached luminaire. The removal and discard of the existing DMS on the northbound approach shall be paid under item 645.1071. If the MTA decides not to accept the DMS sign, then the Contractor shall discard it at no additional charge to the project.

The following Subsection is added:

645.08 Method of Measurement

The following sentence is added:

Remove and Discard Canopy Mounted Signs shall be measured as complete units for each static sign removed and discarded. Remove and Discard Canopy Mounted DMS Sign shall be measured as complete units for each DMS sign removed and discarded if necessary.

645.09 Basis of Payment

The following paragraphs are added:

The accepted quantity of Remove and Discard Canopy Mounted signs shall be paid for at the Contract unit price each for each type of sign as specified. Such price shall include removing sign panels, luminaires, and hardware framing supports, sign controllers and all electrical components associated with the signs and delivering to the MTA's Sign Shop at Mile 58 NB. If the MTA does not accept the DMS then it shall be discarded by the Contractor at no additional cost. This includes all hardware, labor and equipment necessary to complete this task.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
645.107	Remove and Discard Canopy Mounted Sign	Each
645.1071	Remove and Discard Canopy Mounted DMS Sign	Each

SPECIAL PROVISION

SECTION 645

HIGHWAY SIGNING

(Remove and Reset Sign)

(Remove and Stack Sign)

645.07 Demounting and Reinstalling Existing Signs and Poles

The following paragraphs are added:

At locations noted on the Plans, existing ground-mounted signs are designated to be removed and reset. This work shall consist of removing the sign panels, removing and resetting or disposing of the existing wood post and resetting the sign panels on a new wood post if required in the appropriate specified location. The Resident will determine if a new wood post is required.

At locations as shown on the Plans, existing ground-mounted signs and overhead mounted signs are designated to be removed and stacked. This work shall consist of removing and delivering existing sign panels, posts, concrete foundations, steel bridge sign supports and breakaway devices to the MTA Sign Shop at Mile 58 NB. All aluminum sign support structures shall be disposed of by the Contractor. All signs designated removed and stacked that are less than 12' shall be disposed by the contractor.

Excavations shall be backfilled and ground restored to the satisfaction of the Resident. Existing foundations for overhead sign structures shall be abandoned by removing the foundation to 6 inches below finished grade and disposed.

Any existing signs not shown on the Plans are to remain in their existing condition unless directed otherwise by the Resident.

645.08 Method of Measurement

The following sentences are added:

Removing and Resetting existing ground-mounted signs shall be measured as complete unit each, removed, reset and accepted.

Removing and Resetting of existing DMS Signs shall be coordinated with the MTA and the 8.8 Toll Plaza contractor.

Removing and stacking existing signs, regardless of the type of sign stacked, shall be measured as complete units each removed and stacked.

645.09 Basis of Payment

The following paragraphs are added:

The accepted signs removed and stacked shall be paid for at the Contract unit price each as specified for each type of sign designated on the plans. Such price shall include removing and stacking sign panels and supports, and removing or abandoning foundations at the location specified. All signs designated removed and stacked that are less than 12' shall be disposed by the contractor.

The accepted signs Removed and Reset will be paid for at the Contract unit price each as specified. Such price will include removing and resetting sign panels, removing and resetting or disposing existing wood post and resetting the sign panels on the existing or new wood post and new hardware as required to complete the sign installation. Any signs or supports damaged by the Contractor shall be replaced by him with new signs or supports conforming to the applicable Specifications at no additional cost to the Authority.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
645.105	Remove and Stack Sign	Each
645.1051	Remove and Stack Ground Mount Sign and Structure	Each
645.1052	Remove and Stack Overhead or Cantilever Guide Sign and Structure	Each
645.109	Remove and Reset Sign	Each

SPECIAL PROVISION

SECTION 645

HIGHWAY SIGNING

(Wood Post)

645.01 Description

The following sentence is added:

This work shall include installing a 6” x 6” pressure treated wood post which is break away and foundation for all signs as specified on the Sign Summary Plans.

645.021 Materials

The following paragraph is added at the end of this Subsection:

The wood post shall be to Maine Turnpike or Section 720.12 of the Maine DOT Standard Specifications.

645.08 Method of Measurement

The following sentence is added:

Wood Post will be measured by each unit in place.

645.09 Basis of Payment

The following paragraphs are added:

The accepted quantity of Wood Posts shall be paid for at the Contract unit price each as specified. Such price shall include all hardware, labor and equipment necessary to complete this task.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
645.28	Wood Post	Each

SPECIAL PROVISIONSECTION 652MAINTENANCE 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.

Maine Turnpike Traffic Control Requirements

All work shall be performed within Supplemental Specification 107.3 Allowable Work Times.

Three-lane traffic in each direction shall be maintained on I-95 at all times, unless when one or two lanes of traffic are allowed by these Specifications and Plans. Minimum shoulder widths on both sides of the travel lanes shall be provided at all times, unless allowed under “Temporary Shoulder Closures” in the tables below. Minimum shoulder width during winter shall be 8’ as shown on plans.

Maintenance of Traffic plans have been developed for four major phases of construction, Phase 1, 2, 3 and 4, which provide for three lanes of traffic Southbound and four lanes Northbound. The Contractor shall schedule this work in accordance with the requirements provided in the tables below.

For all other operations, standard lane or shoulder closures shall be developed by the Contractor from the typical details provided in the Plans and shall coordinate and not conflict with the traffic control devices set up for Phases 1, 2, 3 and 4. All operations requiring lane and/or shoulder closures shall be approved by the Resident prior to start of work.

During the erection and removal of overhead structures or signs, traffic may be stopped and held for periods no longer than 25 minutes during these operations. Before the roadway is opened, all materials shall be properly attached and secured, or removed from traffic so as to not endanger traffic passing underneath. The Contractor shall reimburse the Authority at a rate of \$2500.00 per five-minute period beyond the 25 minute maximum time limit that each roadway (northbound and southbound) is not reopened to traffic.

<b>TABLE 1 - Mainline Northbound</b>						
<b>September 8, 2021 to June 10, 2022</b>						
<b>September 12, 2022 to June 9, 2023</b>						
	<b>Erection / Removal of Overhead Structures/ Signs</b>	<b>Equipment Moves</b>	<b>Temporary Single Lane Closures</b>	<b>Temporary Double Lane Closures <sup>2</sup></b>	<b>Temporary Shoulder Closures</b>	
<b>Days of Week:</b>	Monday through Thursday					
	6:00 a.m. to 6:00 p.m.		Allowed	Allowed <sup>1</sup>		Allowed
<b>Days of Week:</b>	Sunday Night through Friday Morning					
	6:00 p.m. to 6:00 a.m. following day		Allowed	Allowed		Allowed
	10:00 p.m. to 6:00 a.m. following day		Allowed	Allowed	Allowed	Allowed
	10:00 p.m. to 5:00 a.m. following day	Allowed	Allowed	Allowed	Allowed	Allowed
<b>Day of Week:</b>	Friday					
	6:00 a.m. to 12:00 p.m.		Allowed	Allowed		Allowed
<b>Days of Week:</b>	Friday Night through Saturday Morning					
	9:00 p.m. (Friday) to 8:00 a.m. (Saturday)		Allowed	Allowed		Allowed
	11:00 p.m. (Friday) to 5:00 a.m. (Saturday)	Allowed	Allowed	Allowed	Allowed	Allowed
<b>Days of Week:</b>	Saturday Night through Sunday Morning					
	6:00 p.m. (Saturday) to 9:00 a.m. (Sunday)		Allowed	Allowed		Allowed
	9:00 p.m. (Saturday) to 9:00 a.m. (Sunday)		Allowed	Allowed	Allowed	Allowed

1. Monday through Thursday:

Single Lane closure NOT allowed between the hours of 9:00 a.m. and 5:00 p.m. for the following dates:

Year	2021	2022
Dates	November 18 – November 29	November 17 - November 28

2. Monday through Thursday:

Double Lane closure NOT allowed for the following dates:

Year	2021	2022
Dates	February 12 – 22	February 11 – 23
	April 16 – June 11	April 15 – June 10
	September 10 – October 4	September 9 – October 3
	October 29 – November 8	October 28 – November 7

<b>TABLE 2 - Mainline Southbound</b>						
<b>September 13, 2021 to June 10, 2022</b>						
<b>September 12, 2022 to June 9, 2023</b>						
	<b>Erection / Removal of Overhead Structures/ Signs</b>	<b>Equipment Moves</b>	<b>Temporary Single Lane Closures</b>	<b>Temporary Double Lane Closures</b>	<b>Temporary Shoulder Closures</b>	
Days of Week:	Monday through Thursday					
	6:00 a.m. to 6:00 p.m.					Allowed
Days of Week:	Sunday Night through Friday Morning					
	6:00 p.m. to 6:00 a.m. following day					Allowed
	9:00 p.m. to 5:00 a.m. following day		Allowed	Allowed		Allowed
	10:00 p.m. to 5:00 a.m. following day	Allowed	Allowed	Allowed	Allowed	Allowed
Day of Week:	Friday					
	6:00 a.m. to 6:00 p.m.					Allowed
Days of Week:	Friday Night through Saturday Morning					
	6:00 p.m. (Friday) to 8:00 a.m. (Saturday)					Allowed
	7:00 p.m. (Friday) to 8:00 a.m. (Saturday)			Allowed	Allowed	Allowed
	10:00 p.m. (Friday) to 5:00 a.m. (Saturday)	Allowed	Allowed	Allowed	Allowed	Allowed
Days of Week:	Saturday Night through Sunday Morning					
	8:00 p.m. (Saturday) to 9:00 a.m. (Sunday)			Allowed	Allowed <sup>1</sup>	Allowed



## 1. Saturday Night through Sunday Morning:

Double Lane closure NOT allowed between the hours of 7:00 a.m. to 9:00 a.m. for the following dates:

Year	2021	2022
Dates	September 13 – October 4	September 12 – October 3

<b>TABLE 3 - Mainline Northbound</b>						
<b>June 12, 2021 to September 12, 2021</b>						
<b>June 11, 2022 to September 11, 2022</b>						
	<b>Erection and Removal of Overhead Structures/ Signs</b>	<b>Equipment Moves</b>	<b>Temporary Single Lane Closures</b>	<b>Temporary Double Lane Closures</b>	<b>Temporary Shoulder Closures</b>	
Days of Week:	Monday through Thursday					
	6:00 p.m. to 9:00 a.m.		Allowed	Allowed		Allowed
Days of Week:	Sunday Night through Friday Morning					
	6:00 p.m. to 6:00 a.m. following day		Allowed	Allowed <sup>1</sup>		Allowed
	11:00 p.m. to 6:00 a.m. following day		Allowed	Allowed	Allowed	Allowed
	11:00 p.m. to 5:00 a.m. following day	Allowed	Allowed	Allowed	Allowed	Allowed
Day of Week:	Friday					
	6:00 a.m. to 8:00 a.m.		Allowed	Allowed		Allowed
Days of Week:	Friday Night through Saturday Morning					
	11:00 p.m. (Friday) to 6:00 a.m. (Saturday)		Allowed	Allowed	Allowed	Allowed
	11:00 p.m. (Friday) to 5:00 a.m. (Saturday)	Allowed	Allowed	Allowed	Allowed	Allowed
Days of Week:	Saturday Night Through Sunday Morning					
	6:00 p.m. (Saturday) to 8:00 a.m. (Sunday)		Allowed	Allowed		Allowed
	9:00 p.m. (Saturday) to 7:00 a.m. (Sunday)		Allowed	Allowed	Allowed	Allowed

## 1. Sunday Night through Friday Morning:

Single Lane closure NOT allowed from 6:00 p.m. to 11:00 p.m. for the following dates:

Year	2021	2022
Dates	June 25 - July 6	June 24 – July 5

**TABLE 4 - Mainline Southbound**

**June 12, 2021 to September 12, 2021  
June 11, 2022 to September 11, 2022**

	<b>Erection and Removal of Overhead Structures/ Signs</b>	<b>Equipment Moves</b>	<b>Temporary Single Lane Closures</b>	<b>Temporary Double Lane Closures</b>	<b>Temporary Shoulder Closures</b>
Days of Week:	Monday through Thursday				
	6:00 a.m. to 6:00 p.m.				Allowed
Day of Week:	Sunday Night through Monday Morning				
	9:00 p.m. to 6:00 a.m. following day				Allowed
	11:00 p.m. to 5:00 a.m. following day	Allowed	Allowed	Allowed	Allowed
Day of Week:	Monday Night through Friday Morning				
	9:00 p.m. to 6:00 a.m. following day		Allowed	Allowed	Allowed
	10:00 p.m. to 5:00 a.m. following day	Allowed	Allowed	Allowed	Allowed
Day of Week:	Friday				
	6:00 a.m. to 6:00 p.m.				Allowed
Days of Week:	Friday Night through Saturday Morning				
	9:00 p.m. (Friday) to 6:00 a.m. (Saturday)		Allowed	Allowed	Allowed
	10:00 p.m. (Friday) to 5:00 a.m. (Saturday)	Allowed	Allowed	Allowed	Allowed
Days of Week:	Saturday Night through Sunday Morning				
	11:00 p.m. (Saturday) to 7:00 a.m. (Sunday)		Allowed	Allowed	Allowed

SPECIAL PROVISIONSECTION 652MAINTENANCE OF TRAFFIC

(October 8, 2020)

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

652.1 Description

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

Traffic control devices include signs, signals, lighting devices, markings, barricades, channelizing, and hand signaling devices, portable light towers, truck mounted impact attenuators, traffic officers, and flaggers.

652.2 Materials

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

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

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

652.2.2 Signs

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

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

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

### 652.2.3 Flashing Arrow Board

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

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

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

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

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

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

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

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

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

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

#### 652.2.4 Other Devices

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

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

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

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

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

Paddles must conform to any of the following patterns:

- A. Two white or red lights (colors shall be all white or all red), one centered vertically above and one centered vertically below the STOP legend; and/or two white or yellow lights (colors shall be all white or all yellow), one centered vertically above and one centered vertically below the SLOW legend;
- B. Two white or red lights (colors shall be all white or all red), one centered horizontally on each side of the STOP legend; and/or two white or yellow lights (colors shall be all white or all yellow), one centered horizontally on each side of the SLOW legend;
- C. One white or red light centered below the STOP legend; and/or one white or yellow light centered below the SLOW legend;
- D. A series of eight or more small all white or all red lights no larger than 1/4 inch in diameter along the outer edge of the paddle, arranged in an octagonal pattern at the eight corners of the border of the STOP face; and/or a series of eight or more small all

white or all yellow lights no larger than 1/4 inch in diameter along the outer edge of the paddle, arranged in a diamond pattern along the border of the SLOW face; or

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

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

Type I barricades shall be 2 feet minimum, 8 feet maximum in length with an 8 inch wide rail mounted 3 feet minimum above the ground. Type II barricades shall be 2 feet in length with two 8 inch wide rails, and the top rail shall be mounted 3 feet minimum above the roadway. Type III barricades shall be 8 feet in length with three 8 inch wide rails, and the top rail shall be mounted 5 feet minimum above the roadway. The cross members of all barricades shall be of 1/2 or 5/8 inch thick plywood or other lightweight rigid material such as plastic, fiberglass or fiber wood as approved by the Resident. The predominant color for supports and other barricade components shall be white, except that unpainted galvanized metal or aluminum components may be used.

#### 652.2.5 Portable Changeable Message Sign

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

Features to the Ver-Mac PCMS shall include:

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



The Contractor shall complete and/or provide the following:

- Submit a catalog cut shop drawing to the Resident of all proposed equipment for review and approval.
- Establish and pay for a data cellular account so that PCMS may be remotely programmed and operated from the MTA Communications' Center.
- Provide to the Authority technical support from the PCMS manufacturer that may be necessary to integrate the PCMS into the MTA software platform (Vanguard Software by Daktronics).
- Provide the manufacturer's software necessary to change the PCMS messages remotely from the MTA Communications' Center and the Resident's computer if necessary or requested.
- Provide training on the operation of the PCMS to the Resident and the MTA Communications' Center representative.
- Make all PCMS on the Project work site available to the MTA for any/all emergency situations as defined by the MTA. This shall include the preemption of any messages running at the time of need as approved by the MTA and the Resident.

The Contractor shall also:

- Furnish, operate, relocate and maintain the PCMS as approved or requested by the Resident.
- Be responsible for the day to day programming and operation of the PCMS for Project purposes.

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

#### 652.2.5 Truck Mounted Attenuator

When a pay item for a Truck Mounted Attenuator (TMA) is included in the contract or otherwise required in contract at least one TMA will be required in use on the project. 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.

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

- Truck and attached attenuator shall conform to the NCHRP Report 350, Test Level 3 criteria **or MASH if manufactured after 2019**.
- Amber strobe lights with 360-degree visibility.

- An arrow light bar fixed to the vehicle.
- The attenuator shall be mounted to a vehicle with a minimum weight of 10,000 lbs.
- **The attenuator shall be mounted to a vehicle with a minimum weight of 24,000 lbs. for Items 652.4501 – Truck Mounted Attenuator – 24, 000 LB.**

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. The shadow vehicle shall have its front wheels turned away the work area and from traffic, have parking brake set, and be put in park if an automatic transmission; or if a manual transmission it shall have its front wheels turned away the work area and from traffic, have parking brake set and should be placed in gear and shut off if possible while still maintaining warning lights. If length of time or weather are a concern for the battery since the warning lights must be maintained the engine should be started and run periodically for battery recharging. No other vehicles or equipment shall park in front of the shadow vehicle or within the buffer space behind the shadow vehicle. For placement details, reference the Manual 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

#### 652.2.6 Sequential Flashing Warning Lights

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

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

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

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

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

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

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

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

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

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

#### 652.2.7 Automated Trailer Mounted Speed Sign

When included in the contract as a pay item Automated Trailer mounted speed signs requires 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

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”.

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 attached graphic details).

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

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

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

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

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

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

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

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

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

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

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

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

### 652.2.8 Temporary Portable Rumble Strips

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

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

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

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

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

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

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

Maintain rumble strips as follows:

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

Repair or replace damaged rumble strips immediately.

### 652.3.1 Responsibility of the Authority

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

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

### 652.3.2 Responsibility of the Contractor

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

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

### 652.3.3 Submittal of Traffic Control Plan

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

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

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

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

The Traffic Control Supervisor, or designee directly overseeing physical installation, adjustment, and dismantling of work zone traffic control, will ensure all personnel

- performing those activities are trained to execute the work in a safe and proper manner, in accordance with their level of decision-making and responsibility. The emergency contact list shall contain a listing of individuals who may be contacted during non-work hours and shall adequately respond to the request.
- b. Proposed revisions to the construction phasing or sequencing that reasonably minimizes traffic impacts.
  - c. A written narrative and/or plan explaining how traffic and pedestrians will be moved through the Project Limits, including transitions during the change from one phase of construction to the next, as applicable.
  - d. Temporary traffic control treatments at all intersections with roads, rail crossings, businesses, parking lots, pedestrian ways, bike paths, trails, residences, garages, farms, and other access points, as applicable.
  - e. A list of all Contractor or Subcontractor certified flaggers to be used on the Project, together with the number of flaggers which will be used for each type of operation that flagging is needed. If the Contractor is using a flagging Subcontractor, then the name and address of the Subcontractor may be provided instead of a list of flaggers.
  - f. A procedure for notifying the Resident of the need to change the traffic control plan or the need to remove a lane restriction.
  - g. A description of any special detours including provisions for constructing, maintaining, signing, and removing the detour or detours, including all temporary bridges and accessory features and complete restoration of the impacted land.
  - h. The maximum length of requested contiguous lane closure. The Contractor shall not close excessive lengths of traffic lane to avoid moving traffic control devices.
  - i. The proposed temporary roadway surface conditions and treatments. The Contractor shall provide an adequate roadway surface at all times; taking into account traffic speed, volume, and duration.
  - j. The coordination of appropriate temporary items (drainage, concrete barriers, barrier end treatments, impact attenuators, and traffic signals) with the TCP.
  - k. The plan for unexpected nighttime work, the contractor shall provide a list of emergency nighttime lighting equipment and safety personnel available on-site or have the ability to have them on site within an hour of the time of need.
  - l. The plan for meeting any project specific requirements contained in special provision 105 and/or 107, and/or Section 656
  - m. The lighting plan if night work is anticipated.

The Authority will review the TCP for completeness and conformity with Contract provisions, the current edition of the MUTCD, and Authority policy and procedures. The Authority will review and provide comments to the Contractor within 14 days of receipt of the

TCP. No review or comment by the Authority, or any failure to review or comment, shall operate to absolve the contractor of its responsibility to design and implement the plan in accordance with the Contract, or to shift any responsibility to the Authority. If the TCP is determined by the Authority to be operationally ineffective, the Contractor shall submit modifications of the TCP to the Authority for review, and shall implement these changes at no additional cost to the Contract. Nothing in this Section shall negate the Contractor's obligations set forth in Section 110 - Indemnification, Bonding, and Insurance. The creation and modification of the TCP will be considered incidental to the related 652 items.

#### 652.3.4 General

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

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

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

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

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

When Contractor operations or shoulder grading leave a continuous 3 inch or less exposed vertical face at the edge of the traveled way, **including the shoulder, or when traffic is shifted into the shoulder adjacent to the edge of pavement where an existing 3 inch or less exposed vertical face creates a safety hazard**, channelization devices should be placed 2 feet



outside the edge of the pavement at intervals not exceeding 600 feet and, depending on type and location of the exposed vertical face, a 48 inch by 48 inch W8-9 Low Shoulder, or W8-11 Uneven Lane, and/or a W8-17P Shoulder Drop-Off sign should be placed at a maximum spacing of ½ mile. When Contractor operations or shoulder grading leave greater than a 3 inch exposed continuous vertical face at the edge of the traveled way, **including the shoulder, or when an existing condition of an exposed vertical face of 3 inches or more is adjacent to active traffic shifted into shoulder**, the Contractor shall place shoulder material at a slope not exceeding 3 horizontal to 1 vertical to meet the pavement grade, before the lane is opened to traffic.

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

### Maine Turnpike Traffic Control Requirements

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

#### General

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

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

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

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

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

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

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

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

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

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

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

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

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

## Temporary Mainline Lane Closures

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

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

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

- Milling and Paving Operations
- Bridge work
- Drainage Installation and/or Adjustment
- Clear Zone Improvements
- Pavement Markings Layout and Placement
- **Work directly over traffic within six feet of a travel lane as measured from the painted pavement marking line or traffic control device will require a lane closure. This work includes but is not limited to the following:**
  1. **Unbolting structural steel**
  2. **Removing structural steel**
  3. **Erecting structural steel**
  4. **Erecting or moving sign panels on bridges or sign structures**
  5. **Bolting structural steel**
  6. **Loading and unloading trucks**
  7. **Light pole removal or installation**
  8. **Snow fence installation**

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

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

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

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

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

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

#### Mainline Shoulder Closures

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

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

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

#### Equipment Moves

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

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

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

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

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

#### Request for Complete Stoppage of Traffic

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

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

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

### 652.3.5 Installation of Traffic Control Devices

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

Portable signs shall be erected on temporary sign supports approved crashworthy devices so that the bottom of the sign is either 1) 12 inches or 2) greater than 5 feet above the traveled way. **The bottom of all regulatory signs and ramp exit signs shall be a minimum of 5 feet above the traveled way.** Post-mounted signs shall be erected so the bottom of the sign is no less than 5 feet above the traveled way, and 7 feet above the traveled way in business, commercial, and residential areas. Post-mounted signs must be erected so that the sign face is in a true vertical position. All signs shall be placed so that they are not obstructed in any manner and immediately modified to ensure proper visibility if obstructed.

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

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

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

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

Drums shall not be weighted on the top. Drain holes shall be provided to prevent water from accumulating in the drums. During winter periods, drums shall be placed on the grass shoulder or removed from the roadway so winter maintenance operations will not be impacted. This requires the placement of drums behind the median guardrail. Drums shall not be placed on snow banks.

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

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

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

The Contractor is required to cover all existing signs, including regulatory and warning signs, within the Work zone which may conflict with the proposed construction signs. The Contractor is also required to cover all permanent construction signs when they conflict with a

daily traffic control setup. The method of covering existing signs must be approved by the Resident. The use of adhesives on the sign face is prohibited.

### Work Zone Speed Limits

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

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

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

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

### Lane Closure Installation and Removal Procedure

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

1. The sign package shall be erected starting with the first sign and proceeding to the start of the taper. The sign crew shall erect signs with the vehicle within the outside shoulder;
2. Position the arrow board with the proper arrow at the beginning of the taper; and,
3. When arrow board is in place, continue with the drums/cones to secure the work area.

To dismantle the lane closure, start with last drums/cone placed and work in reverse order until all the drums are removed. The arrow board which was installed first shall be the final traffic control device removed, excluding the sign package. The remaining sign package shall be picked-up starting with the first sign placed and continuing in the direction of traffic and with the vehicle in the outside shoulder.

## Trucking Plan

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

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

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

### 652.3.6 Traffic Control

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

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

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

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

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



#### 652.4 Flaggers

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

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

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

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

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

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

Flaggers shall be provided as a minimum, a 10 minute break, every 2 hours and a 30 minute or longer lunch period away from the work station. Flaggers may only receive 1 unpaid break per day; all other breaks must be paid. Sufficient certified flaggers shall be available onsite to provide for continuous flagging operations during break periods. If the flaggers are receiving the appropriate breaks, breaker flagger(s) shall be paid starting 2 hours after the work begins and ending 2 hours before the work ends. A maximum of 1 breaker per 6 flaggers will be paid. (1 breaker flagger for 2 to 6 flaggers, 2 breaker flaggers for 7 to 12 flaggers, etc). If a flagger station is manned for 10 hours or more, then ½ hour for lunch will be deducted from billable breaker flagger hours.

### 652.41 Traffic Officers

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

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

### 652.5.1 Rumble Strip Crossing

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

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

### 652.6.1 Daylight Work Times

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

### 652.6.2 Night work

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

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

The Contractor shall have available portable floodlights for special areas.

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

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

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

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

Night Work lighting requirements:

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

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

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

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

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

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

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

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

### 652.6.3 Traffic Coordinator and Personnel

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

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

- a. Developing, in conjunction with the Resident and Project superintendent, a traffic control program for the days' work activities which will facilitate traffic in a safe and efficient manner;
- b. Insure that all traffic control implements (signs, arrow boards, barrels, etc.) are on-site so the traffic program can be implemented effectively;
- c. Insure a safe and effective setup or take-down of all signing implements to least impact the traveling motorist; and,
- d. Working knowledge of construction signing/traffic control requirements in conformance with the latest issued Manual on Uniform Traffic Control Devices.
- e. The Contractor shall supplement the traffic control plan with a daily plan, which includes schedules for utilizing traffic coordinators and flaggers. This plan shall be submitted daily and agreed upon cooperatively with the Resident.

#### 652.7 Method of Measurement

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

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

The accepted quantity of traffic officer and flagger time will be the number of hours the designated station is occupied. The number of hours authorized for payment, **if any**, will be measured to the nearest  $\frac{1}{4}$  hour.

The Authority will make payment for the State Police officers and vehicles directly to the State Police when utilized for mainline traffic control activities. State Police escorts, if required to move oversize material or equipment loads to the jobsite, will not be paid separately, but shall be incidental to the various pay items.

Maintenance of traffic control devices will be measured by the calendar day or as one lump sum, as indicated in the plans and specifications, for all authorized and installed traffic control devices. Traffic control devices will only be measured for payment the first time used. Subsequent uses shall be incidental to Item 652.36 or 652.361.

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

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

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

Truck mounted attenuator 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, as approved by the Resident.

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

Automated Trailer Mounted Speed Limit Sign shall 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.

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.

#### 652.8 Basis of Payment

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

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

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

The Truck Mounted Attenuator(s) will be 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.

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

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

<u>Amount of Penalty Damages per Violation</u>		
<u>1<sup>st</sup></u>	<u>2<sup>nd</sup></u>	<u>3<sup>rd</sup> &amp; Subsequent</u>
\$500	\$1,000	\$2,500

652.8.1 Maintenance of Traffic Control Devices

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

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

652.8.2 Other Items

The accepted quantities of flagger hours will be paid for at the contract unit price per hour for each flagging station occupied excluding lunch breaks, and for each approved breaker flagger. Overtime hours, as reported on the certified payrolls, will be paid an additional 30% of the bid price for 652.38. The computation and additional payment for overtime hours will occur

during the project close-out process and will be paid as additional hours of 652.38 to the nearest ¼ hour. The contract unit price shall be full compensation for hiring, transporting, equipping, supervising, and the payment of flaggers and all overhead and incidentals necessary to complete the work.

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

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

Payment for temporary pavement marking lines and pavement marking removal will be made under the respective pay item in Section 627 - Pavement Markings.

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

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

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

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

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

The Truck Mounted Attenuator(s) will be paid for at the Contract unit price per calendar day. This price shall include all costs associated with the use of the vehicle. Payment shall include operator, fuel, truck, maintenance, flashing lights, arrow board and all other incidentals necessary to operate the vehicle.

The 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.

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

anticipate the use of this item on the contract. If contractor wishes to utilize temporary portable rumble strips and the item is not in the contract, then the contractor may propose use of them to the Authority for consideration.

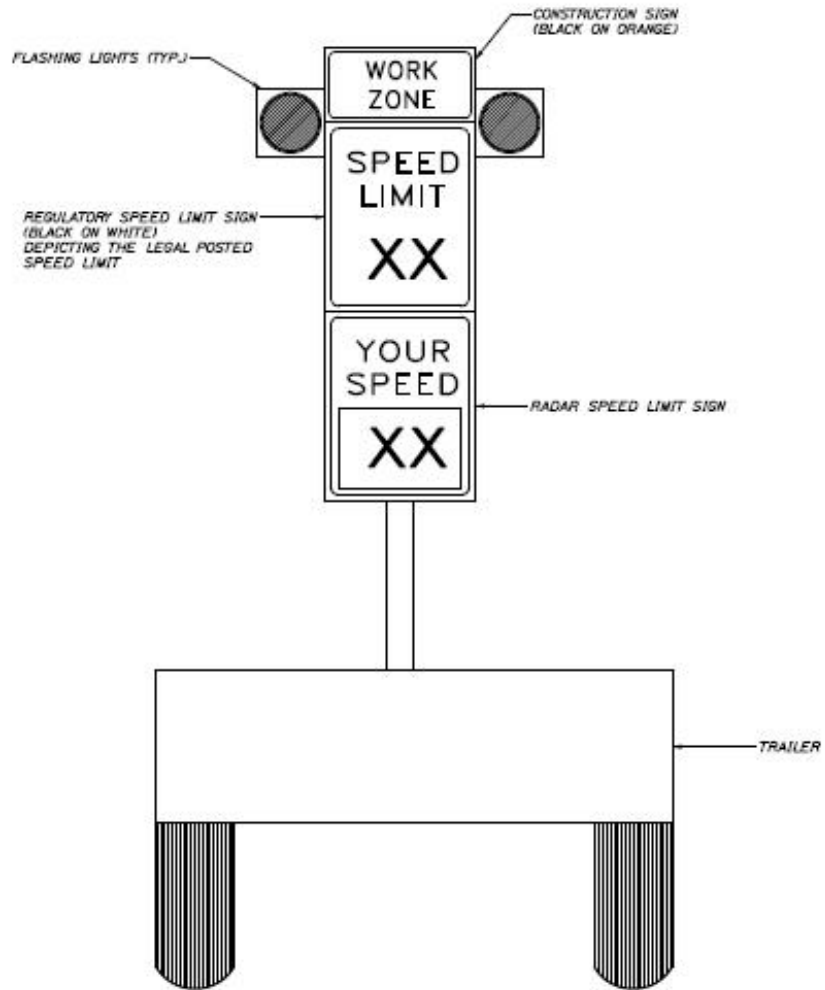
Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
652.30	Flashing Arrow	Each
652.312	Type III Barricades	Each
652.33	Drum	Each
652.34	Cone	Each
652.35	Construction Signs	Square Foot
652.351	Construction Signs-Supplied by Authority	Lump Sum
652.361	Maintenance of Traffic Control Devices	Lump Sum
652.41	Portable-Changeable Message Sign	Each
652.45	Truck Mounted Attenuator	Calendar Day
652.452	Automated Trailer Mounted Speed Limit Sign	Each



Date: 2/13/2018

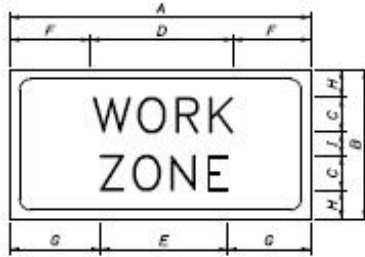
Filename: Trailer Mounted Speed Limit.dgn



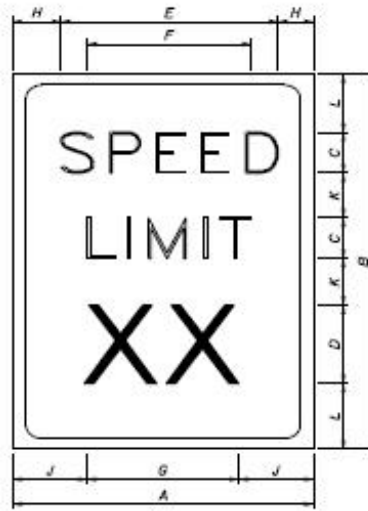
**HNTB**  
FEBRUARY 2018

AUTOMATED TRAILER MOUNTED  
SPEED LIMIT SIGN

Date: 2/13/2018

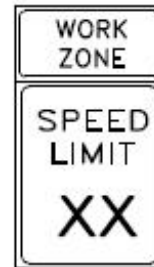


**SIGN #1**  
 1.25" BORDER, 0.75" INDENT,  
 BLACK ON ORANGE, BB GRADE PLYWOOD SIGN



**SIGN #2**  
 1.25" BORDER, 0.75" INDENT,  
 BLACK ON WHITE, BB GRADE PLYWOOD SIGN

DIMENSIONS (INCHES) / LETTER FONTS												
	A	B	C	D	E	F	G	H	I	J	K	L
*1	48	20	50	18 <sup>5</sup> / <sub>8</sub>	16 <sup>5</sup> / <sub>8</sub>	14 <sup>5</sup> / <sub>8</sub>	15 <sup>5</sup> / <sub>8</sub>	4	2	N/A	N/A	N/A
*2	48	60	8E	16E	38 <sup>1</sup> / <sub>4</sub>	29 <sup>1</sup> / <sub>4</sub>	29 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>8</sub>	9 <sup>1</sup> / <sub>4</sub>	8	6



Filename: Trailer Mounted Speed Limit.dgn



**HNTB**  
 FEBRUARY 2018

TRAILER MOUNTED CONSTRUCTION ZONE  
 SPEED LIMIT SIGN

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Temporary Stormwater Drainage)

Section 652 of the Maine Turnpike Authority 2019 Supplemental Specifications is modified as follows:

652.1 Description

The following paragraph is added:

The work shall also consist of furnishing, installing, maintaining and removing temporary stormwater drainage structures, pipe, and systems necessary to provide continual drainage of the travel ways and construction areas during the Contractors execution of the work.

652.2 Materials

The following paragraph is added:

Materials and Construction Requirements shall be per the Section 603 – Pipe Culverts and Stormdrain and Section 604 – Manholes, Inlets and Catch Basins, and other referenced or appropriate section(s) of the Contract.

652.2.3 Responsibility of the Contractor

The following paragraph are added:

The Contractor shall provide the necessary stormwater drainage for temporary control of stormwater during construction, including, but not limited to, catch basins, manholes, pipe, outlet structures, and other means that is appropriate to the construction means, methods and sequencing of construction selected by the Contractor.

Temporary stormwater drainage shall be provided to keep the active travel ways and shoulders free from ponding water at low points and flowing stormwater along an embankment, gutter, curb, temporary barrier, or other impediment for proper evacuation of stormwater runoff.

Should the temporary stormwater drainage employed by the Contractor fail to protect the travel ways and shoulders from stormwater runoff as determined by the Resident, or at the request of the Resident, the Contractor shall employ additional measures to control stormwater runoff.

### 652.7 Method of Measurement

The following paragraph is added:

The installation of temporary drain pipe will be measured by the linear foot under the applicable Option III pipe pay item. Removal or abandoning temporary drain pipe will be measured by the linear foot under pay items 202.16 and 202.161.

The installation of temporary catch basins and manholes will be measured by the unit price each. The removal of temporary structures is incidental and will not be measured separately.

All other work to provide and maintain temporary drainage is incidental and no separate measurement will be made for Temporary Stormwater Drainage.

### 652.8.2 Basis of Payment

The installation of temporary drain pipe will be paid by the linear foot under the applicable Option III pipe pay item.

Removal or abandoning temporary drain pipe will be paid by the linear foot under pay items 202.16 and 202.161.

The installation of temporary catch basins and manholes will be paid by the unit price each. The removal or abandoning of temporary structures is incidental to the structure cost and will not be paid separately

All other work required to provide and maintain temporary drainage is incidental to the work and there shall be no separate payment for Temporary Stormwater Drainage.

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 XI (Prismatic) manufactured by 3M Company, for all signs.

Reflective sheeting, used in sign construction, shall have been manufactured within the six months immediately prior to the fabrication of each sign. Upon delivery at the job site of each shipment of signs, a letter of certification shall be provided that the reflective sheeting conforms to the requirements.

For Type 1 Guide Signs, all reflective sheeting shall be color matched on each sign unit.

All warning signs shall be fluorescent yellow except for Ramp Advisory Speed signs which shall be yellow.

All Construction Series signs that use orange backgrounds shall be fluorescent orange.

All Pedestrian Signs shall be fluorescent yellow-green.

EZ-PASS Purple shall conform to the FHWA Purple color box.

719.02 Demountable High Intensity Reflectorized Letters, Numerals, Symbols, and Borders

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

719.02 Letters, Numerals, Symbols, and Borders

All signs shall be manufactured utilizing Direct Applied letters, numerals, symbols and borders or be Digitally Printed meeting all sign sheeting manufacturer's (3M) requirements to ensure that the manufacturer's warranty will be in full effect.

All Type 1 overhead signs, Type 1 interchange signs and any other Type 1 signs over 100 square feet shall utilize Direct Applied letters, numerals, symbols and borders.

Direct Applied

Direct reflectorized applied letters, numerals, symbols and borders shall consist of cut out sheeting that shall meet at a minimum the requirements for ASTM 4956 – Type XI (Prismatic) sheeting. The sheeting material used for the direct applied legend shall be the same type as used for the background.

## Digitally Printed

Digital printing methods may be used to produce the sign copy and borders on retroreflective sheeting. Retroreflective sheeting complying with ASTM D 4956 Type XI and designated by the manufacturer as suitable for digital printing traffic signs along with associated ink and premium overlay film. Digitally Printed signs shall meet all sign sheeting manufacturer's (3M) requirements to ensure that the manufacturer's warranty will be in full effect

Transparent and opaque durable inks used in digital printed sign copy and borders shall be as recommended by the sheeting manufacturer (3M). Digital printed traffic colors shall be properly applied and shall have a warranty life of the base retroreflective sign sheeting. Digitally printed signs shall present a flat surface, free from foreign material, and all copy and borders shall be clear and sharp. Digital printed signs shall conform to 70% of the retroreflective minimum values established for its type and color (applicable to traffic colors only), as required by ASTM D 4956. Digital printed signs shall meet the daytime color and luminance, and nighttime color requirements of ASTM D 4956. Printed traffic colors shall meet the accelerated weathering and colorfastness requirements of ASTM D 4956. Digitally printed black shall remain sufficiently opaque for its intended use for the warranty period of the base sheeting. No variations in color or overlapping of colors will be permitted.

Digitally printed traffic signs shall have an integrated engineered match component clear UV- premium protective overlay recommended by the sheeting manufacturer applied to the entire face of the sign.

All digitally printed traffic signs shall utilize an integrated engineered match component system for materials and printing process and equipment. The integrated engineered match component system shall consist of retroreflective sheeting, durable ink(s), and clear protective overlay film, as specified by the sheeting manufacturer, applied to aluminum substrate.

The sign fabricator shall use an integrated engineered match component system digital printer approved by the sheeting manufacturer. Each approved digital printer shall only use the compatible retroreflective sign sheeting manufacturer's engineered match component system products. The sign fabricator shall maintain their digital printer's color calibration according to the sheeting manufacturer's requirements to help ensure digitally printed signs meet the manufacturer's specifications. The fabricator shall be trained by the sheeting manufacturer to produce digitally printed traffic signs that qualify for the sheeting manufacturer's warranty.

## General

Type 1 Guide Signs shall have two-inch-tall, series C text that indicates the sign size, and the sign install date (MM/YY) located two inches above the bottom border of the sign.

SPECIAL PROVISIONSECTION 800MISCELLANEOUS INCIDENTALS

(Toll Plaza and Tunnel Demolition)

800.1 Description

This work shall consist of demolishing the existing toll plaza and tunnel at Mile 7.3, and legally disposing of all debris materials. Structure components to be demolished and disposed of are shown on the Plans or described herein. The following work in this item generally includes, but is not limited to demolishing and legally disposing of debris materials for the following plaza, tunnel, and building components:

1. Canopy over Lanes 1 through 17 including all architectural finishes, signage, equipment, roof drainage, conduit, and all other canopy components.
2. Sign and antenna support bridges.
3. All existing toll booths and booth contents.
4. All toll island concrete components including islands, bumpers, ramparts, pedestals, stair enclosure walls.
5. Roadway structural slab including all loops, treadles, conduit and associated wiring.
6. Signage, flashing beacons and all related toll equipment mounted to concrete toll islands.
7. Concrete berms and curbs along Lanes 1 and 17.
8. Bollards and miscellaneous equipment support structures in islands and berms.
9. Tunnel structure and contents.
10. Portions of existing piles.
11. Disconnecting, capping and making inactive all utilities servicing the tunnel and plaza. Filling inactive pipes and conduit with grout as noted on the Plans.
12. Selective demolition at the existing toll administration building structure in preparation for construction of a new basement closure wall.
13. Existing shed, miscellaneous structures and concrete slabs adjacent to the toll administration building.
14. Installing new underdrain section along building within footprint of demolished tunnel.
15. Installing temporary construction at the demolished toll islands for Lanes 2, 15 and 16 to withstand traffic loading in Phase 1B.

800.2 Demolition Plan and Procedures

Prior to starting any demolition work, the Contractor shall submit demolition plans and procedures to the Resident for approval. The demolition plans shall show types, locations, and dimensions of all demolition equipment. Temporary fencing and dimensions between equipment and travel roadways shall be shown. Procedures shall specify demolition methods and timeframes for utility disconnections and removal of asbestos-containing materials.

Toll island concrete slabs above the existing tunnel were not originally designed to accommodate traffic loading. The demolition plans shall include drawing details for temporary construction installed at the toll island concrete slab locations and at the existing stair opening in the Lane 15 toll island to support temporary roadway construction and traffic loading under Phase 1B. The temporary construction shall be designed to support the Maine Modified Live Load (HL-93 plus 25% increase in truck load for Strength I limit state). Design calculations and details for the temporary construction shall be submitted to the Engineer for review and approval. The calculations and details shall be in accordance with the AASHTO Guide Design Specifications for Bridge Temporary Works (2<sup>nd</sup> Edition, 2017) and shall be signed and sealed by a professional structural engineer licensed in the State of Maine.

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.

### 800.3 Salvaged Items

Salvage items listed on the Plans and as directed by the Resident and Toll Systems Manager shall be removed and stacked at the Authority's Central Inventory/Sign Shop MM 58.3 Northbound. The Contractor shall allow 5 days for TransCore and MTA to salvage equipment and other items not required to be removed by the Contractor. When the Resident directs the Contractor to salvage items from an existing structure, the Contractor shall carefully dismantle the items, and transport the items to the location specified above. If approved by the Resident, items may be temporarily stored within the right-of-way prior to transporting off-site. The use of any portion of the salvaged material in connection with new or temporary construction shall not be anticipated by the Contractor.

### 800.4 Decommissioning the Plaza and Preparation for Demolition of Structures

Once the plaza is decommissioned and made ready for demolition, the Contractor shall provide the necessary time for the utility companies and trades to disconnect and cap or remove all services to the tunnel and plaza. The time required for removal of asbestos containing materials in the structures shall also be included in the Contractor's schedule of operations.

Within the building, disconnect and cap utilities servicing the tunnel and plaza and remove all electrical wires back to the panels. Remove or relocate pipes, conduits, supports and all other utility components to allow for construction of the new basement closure wall.

### 800.5 Demolition Debris and Traffic Adjacent to Work Zone

The Contractor shall ensure that traffic will be protected from debris and construction operations. Temporary chain-link fence with protective screens shall be provided to separate traffic from the demolition work zones.

Demolition debris (including debris from wearing surface removal, saw cut slurry, dust, concrete debris, etc.) shall be contained and shall not be allowed to discharge to any resource. Debris shall be disposed of in accordance with local, State, and Federal regulations.



### 800.6 Soil Excavation for Removal of Tunnel Structure

The Contractor shall excavate soil for removal of the tunnel structure in accordance with Section 203. The upper limit of excavation included in this pay item will be the bottom of the pavement structure within the proposed roadway limits and the bottom of the loam and mulch layer outside of the proposed roadway limits.

### 800.7 Filling Voids and Backfilling After Removal of Structures

The Contractor shall fill the voids due to removal of the plaza items including the tunnel structure with granular borrow (Section 203). The upper limit of the granular borrow will be the bottom of the pavement structure within the proposed roadway limits and the bottom of the loam and mulch layer outside of the proposed roadway limits. The granular borrow shall be placed in layers not more than 12" thick and compacted to at least 98 percent of the maximum dry density as determined by the modified proctor test.

### 800.8 Method of Measurement

The demolition of the toll plaza, tunnel and other components specified herein will be measured for payment as one lump sum unit, complete, and accepted.

The horizontal and vertical limits of demolition are as specified on the Plans and described herein. All miscellaneous structures shall be removed a minimum of 2 feet below proposed grade unless otherwise noted. The tunnel structure shall be completely removed (including tunnel bottom floor slab) from Lane 1 through Lane 16 with the exception of the steel support piles. Piles supporting canopy columns and all other plaza structures shall be removed a minimum of 4 feet below proposed grade as shown on the Plans. At the new basement closure wall, existing concrete shall be cut to neat lines for preparation of the closure wall construction.

The work listed below will be measured and paid for separately within the Contract.

1. Restoration of the roadway pavement construction and landscaping on each side of the highway including, but not limited to, seeding and installing pavement.
2. Removal of guardrail.
3. Removal of asbestos-containing materials in existing structures to be demolished.
4. Earth support excavation systems.

### 800.9 Basis of Payment

The accepted quantity of Toll Plaza and Tunnel Demolition will be paid for at the Contract lump sum price. All labor and materials required will be incidental to this item.

The wrapping of tollbooths in plastic shall be considered incidental to this item.

The Contractor will make his own investigation of the structures to be demolished including the materials that are part of the structure. No increase will be made to the bid price due to the nature of the materials involved in the demolition.

No separate payment will be made for the following:

1. Salvaging items.
2. Debris containment (i.e. temporary protective fence) and dismantling, storing and transporting salvaged materials.
3. Excavating and dewatering as required to demolish the tunnel structure.
4. Furnishing granular borrow (Section 203) to fill voids due to removal of plaza and tunnel.
5. Temporary construction within toll islands for Lanes 2, 15 and 16 (installed for Phase 1A demolition).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
800.311 Toll Plaza and Tunnel Demolition	Lump Sum

SPECIAL PROVISIONSECTION 801MISCELLANEOUS INCIDENTALS

(Test Pits)

801.01 Description

This work shall consist of excavating and back filling test holes to locate existing utilities at locations shown on the plans or as directed by the Resident.

801.02 Construction Requirements

The work shall be done in a manner that provides safe passage of the traveling public at all times. Coordination with the utilities is required prior and during the test pit activities. An authorized representative from the utility shall be present during the test pit activity. Test pits shall be completed in a manner that does not damage any utilities. Any damage to utilities or other roadway features by the test pit operations shall be repaired by the Contractor at no additional cost and shall be to the Resident's satisfaction.

Once the location work is complete, the Contractor shall backfill the hole, with material consistent with the existing conditions and in accordance with the standard specifications for backfilling.

801.03 Method of Measurement

Test Pits will be measured for payment by each.

801.04 Basis of Payment

The accepted quantity of Test Pits will be paid for at the contract unit price per vertical foot of excavation, which shall be full compensation for all labor, materials, tools, equipment, and incidentals necessary to the complete the work including excavation, backfilling, restoration, pavement replacement, disposal of materials and the protection of the utilities. Associated traffic control will not be paid for separately and is considered incidental to the test pit item.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
801.03      Test Pits	Each

MAINE TURNPIKE AUTHORITY

MAINE TURNPIKE

PART III – APPENDICES

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APPENDIX A

LEAD PAINT ASSESSMENT

AND ASBESTOS REPORT

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February 16, 2016

Grant Austin  
Sebago Technics  
Environmental Scientist  
75 John Roberts Road  
Suite 1A  
South Portland, ME 04106

Re: York Toll Plaza  
Interstate 95, Exit 7, York, Maine  
Building Survey Findings  
RPF File No. 167069

Dear Mr. Austin:

On February 2, 2016, RPF Environmental, Inc. (RPF) conducted a survey at the York Toll Plaza located at Exit 7 on Interstate 95 in York, Maine. The survey was performed in the buildings as designated by you or your site representative for accessible hazardous building material as indicated herein. Below is a summary of findings, discussion of the results and preliminary recommendations for proper management of the identified hazardous building material. Attached to this report are the survey data tables, laboratory results, survey methodologies and limitations.

This report is not intended to be used as an abatement specification or work plan. To proceed with abatement work, the following important steps are necessary:

1. A work plan or project design documents must be prepared prior to abatement by a certified abatement project designer.
2. The abatement specification or work plan should then be used to solicit bids from qualified abatement contractors. Only properly licensed contractors should be used for asbestos abatement and disposal.
3. A qualified industrial hygiene/testing consultant should conduct sufficient testing and inspections of the work, independent of the abatement contractor. The consultant should also prepare final abatement reports for the work.



## Summary of Findings

The York Toll Plaza at Exit 7 on Interstate 95 consists of a single story Administration Building with a full basement used as office space. This building is connected to the adjacent toll booths via an underground concrete tunnel and both the tunnel and toll booths extend across Interstate 95 underneath a metal canopy with a rubber membrane roof.

The scope of the survey included accessible asbestos-containing building material in accordance with the initial asbestos inspection requirements prior to renovation or demolition work as stated in the State regulations and applicable federal regulations. In addition, the survey included screening for lead paint (LP), polychlorinated biphenyls (PCB) light ballasts, mercury switches, and fluorescent light bulbs.

### Asbestos

Existing survey and testing information provided by Client to RPF during this project includes a limited asbestos testing report prepared by EHS Associates dated October 2000 and a limited asbestos testing report prepared by Industrial Hygiene New England, Inc. dated February 1989. Based on the review of the existing survey records, the following materials are identified as ACM:

- Red Floor Tile and Mastic
- Transite Countertops
- Roof Flashing Materials

In addition, several types of additional suspect asbestos-containing building material (ACBM) were observed by RPF, including friable and nonfriable suspect material. Based on the testing performed by RPF asbestos was detected in the following materials:

- Gypsum Board Joint Compound
- Transite Countertops (confirmation testing)
- Caulk (gray)
- Damp Proof Coating

### Lead Paint

Based on the year of construction and extent of renovation conducted over the years, it is reasonable to assume that some lead paint (LP) is present. RPF conducted limited spot testing of paint and LP was confirmed to be present on various interior and exterior building components. The intent of the lead testing was for potential lead hazardous waste disposal screening purposes only.

### Polychlorinated Biphenyls, Mercury, Refrigerants

Based on the RPF visual observations, polychlorinated PCB containing light ballasts, and fluorescent light bulbs are present throughout the Administration Building and Toll Booths.

Depending on the extent of renovation and final construction plans, proper abatement and/or management of the materials will be required in accordance with applicable State and federal regulations. Renovation and demolition plans should be reviewed by a certified industrial hygienist and a licensed project designer for possible asbestos impact issues. Based on the impact assessment and planned usage, technical specifications should be prepared for abatement, as applicable. A management plan should also be prepared to address any asbestos or other hazardous material scheduled to remain after construction.

## **Discussion of Findings**

### Asbestos-Containing Building Material

Asbestos is the name for a group of naturally occurring minerals that separate into strong, very fine fibers. The adverse health effects associated with asbestos exposure have been extensively studied for many years. Results of these studies and epidemiological investigations have demonstrated that inhalation of asbestos fibers may lead to increased risk of developing one or more diseases. In all cases, extreme care must be used not to disturb asbestos-containing materials or to create fiber release episodes.

In the accessible locations surveyed, RPF identified twenty-three (23) homogeneous groups of accessible suspect asbestos-containing building material. Suspect materials were identified based on current industry standards, EPA, and other guideline listings of potential suspect ACBM.

The following is a summary list of the suspect ACBM identified and sampled during this survey:

Pressboard	Laminate with Adhesive
Gypsum Board Joint Compound	Building Caulk
Exhaust Pipe Insulation	Duct Sealant
Duct Vibration Cloth	Damp Proof Coating
Countertops	Covebase and Adhesive
Ceramic Floor Tile Grout and Mastic	12" Red Floor Tile and Mastic
Suspended Ceiling Tiles	12" Gray Floor Tile and Mastic
Sink Basin Undercoat	Flashing
Rubber Membrane Roof Seam Sealant/Caulk	

A total of sixty-six (66) samples were extracted from the different groups of suspect material in accordance with EPA sampling protocols. Of the samples collected by RPF, asbestos was detected in four (4) groups of suspect ACBM.

Table 1 of Appendix A includes a list of ACM and accessible asbestos identified in the building, EPA category listings, and asbestos content. A listing of the different homogenous groups of suspect material identified, samples collected, and analytical results is included in Appendix A.

Confirmation testing was performed of the previously identified ACMs that were observed still present. Of the previously identified materials, the ACM roof flashing that was indicated on toll booths 3 and 4 appears to have been removed as these toll booths are now newer metal booths with no suspect roofing. Also, information provided to RPF on the day of the survey indicated that the ACM red floor tile may have been removed some time in the late 1980s. Confirmation testing was performed of the existing red floor tile in the administration building and they were confirmed to not contain asbestos. The countertops in the old brick toll booths were still present in many of the booths and testing confirmed that they were asbestos containing.

The ACM identified during this survey consists of nonfriable material which was observed to be in good to fair condition and, left undisturbed and properly managed, is unlikely to cause any major fiber release episodes.

As you can see in the analytical results, one of the composite samples of gypsum board and joint compound material was found to have trace amounts (<1%) asbestos present. Current definitions for ACM include materials found to have greater than 1% asbestos content. Layered analysis of this composite material was performed and asbestos was not detected in the wallboard layer and 2% asbestos was detected in the joint compound. Therefore, the joint compound is classified as ACM.

The removal and disposal of asbestos containing joint compound, when used as a filler for nail holes and and tape seams in building construction is not regulated by Maine Chapter 425 Asbestos Management Regulations Section. However, the material is still regulated by OSHA for worker exposures, engineering controls and related safe work practices and potentially for proper transportation and disposal.

The structure was in current use at the time of the survey and full destructive or exploratory survey methods were not feasible. Please reference the attached methodology and limitations.

### Lead Paint Screening

Based on the type and age of construction of the original administration building and toll booths, it is reasonable to assume that various painted surfaces contain some lead. It is not uncommon in buildings such as this and that have had various renovation and upgrades to have both lead containing paint and non lead containing paint. Lead is a toxic metal that was used for many years in paint and other products found in and around buildings and homes. Exposure to lead may cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. Children six years old and under are most at risk; however, adults are also susceptible to the effects of lead over exposure.

For the purposes of this survey, RPF performed screening for lead in paint using a Niton X-Ray Fluorescence (XRF) Meter of various interior and exterior painted surfaces. The results of this lead screening are included at Table 4 of Appendix A. The results of this testing showed lead concentrations in various interior and exterior painted surfaces ranging from 0.01 to 15.6 milligrams per square centimeter (mg/cm<sup>2</sup>). The intent of the lead testing was for potential lead hazardous waste disposal screening purposes only.

Based on this limited testing, it should be assumed that other painted surfaces at the site may also contain lead.

Current State of Maine Lead Poisoning regulations consider any paint that contains greater than 1.0 mg/cm<sup>2</sup> to be lead-based paint. However, the intent of this survey was for construction purposes only and preliminary demolition waste stream implications, not for compliance with ME Lead Poisoning regulations, HUD, or any regulatory abatement order.

Any surfaces with lead present should be managed in accordance with current rules and guidelines, including but not limited to OSHA worker safety rules and State and EPA waste handling and disposal regulations. U.S. Occupational Safety and Health Administration (OSHA) construction rules do not specify any "safe" or acceptable levels of lead within paint for the purposes of occupational exposures. Therefore, construction work involving paint found to contain lead must be completed in accordance with OSHA regulations, not limited to the lead standard, 29 CFR 1926.62. Contractors completing work in areas found to contain lead, or where it is reasonable to assume lead may be present, should be notified of the presence (and potential presence) of lead and proper work protocols should be used.

As lead was found to be present in the screening, proper waste testing with TCLP extraction for lead and potentially other toxic materials should also be completed prior to disposal of any waste generated in accordance with current EPA requirements. Often times it is recommended that pre-demolition TCLP testing be completed such that waste can be segregated as required during demolition activity. Construction/demolition waste that is found to contain lead greater or equal to 5.0 milligrams per liter (mg/L) by TCLP analysis must be handled and treated as hazardous waste.

Please also note that construction and renovation work involving lead paint in housing and child-occupied facilities built before 1978 is also regulated under the EPA Renovation, Repair, and Painting (RRP) rule. Any contractors conducting such work must be properly certified and must use lead safe work methods pursuant to the EPA RRP rule. In addition, pursuant to Title X requirements landlords and sellers are required to disclose the results of lead inspections to tenants and purchasers, and to provide the warning notice and pamphlets in accordance with Title X and State requirements.

#### PCB Light Ballasts and Fluorescent Lamp Inventory

For this survey, RPF inventoried representative fluorescent lamps observed in accessible areas throughout the Administration Building, Tunnel and Toll Booths. Visual spot checks of accessible

fixture ballasts were not feasible as the lighting systems were still energized during the survey. As such, the ballasts observed should be assumed to potentially have PCB containing ballasts until proper inspections of the ballasts can be conducted for a “No PCBs” label. Unmarked ballasts and ballasts without date stamps are assumed to be PCB containing.

During demolition of the lights, additional inspections should be performed as noted above. PCB and non-PCB ballasts should be segregated and packaged for waste disposal in accordance with State and federal requirements. There is a substantial cost difference for disposal of PCB ballasts versus non-PCB ballasts. It is also recommended that prior to proceeding with site work, it be requested that the Client or Building Owner provide documentation of PCB ballasts removed and replaced in the building, if available.

PCBs have been shown to cause chronic toxic effects and are a human carcinogen. PCBs are toxic according to the U.S. EPA and are a regulated material. The two primary federal laws that affect the handling of PCBs are the Toxic Substance Control Act and the Superfund Law (CERCLA). Other regulations include various State requirements, Department of Transportation, U.S. OSHA, and the Resource Conservation and Recovery Act. The regulations establish various requirements for the removal, handling, storage and disposal of PCBs.

With regard to light ballasts, approximately half were manufactured prior to 1979 and nearly all pre-1979 ballasts contain PCBs. Ballasts manufactured after July 1, 1978 and that do not contain PCBs are required to be clearly marked “No PCBs”. Please note that it is possible that post 1979 ballasts may contain some PCBs in the capacitor oils and more information should be requested if needed for applicable State and federal agencies. PCBs may also be present in common household appliances with small capacitors and as dielectric fluids; other electric equipment such as transformers, switches and voltage regulators; and recent studies have shown PCB content in caulk and some paints. Documentation of current conditions and in-depth hazard assessments, and laboratory testing for these other PCB usages, is beyond the scope-of-work for this initial survey.

#### Visual Observations for Mercury Switches and Fluorescent Light Bulbs

Based on the spot checks by RPF, no mercury containing thermostats or switches were observed in the administration building, tunnel or toll booths. It is possible that additional switches, thermostats or heat detection devices may be encountered during renovation or demolition work and care should be used to properly handle such materials. In addition, fluorescent and high intensity discharge lamps contain a small quantity of mercury that may pose a hazard to human health or the environment if the materials are not managed properly. The lamps may also contain lead solder material. Approximately seventy-five (75) fluorescent light bulbs were observed in light fixtures throughout the Administration Building, Tunnel and Toll Booths.

## **Conclusions**

Based on the survey findings, the buildings were found to contain ACM, LP and other hazardous building material.

In accordance with current regulatory requirements, ACBM that may be impacted or disturbed (such that asbestos fiber release occurs) by renovation, demolition or other such activity must be removed by qualified, licensed firms. Although regulations for removal of nonfriable ACBM are somewhat less stringent than the requirements for friable ACBM, it should be noted that nonfriable ACBM that is subjected to grinding, abrasion, and other forces, could be rendered friable. In this event, the nonfriable ACBM would be re-categorized friable ACBM.

ACBM that will not be impacted by renovation or demolition activity may be left in place if managed properly and if the materials are maintained in good condition. ACBM to remain in the building should be included in an asbestos management plan and operations and maintenance (O&M) program detailing the measures to be used to safely occupy the building until the ACBM is fully removed. An accredited Management Planner should prepare the O&M Program in accordance with the guidelines set forth in 40 CFR Part 763 (ASHERA).

Work impacting LP, fluorescent light bulbs, mercury and potential PCB ballasts must be performed in accordance with current State and federal standards, including but not limited safe work practices, engineering controls, proper waste packaging, and proper disposal. Work involving LP may require notification of tenants, if rented or leased space, prior to start of work.

Sufficiently in advance of the start of renovation and/or remediation work, abatement project design should be completed. As part the initial design steps any planned renovation and demolition activity should be reviewed for potential impact on ACBM. Asbestos removal is highly regulated at the State and federal level, and in some cases, at the local level also. Notification to the State of Maine is required 10-days prior to the start of interior abatement work and demolition. Only qualified, trained, and licensed firms, as applicable, should be engaged to complete asbestos removal or other abatement activity. Asbestos abatement work must be designed (abatement specifications or work plan prepared) by accredited personnel.

All employees and contractors that may access or otherwise disturb areas with suspect ACBM present should be notified of the presence of ACBM and possible hidden ACBM, and the need to use caution when proceeding with work. Appropriate notifications, labeling and other hazard communications should be completed to all employees, contractors and others in accordance with US OSHA regulations and other applicable requirements (including asbestos labeling in accordance with 29 CFR Part 1926). The scope of RPF services for this survey did not include labeling of ACBM or hazard communications to other employees, building occupants, contractors, or subcontractors.

Documentation of current ACBM conditions and in-depth hazard assessment is beyond the scope-of-work for this initial survey. With the exception of the specific testing and analysis detailed herein, no other samples of materials, oil, water, ground water, air, or other suspect hazardous materials were collected in the course of this inspection that supports or denies these conclusions. No additional services beyond those explicitly stated herein were performed and none should be inferred or implied. The summary and conclusions are based on reasonably ascertainable information as described in this report. RPF Environmental, Inc. makes no guarantees, warranties, or references regarding this property or the condition of the property after the period of this report.

If you have any questions at this time, or if you would like to discuss the remediation process, please call our office.

Sincerely,  
RPF ENVIRONMENTAL, INC.



Allan D. Mercier  
EH&S Consultant  
Licensed Asbestos Inspector (ME Lic#AI-0526)

Enclosures:

Appendix A: Data and Analytical Tables

Appendix B: Photographs

Appendix C: Summary of Methodology and Limitations

167069 Survey Report 020216 – revised2

## **APPENDIX A**



**TABLE 1**

**SEBAGO TECHNICS**  
**Interstate 95, Exit 7, Administration Building, Toll Booths and Canopy, York, ME**

**SUMMARY OF INTERIOR ACBM & ASBESTOS IDENTIFIED**

Building Material	Location	Approximate Quantity	EPA Category	Asbestos Results
Gypsum board joint compound (as composite material)	Throughout Building	5,200 square feet	Non-ACBM	Trace Chrysotile (non-ACBM)
Joint Compound (as an individual material)	Throughout Building	520 square feet	Category II Nonfriable	2% Chrysotile
Countertops	Toll booths 6, 11, 12, 13, 14, and 15	8 counters @ 9 square feet each	Category II Nonfriable	10% Chrysotile
Caulk (gray)	Along edges of window frames on brick toll booths	9 booths at 25 linear feet each	Category II Nonfriable	4.2% Chrysotile
Damp Proof Coating	Exposed in lower level utility room of Administration building and around exterior foundation of original building	1,280 square feet	Category II Nonfriable	12.9% Chrysotile

**Notes:**

- Please note that Category 1 and Category 2 nonfriable ACM are recategorized as friable and/or RACM under certain conditions. Current State asbestos regulations are more strict and comprehensive than the EPA NESHAPs requirements.
- All quantities are approximate only and should be confirmed during abatement project design and abatement bidding.
- It is possible that some concealed or inaccessible ACBM is present. Care should be used when renovating/demolishing inaccessible building space. Further explorative survey work may be necessary during design and/or in conjunction with demolition.

**TABLE 2**

**SEBAGO TECHNICS**  
**Interstate 95, Exit 7, Administration Building, Toll Booths and Canopy, York, ME**

**SUMMARY OF BULK MATERIAL SAMPLING AND RESULTS**  
**Polarized Light Microscopy – EPA 600/R-93/116 Method**

**Samples Collected: February 2, 2016**

Sample ID	Sample Description	Asbestos Content	Other Content
020216-HG2a	PressBoard, toll booth canopy, center	No Asbestos Detected	99% Cellulose 1% Non-fibrous
020216-HG2b	PressBoard, toll booth canopy, south side	No Asbestos Detected	99% Cellulose 1% Non-fibrous
020216-HG2c	PressBoard, toll booth canopy, north side	No Asbestos Detected	99% Cellulose 1% Non-fibrous
020216-HG6a	Gypsum Board, white, with joint compound, lower level, storage room	<1% Chrysotile	10% Cellulose 90% Non-fibrous
	Gypsum Board layer	No Asbestos Detected	---
	Joint Compound layer	2% Chrysotile	---
020216-HG6b	Gypsum Board, white, with joint compound, lower level, utility room, ceiling	No Asbestos Detected	10% Cellulose 90% Non-fibrous
020216-HG6c	Gypsum Board, white, with joint compound, upper level, men's bathroom, wall	No Asbestos Detected	10% Cellulose 90% Non-fibrous
020216-HG6d	Gypsum Board, white, with joint compound, upper level, break room	No Asbestos Detected	10% Cellulose 90% Non-fibrous
020216-HG6e	Gypsum Board, white, with joint compound, upper level, hallway by women's bathroom	No Asbestos Detected	10% Cellulose 90% Non-fibrous
020216-HG8a	Exhaust Pipe Insulation, white, 14", boiler room	No Asbestos Detected	2% Synthetic Fibers 98% Non-fibrous
020216-HG8b	Exhaust Pipe Insulation, white, 14", boiler room	No Asbestos Detected	2% Synthetic Fibers 98% Non-fibrous
020216-HG8c	Exhaust Pipe Insulation, white, 14", generator room	No Asbestos Detected	2% Synthetic Fibers 98% Non-fibrous
020216-HG9a	Duct Vibe Cloth, black, generator room	No Asbestos Detected	20% Fiber Glass 80% Non-fibrous
020216-HG9b	Duct Vibe Cloth, black, generator room	No Asbestos Detected	20% Fiber Glass 80% Non-fibrous
020216-HG9c	Duct Vibe Cloth, black, generator room	No Asbestos Detected	20% Fiber Glass 80% Non-fibrous
020216-HG14a	Countertop, gray, toll booth 6	10% Chrysotile	90% Non-fibrous

**Notes:**

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

**TABLE 2 (continued)**

**SEBAGO TECHNICS**  
**Interstate 95, Exit 7, Administration Building, Toll Booths and Canopy, York, ME**

**SUMMARY OF BULK MATERIAL SAMPLING AND RESULTS**  
**Polarized Light Microscopy – EPA 600/R-93/116 Method**

**Samples Collected: February 2, 2016**

Sample ID	Sample Description	Asbestos Content	Other Content
020216-HG14b	Countertop, gray, toll booth 11	*SFP	*SFP
020216-HG14c	Countertop, gray, toll booth 12	*SFP	*SFP
020216-HG15a	Ceramic Floor Tile Grout, gray, upper level, men's bathroom	No Asbestos Detected	100% Non-fibrous
020216-HG15b	Ceramic Floor Tile Grout, gray, upper level, men's bathroom	No Asbestos Detected	100% Non-fibrous
020216-HG15c	Ceramic Floor Tile Grout, gray, upper level, men's bathroom	No Asbestos Detected	100% Non-fibrous
020216-HG16a	Ceramic Floor Tile Mastic, gray, upper level men's bathroom	No Asbestos Detected	100% Non-fibrous
020216-HG16b	Ceramic Floor Tile Mastic, gray, upper level men's bathroom	No Asbestos Detected	100% Non-fibrous
020216-HG16c	Ceramic Floor Tile Mastic, gray, upper level men's bathroom	No Asbestos Detected	100% Non-fibrous
020216-HG17a	Suspended Ceiling Tile, gray, upper level, janitor's closet	No Asbestos Detected	60% Cellulose, 20% Fiber Glass 20% Non-fibrous
020216-HG17b	Suspended Ceiling Tile, gray, upper level, janitor's closet	No Asbestos Detected	60% Cellulose, 20% Fiber Glass 20% Non-fibrous
020216-HG17c	Suspended Ceiling Tile, gray, upper level, janitor's closet	No Asbestos Detected	60% Cellulose, 20% Fiber Glass 20% Non-fibrous
020216-HG18	Sink Basin Undercoat, white, upper level, break room	No Asbestos Detected	30% Cellulose 70% Non-fibrous

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## Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

**TABLE 3**

**SEBAGO TECHNICS**  
**Interstate 95, Exit 7, Administration Building, Toll Booths and Canopy, York, ME**

**SUMMARY OF BULK MATERIAL SAMPLING AND RESULTS**  
**Polarized Light Microscopy with Gravimetric Reduction**  
**EPA 600/R-93/116 and 600/M4-82-020 Method**

**Samples Collected: February 2, 2016**

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
020216-HG1a	Seam Sealant, toll booth canopy	56.2	0	43.8	No Asbestos Detected
020216-HG1b	Seam Sealant, toll booth canopy	45.0	-	55.0	No Asbestos Detected
020216-HG1c	Seam Sealant, toll booth canopy	73.1	0	26.9	No Asbestos Detected
020216-HG3a	Roof Tar Debris, toll booth canopy	18.7	0	81.3	No Asbestos Detected
020216-HG4a	Laminate with adhesive, brick tool booth #19, ceiling	96.7	0	3.3	No Asbestos Detected
020216-HG4b	Laminate with adhesive, brick tool booth #9, ceiling	95.4	0	4.6	No Asbestos Detected
020216-HG4c	Laminate with adhesive, brick tool booth #8, ceiling	98.9	0	1.1	No Asbestos Detected
020216-HG5a	Caulk, gray, brick tool booth #99, along brick	70.5	0	29.5	No Asbestos Detected
020216-HG5b	Caulk, gray, brick tool booth #9, along window frame at brick	62.2	0	37.8	No Asbestos Detected
020216-HG5c	Caulk, gray, brick tool booth 11, along bottom of window frame	57.9	0	37.9	4.2% Chrysotile
020216-HG7a	Duct Sealant, gray, lower level, boiler room	51.9	0	48.1	No Asbestos Detected
020216-HG7b	Duct Sealant, gray, lower level, boiler room	51.4	0	48.6	No Asbestos Detected
020216-HG7c	Duct Sealant, gray, lower level, boiler room	50.5	0	49.5	No Asbestos Detected
020216-HG10a	Damp proof coating, brown, lower level, utility room, old exterior wall	73.2	0	13.9	12.9% Chrysotile

**Notes:**

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

**TABLE 3 (continued)**
**SEBAGO TECHNICS**
**Interstate 95, Exit 7, Administration Building, Toll Booths and Canopy, York, ME**
**SUMMARY OF BULK MATERIAL SAMPLING AND RESULTS  
 Polarized Light Microscopy with Gravimetric Reduction  
 EPA 600/R-93/116 and 600/M4-82-020 Method**
**Samples Collected: February 2, 2016**

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
020216-HG10b	Damp proof coating, brown, lower level, utility room, old exterior wall	*SFP	*SFP	*SFP	*SFP
020216-HG10c	Damp proof coating, brown, lower level, utility room, old exterior wall	*SFP	*SFP	*SFP	*SFP
020216-HG11a-A	Covebase, tan on white, lower level, universal waste storage rom	50.8	0	49.2	No Asbestos Detected
020216-HG11a-B	Adheisve, tan on white, lower level, universal waste storage rom	39.9	0	60.1	No Asbestos Detected
020216-HG11b-A	Covebase with adhesive, tan on white, upper level, hallway by stairs	54.3	0	45.7	No Asbestos Detected
020216-HG11b-B	Adhesive, tan on white, upper level, hallway by stairs	47.6	0	52.4	No Asbestos Detected
020216-HG11c-A	Covebase, tan on white, upper level, wall by women's bathroom	56.5	0	43.5	No Asbestos Detected
020216-HG11c-B	Adhesive, tan on white, upper level, wall by women's bathroom	54.0	0	46.0	No Asbestos Detected
020216-HG12a	12" Floor Tile, red, lower level, universal waste storage	73.6	23.1	3.3	No Asbestos Detected
020216-HG12b	12" Floor Tile, red, upper level, hallway	13.1	86.8	0.1	No Asbestos Detected
020216-HG12c	12" Floor Tile, red, upper level, break room	14.8	85.0	0.2	No Asbestos Detected
020216-HG13a	Mastic, yellow, lower level, universal waste storage	57.5	0	42.5	No Asbestos Detected
020216-HG13b	Mastic, yellow, upper level, hallway	52.0	0	48.0	No Asbestos Detected
020216-HG13c	Mastic, yellow, upper level, break room	70.4	0	29.6	No Asbestos Detected
020216-HG19a-A	12" Gray Floor Tile, upper level, office	21.3	78.0	0.7	No Asbestos Detected

## Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

**TABLE 3 (continued)**
**SEBAGO TECHNICS**
**Interstate 95, Exit 7, Administration Building, Toll Booths and Canopy, York, ME**
**SUMMARY OF BULK MATERIAL SAMPLING AND RESULTS  
 Polarized Light Microscopy with Gravimetric Reduction  
 EPA 600/R-93/116 and 600/M4-82-020 Method**
**Samples Collected: February 2, 2016**

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
020216-HG19a-B	Mastic, upper level, office	41.1	0	58.9	No Asbestos Detected
020216-HG19b-A	12" Gray Floor Tile, upper level, office	14.2	85.0	0.8	No Asbestos Detected
020216-HG19b-B	Mastic, upper level, office	50.3	0	49.7	No Asbestos Detected
020216-HG19c-A	12" Gray Floor Tile, upper level, office	17.8	73.4	8.8	No Asbestos Detected
020216-HG19c-B	Mastic, upper level, office	17.6	0	82.4	No Asbestos Detected
020216-HG20a	Flashing, exterior, bottom of CMU wall at foundation by main entrance	10.8	0	89.2	No Asbestos Detected
020216-HG20b	Flashing, exterior, bottom of CMU wall at foundation by main entrance	5.2	0	94.8	No Asbestos Detected
020216-HG20c	Flashing, exterior, bottom of CMU wall at foundation by main entrance	5.3	0	94.7	No Asbestos Detected

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## Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.



**TABLE 4**

**SEBAGO TECHNICS  
 Interstate 95, Exit 7, Administration Building, Toll Booths and Canopy, York, ME**

**XRF SURVEY RESULTS**

**Sample Collected: February 2, 2016**

Component	Substrate	Color	Location	Result (mg/cm <sup>2</sup> )
Calibration	--	--	SRM 2573	1.6
Calibration	--	--	SRM 2573	1.6
Wall	CMU	Beige	Lower Level, hallway	0.01
Door Frame	Metal	Beige	Lower Level, storage room	0.0
Wall	Gypsum Wall Board	Beige	Lower Level, storage room	0.01
Door	Metal	Beige	Lower Level, boiler room	0.02
Floor	Concrete	Gray	Lower Level, hallway	0
Floor	Concrete	Gray	Lower Level, hallway	0.01
Floor	Concrete	Yellow	Lower Level, tunnel room	0
Wall	Gypsum Wall Board	Beige	Lower Level, utility	0
Wall	Concrete	Beige	Lower Level, utility	0
Wall	Gypsum Wall Board	Beige	Upper Level, hallway Communications room	0
Door	Metal	Beige	Upper Level, hallway Communications room	0
Wall	Gypsum Wall Board	Beige	Upper Level, hallway Communications room	0
Wall	Gypsum Wall Board	White	Upper Level, break room	0
Ceiling	CMU	White	Upper Level, break room	0
Sill	Gypsum Wall Board	White	Upper Level, break room	0
Floor	Concrete	Yellow	Tunnel	0
Wall	Concrete	Gray	Tunnel	0
Window Frame	Metal	Light Blue	Toll Booth 12, exterior	3.4
Window Frame	Metal	Light Blue	Toll Booth 12, interior	15.6
Ceiling	Laminate	White	Toll Booth 12, interior	0
Light Pole	Metal	Yellow	Toll Booth 13	0.30

**TABLE 4 (continued)**

**SEBAGO TECHNICS**  
**Interstate 95, Exit 7, Administration Building, Toll Booths and Canopy, York, ME**

**XRF SURVEY RESULTS**

**Sample Collected: February 2, 2016**

Component	Substrate	Color	Location	Result (mg/cm <sup>2</sup> )
Door Frame	Metal	Light Blue	Toll Booth 13	7.6
Corner	Metal	Light Blue	Toll Booth 13	12.6
Wall	Metal	Blue	Toll Booth 5	0
Wall	Metal	Blue	Toll Booth 5	0
Counter	Metal	Blue	Toll Booth 5	0
Door	Metal	Blue	Toll Booth 5	0
Ceiling	Metal	Blue	Toll Booth 5	0
Calibration	--	--	SRM 2573	1.7
Calibration	--	--	SRM 2573	1.5

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Notes:

- Lead based paint as defined by current state lead poisoning prevention regulations, is any paint that contains in excess of 1.0 mg/cm<sup>2</sup> of lead.
- OSHA does not currently establish a percent lead for lead paint.
- mg/cm<sup>2</sup> milligrams per centimeter square
- cps means hertz measurement
- Please reference the full report for discussions and additional information and limitations pertaining to these results.



## **APPENDIX B**



1. Administration Building



2. Toll Booths and Canopy



3. Typical brick "old" style toll booth – ACBM caulk, transite countertops and LP.



4. Typical newer metal toll booths (lanes 2-5 and 16). No LP or ACBM identified.



5. Typical interior of Administration Building with asbestos containing gypsum joint compound.



6. Typical transite countertop in brick style toll booths.

## APPENDIX B: SITE PHOTOGRAPHS

Site Address:

**Sebago Technics**  
**York Toll Plaza, I-95, Exit 7, York, Maine**



www.airpf.com

603-942-5432

Project No. 167069





7. ACBM damp proof coating on perimeter foundation of original building. Photo shows exposed portion in lower level of Administration Building.



8. Canopy roof is EPDM rubber membrane on metal deck. No asbestos detected.



9. Brick style toll booths area EPDM rubber membrane roof on wood deck. No asbestos detected.



10. Piping throughout lower level of Administration Building is fiberglass. No suspect materials observed.



11. Typical flooring throughout Administration Building – no asbestos detected.



12. Tunnel that extends under toll booths – no suspect materials observed.

## APPENDIX B: SITE PHOTOGRAPHS

Site Address:

**Sebago Technics**  
**York Toll Plaza, I-95, Exit 7, York, Maine**



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 603-942-5432

**Project No. 167069**

## **APPENDIX C**

## Summary of Methodology: Asbestos-Containing Building Materials Survey

EPA accredited inspector(s) surveyed accessible space in the building or site areas included within the RPF Scope of Work (SOW) to identify suspect asbestos-containing building material (ACBM). Suspect ACBM was inventoried and categorized into homogeneous groups of materials. To the extent indicated in the report, samples were then extracted from the different groups of homogeneous materials in accordance with applicable State and federal rules and regulations. For surveys in which the SOW included full inspections of the affect space, sampling methodologies were based on the requirements set forth in 40 CFR Part 763 (EPA) and 29 CFR Part 1926.1101 (OSHA). For preliminary or limited surveys, findings apply to only the affected material or space as indicated in the RPF SOW and Report and additional inspection and testing will be required to satisfy regulatory obligations associated with renovation, demolition, maintenance and other occupational safety and health requirements.

Collected samples were individually placed into sealed containers, labeled, and submitted with proper chain of custody forms to the RPF NVLAP-accredited vendor laboratory. Sample containers and tools were cleaned after each sample was collected. Samples were analyzed for asbestos content using polarized light microscopy (PLM). Although PLM is the method currently recognized in State and federal regulations for asbestos identification in bulk samples, PLM may not be sensitive enough to detect all of the asbestos fibers in certain types of materials, such as floor tile and other nonfriable ACBM. In the event that more definitive results are requested in cases of with negative or trace results of asbestos are detected, RPF recommends that confirmation testing be completed using transmission electron microscopy.

For each homogeneous group of suspect material, a “stop at first positive” (SFP) method may have been employed during the analysis. The SFP method is based on current EPA sampling protocols and means that if one sample within a homogeneous group of suspect material is found to contain >1% asbestos, then further analysis of that specific homogenous group samples is terminated and the entire homogeneous group of material is considered to be ACBM regardless of the other sample results. This is based on the potential for inconsistent mix of asbestos in the product yielding varying findings across the different individual samples collected from the same homogeneous group. Unless otherwise noted in the report, sample groups found to have 1% to <10% asbestos content are assumed to be ACBM; to rebut this assumption further analysis with point count methods are required.

Inaccessible and hidden areas, including but not limited to wall/floor/ceiling cavity space, space with obstructed access (such as fiberglass insulation above suspended ceilings), sub floors, interiors of mechanical and process equipment, and similar spaces were not included in the inspection and care should be used when accessing these areas in the future. Unless otherwise noted in the RPF Report, destructive survey techniques were not employed during this survey.

In the event that additional suspect materials are encountered that are not addressed in this report, the materials should be properly tested by an accredited inspector. For example, during renovation and demolition it is likely that additional suspect material will be encountered and such suspect materials should be assumed to be hazardous until proper inspection and testing occurs.

RPF followed applicable industry standards; however, various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspect, assumptions regarding the determination of homogenous groups of suspect material, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar material. Also reference the Limitations document attached to the report.

### Summary of Methodology: Lead in Paint Survey

Screening for lead in paint (LP) was performed using bulk sampling of paint or using an X-Ray Fluorescence (XRF) meter for in situ measurements of various painted surfaces. For bulk sampling, samples for determinations were collected by scraping lead paint chips from the substrate. The surveyor attempted to sample layers of paint down to the substrate surface at each sample location. Samples were placed into proper sample containers, the containers were then sealed, labeled and shipped with chain of custody to the RPF AIHA accredited vendor laboratory. The samples were analyzed for total lead content using SW 846 3050B - NIOSH Method 7420. For XRF screening, the device was used and calibrated in accordance with the equipment and industry guidelines applicable for the specific testing performed.

Unless specific TCLP waste characterizations were included in the RPF Scope of Work (SOW), further analysis of waste streams for toxicity characteristics including, but not necessarily limited to lead, may be required prior to disposal of the waste stream. Other toxics may also be present including other heavy metals and PCBs and it may also be necessary to conduct waste characterization for these materials.

Sampling was limited to the specific components as listed in the RPF Report and testing and survey was not completed on every different surface in every room or area in the building. In addition unless otherwise noted in the RPF Report, surface dust, air and soil testing were not conducted during this survey. In order to conduct thorough hazard assessments for lead exposures, representative surface dust testing and air monitoring throughout the building, LBP testing of all surfaces in the building, and representative soil testing in the exterior areas should be completed. This type of testing and analysis was beyond the SOW for the initial survey

The intent of this survey is for lead in construction purposes, not for lead abatement, lead inspections, or lead hazard assessments in residential situations. Specific survey and inspection protocols are required for residential lead-based paint inspections that were not included in the RPF SOW.

RPF followed applicable industry standards for construction related identification in nonresidential settings; however, RPF does not warrant or certify that all lead or other hazardous materials in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to inspect or sample, assumptions regarding the determination of homogenous or like types of paint, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar appearing material. Also reference the Limitations document attached to the report.

### Summary of Methodology: Polychlorinated Biphenyls, Mercury and Refrigerants

Various, accessible fluorescent light fixtures were inspected to determine if the ballasts contain a “No PCBs” label. Ballasts that do not have the “No PCBs” label are assumed to contain PCB.

Only limited fixtures were checked based on accessibility and safety concerns. Further inspection will be required during the course of construction, maintenance, renovation and demolition.

Various equipment and machinery within the building may also contain PCB oils. Specific findings relating to such equipment and machinery were not included in the RPF SOW.

It is common to find fluorescent light bulbs, thermostats and switches are present in buildings. RPF performed a visual inspection of specific areas included in the RPF SOW in an attempt to identify such materials. Findings are limited to the specific accessible space accessed by RPF.

Various compressor and refrigerant equipment may be present and is should be assumed that such equipment contains Freon or other chlorofluorocarbons unless otherwise tested or documented. Although general comment may be provided in the RPF Report, the specific identification of all potential Freon and CFCs is not included in the RPF SOW.

The findings may or may not be fully representative of all of the entire building. Confirmation testing and analysis of PCB, refrigerants and mercury was not included in the RPF SOW.

RPF followed applicable industry standards; however, RPF does not warrant or certify that all hazardous material in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspection, electrical safety considerations, and assumptions relating to areas or material being representative of other locations which in fact may not be representative. Also reference the Limitations document attached to the report.



## LIMITATIONS

1. The observations and conclusions presented in the Report were based solely upon the services described herein, and not on scientific tasks or procedures beyond the RPF Environmental, Inc. Scope of Work (SOW) as discussed in the proposal and/or agreement. The conclusions and recommendations are based on visual observations and testing, limited as indicated in the Report, and were arrived at in accordance with generally accepted standards of industrial hygiene practice and asbestos professionals. The nature of this survey or monitoring service was limited as indicated herein and in the report or letter of findings. Further testing, survey, and analysis is required to provide more definitive results and findings.
2. For site survey work, observations were made of the designated accessible areas of the site as indicated in the Report. While it was the intent of RPF to conduct a survey to the degree indicated, it is important to note that not all suspect ACM material in the designated areas were specifically assessed and visibility was limited, as indicated, due to the presence of furnishings, equipment, solid walls and solid or suspended ceilings throughout the facility and/or other site conditions. Asbestos or hazardous material may have been used and may be present in areas where detection and assessment is difficult until renovation and/or demolition proceeds. Access and observations relating to electrical and mechanical systems within the building were restricted or not feasible to prevent damage to the systems and minimize safety hazards to the survey team.
3. Although assumptions may have been stated regarding the potential presence of inaccessible or concealed asbestos and other hazardous material, full inspection findings for all asbestos and other hazardous material requires the use of full destructive survey methods to identify possible inaccessible suspect material and this level of survey was not included in the SOW for this project. For preliminary survey work, sampling and analysis as applicable was limited and a full survey throughout the site was not performed. Only the specific areas and /or materials indicated in the report were included in the SOW. This inspection did not include a full hazard assessment survey, full testing or bulk material, or testing to determine current dust concentrations of asbestos in and around the building. Inspection results should not be used for compliance with current EPA and State asbestos in renovation/demolition requirements unless specifically stated as intended for this use in the RPF report and considering the limitations as stated therein and within this limitations document.
4. Where access to portions of the surveyed area was unavailable or limited, RPF renders no opinion of the condition and assessment of these areas. The survey results only apply to areas specifically accessed by RPF during the survey. Interiors of mechanical equipment and other building or process equipment may also have asbestos and other hazardous material present and were not included in this inspection. For renovation and demolition work, further inspection by qualified personnel will be required during the course of construction activity to identify suspect material not previously documented at the site or in this survey report. Bordering properties were not investigated and comprehensive file review and research was not performed.
5. For lead in paint, observations were made of the designated accessible areas of the site as indicated in the Report. Limited testing may have been performed to the extent indicated in the text of the report. In order to conduct thorough hazard assessments for lead exposures, representative surface dust testing, air monitoring and other related testing throughout the building, should be completed. This type of in depth testing and analysis was beyond the scope of services for the initial inspection. For lead surveys with XRF readings, it is recommended that surfaces found to have LBP or trace amount of lead detected with readings of less than 4 mg/cm<sup>2</sup> be confirmed using laboratory analysis if more definitive results are required. Substrate corrections involving destructive sampling or damage to existing surfaces (to minimize XRF read-through) were not completed. In some instances, destructive testing may be required for more accurate results. In addition, depending on the specific thickness of the paint films on different areas of a building component, differing amounts of wear, and other factors, XRF readings can vary slightly, even on the same building component. Unless otherwise specifically stated in the scope of services and final report, lead testing performed is not intended to comply with other state and federal regulations pertaining to childhood lead poisoning regulations.



6. Air testing is to be considered a “snap shot” of conditions present on the day of the survey with the understanding that conditions may differ at other times or dates or operational conditions for the facility. Results are also limited based on the specific analytical methods utilized. For phase contrast microscopy (PCM) total airborne fiber testing, more sensitive asbestos-specific analysis using transmission electron microscopy (TEM) can be performed upon request.
7. For asbestos bulk and dust testing, although polarize light microscopy (PLM) is the method currently recognized in State and federal regulations for asbestos identification in bulk samples, some industry studies have found that PLM may not be sensitive enough to detect all of the asbestos fibers in certain nonfriable material, vermiculate type insulation, soils, surface dust, and other materials requiring more sensitive analysis to identify possible asbestos fibers. In the event that more definitive results are requested, RPF recommends that confirmation testing be completed using TEM methods or other analytical methods as may be applicable to the material. Detection of possible asbestos fibers may be made more difficult by the presence of other non-asbestos fibrous components such as cellulose, fiber glass, etc., by binder/matrix materials which may mask or obscure fibrous components, and/or by exposure to conditions capable of altering or transforming asbestos. PLM can show significant bias leading to false negatives and false positives for certain types of materials. PLM is limited by the visibility of the asbestos fibers. In some samples the fibers may be reduced to a diameter so small or masked by coatings to such an extent that they cannot be reliably observed or identified using PLM.
8. For hazardous building material inspection or survey work, RPF followed applicable industry standards; however, RPF does not warrant or certify that all asbestos or other hazardous materials in or on the building has been identified and included in this report. Various assumptions and limitations of the methods can result in missed materials or misidentification of materials due to several factors including but not limited to: inaccessible space due to physical or safety constraints, space that is difficult to reach to fully inspect, assumptions regarding the determination of homogenous groups of suspect material, assumptions regarding attempts to conduct representative sampling, and potential for varying mixtures and layers of material sampled not being representative of all areas of similar material.
9. Full assessments often requires multiple rounds of sampling over a period of time for air, bulk material, surface dust and water. Such comprehensive testing was beyond the scope of RPF services. In addition clearance testing for abatement, as applicable, was based on the visual observations and limited ambient area air testing as indicated in the report and in accordance with applicable state and federal regulations. The potential exists that microscopic surface dust remains with contaminant present even in the event that the clearance testing meets the state and federal requirements. Likewise for building surveys, visual observations are not sufficient alone to detect possible contaminant in settled dust. Unless otherwise specifically indicated in the report, surface dust testing was not included in the scope of the RPF services.
10. For abatement or remediation monitoring services: RPF is not responsible for observations and test for specific periods of work that RPF did not perform full shift monitoring of construction, abatement or remediation activity. In the event that problems occurred or concerns arouse regarding contamination, safety or health hazards during periods RPF was not onsite, RPF is not responsible to provide documentation or assurances regarding conditions, safety, air testing results and other compliance issues. RPF may have provided recommendations to the Client, as needed, pertaining to the Client’s Contractor compliance with the technical specifications, schedules, and other project related issues as agreed and based on results of RPF monitoring work. However, actual enforcement, or waiving of, contract provisions and requirements as well as regulatory liabilities shall be the responsibility of Client and Client’s Contractor(s). Off-site abatement activities, such as waste transportation and disposal, were not monitored or inspected by RPF.

11. For services limited to clearance testing following abatement or remediation work by other parties: The testing was limited to clearance testing only and as indicated in the report and a site assessment for possible environmental health and safety hazards was not performed as part of the scope of this testing. Client, or Client's abatement contractor as applicable, was responsible for performing visual inspections of the work area to determine completeness of work prior to air clearance testing by RPF.
12. For site work, including but not limited to air clearance testing services, in which RPF did not provide full site safety and health oversight, abatement design, full shift monitoring of all site activity, RPF expresses no warranties, guarantees or certifications of the abatement work conducted by the Client or other employers at the job site(s), conditions during the work, or regulatory compliance, with the exception of the specific airborne concentrations as indicated by the air clearance test performed by RPF during the conditions present for the clearance testing. Unless otherwise specifically noted in the RPF Report, visual inspections and air clearance testing results apply only to the specific work area and conditions present during the testing. RPF did not perform visual inspections of surfaces not accessible in the work area due to the presence of containment barriers or other obstructions. In these instances, some contamination may be present following RPF clearance testing and such contamination may be exposed during and after removal of the containment barriers or other obstructions following RPF testing services. Client or Client's Contractor is responsible for using appropriate care and inspection to identify potential hazards and to remediate such hazards as necessary to ensure compliance and a safe environment.
13. The survey was limited to the material and/or areas as specifically designated in the report and a site assessment for other possible environmental health and safety hazards or subsurface pollution was not performed as part of the scope of this site inspection. Typically, hazardous building materials such as asbestos, lead paint, PCBs, mercury, refrigerants, hydraulic fluids and other hazardous product and materials may be present in buildings. The survey performed by RPF only addresses the specific items as indicated in the Report.
14. For mold and moisture survey services, RPF services did not include design or remediation of moisture intrusion. Some level of mold will remain at the site regardless of RPF testing and Contractor or Client cleaning efforts. RPF testing associated with mold remediation and assessments is limited and may or may not be representative of other surfaces and locations at the site. Mold growth will occur if moisture intrusion deficiencies have not been fully remedied and if the site or work areas are not maintained in a sufficiently dry state. Porous surfaces in mold contaminated areas which are not removed and disposed of will likely result in future spore release, allergen sources, or mold contamination.
15. Existing reports, drawings, and analytical results provided by the Client to RPF, as applicable, were not verified and, as such, RPF has relied upon the data provided as indicated, and has not conducted an independent evaluation of the reliability of these data.
16. Where sample analyses were conducted by an outside laboratory, RPF has relied upon the data provided, and has not conducted an independent evaluation of the reliability of this data.
17. All hazard communication and notification requirements, as required by U.S. OSHA regulation 29 CFR Part 1926, 29 CFR Part 1910, and other applicable rules and regulations, by and between the Client, general contractors, subcontractors, building occupants, employees and other affected persons were the responsibility of the Client and are not part of the RPF SOW.
18. The applicability of the observations and recommendations presented in this report to other portions of the site was not determined. Many accidents, injuries and exposures and environmental conditions are a result of individual employee/employer actions and behaviors, which will vary from day to day, and with operations being conducted. Changes to the site and work conditions that occur subsequent to the RPF inspection may result in conditions which differ from those present during the survey and presented in the findings of the report.

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APPENDIX C

DEFINED TERMS

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## **DEFINED TERMS**

- AVI (Automatic Vehicle Identification): a system consisting of an antenna and reader installed in a toll lane for communication with a transponder located on a vehicle for automatic identification of the transponder as it passes through the lane.
- Canopy Override Switch (COS): shall mean the switch that controls the signal that is located on the canopy on the entry side of each toll lane.
- Sensor Loops: a system for automatic vehicle detection, separation and classification.
- COMM - Communications
- Components: parts that compose a device or piece of equipment.
- DVAS (Digital Video Audit System) – A video camera and image storage system that captures traffic movements in the lane 24 hours a day.
- EMT - Electrical Metallic Tubing
- Gradient Sensor – Part of the Sensor Loop system - a gradient sensor is placed on each side of the Primary sensor.
- Contractor: the Contractor hired by the Authority through a solicitation process to complete the Project.
- 
- JB - Junction Box
- Lane Controller (LC): A computer system for each type of toll lane that controls the lane equipment.
- Manual Lane Terminal (or MLT): A device consisting of an array of touch screen buttons and associated electronics for processing toll transactions in the attended tollbooths.
- MTA - Maine Turnpike Authority
- NTS -Not to Scale
- Paypoint Sensor – Part of the Sensor Loop system. Detects when the vehicle has reached the lane paypoint, in this case the tollbooth door centerline.
- Primary Sensor – Part of the Sensor Loop system. Located between two gradient sensors, a 6' x '6 square sensor that participates in vehicle classification.
- Project: shall mean the upgrade of the existing New Gloucester Barrier Toll Lane 8 to the toll collection system described in herein.
- RMC - Rigid Metallic Conduit

- RP (Receipt Printer) – Receipt printer that communicates with the payment system. Located in the booth.
- Specifications: shall mean the Technical Specification and instructions included in this document for the purpose of defining the installation procedures
- SI (Systems Integrator) - The systems integrator/contractor for the MTA toll system.
- SS - Stainless Steel
- TCP (Traffic Control Pedestal): A pedestal to mount a traffic signal and screen with a message to patrons.
- UPS - Uninterrupted Power Supply
- VES (Violation Enforcement System) – Cameras that automatically capture digital photographic images of vehicles and their license plates.

APPENDIX C

SIGN TEXT LAYOUT SHEETS



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APPENDIX D

MDEP SITE LOCATION OF DEVELOPMENT ACT  
GENERAL PERMIT

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STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE  
GOVERNOR

PAUL MERCER  
COMMISSIONER

February 2016

Maine Turnpike Authority  
c/o Sara Zografos  
2360 Congress St  
Portland Maine 04102

RE: Site Location of Development Act General Permit, DEP #L-26825-TP-A-N

Dear Ms. Zografos:

Please find enclosed a signed copy of your Department of Environmental Protection General Permit. Please take several moments to read your permit carefully. The Department reviews every application thoroughly and strives to formulate reasonable conditions of approval within the context of the Department's environmental laws. You will also find attached some materials that describe the Department's appeal procedures for your information.

If you have any questions about the permit or thoughts on how the Department processed this application please get in touch with me directly. I can be reached at (207) 446-1611 or at [mike.mullen@maine.gov](mailto:mike.mullen@maine.gov).

Sincerely,

Mike Mullen  
Bureau of Land Resources

pc: File





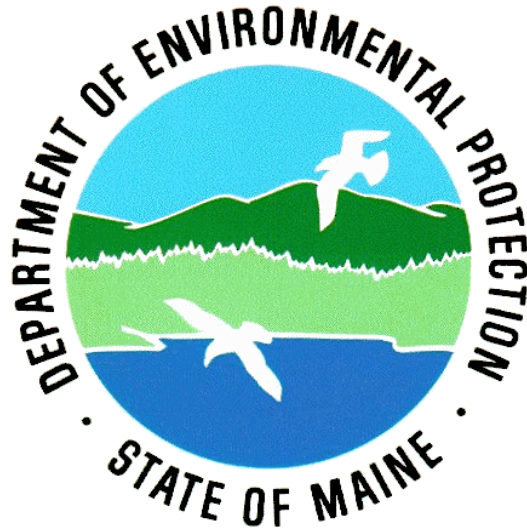
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**STATE OF MAINE**

**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SITE LOCATION OF DEVELOPMENT ACT**

**General Permit for the  
Maine Turnpike Authority**



Bureau of Land Resources



## I. General Permit Coverage

**A. Basis:** The Department of Environmental Protection (DEP) recognizes that the Maine Turnpike Authority (MTA) has established environmental procedures and standard practices that meet or exceed the requirements of the Site Location of Development Act (Site Law). MTA conducts environmental reviews of its proposed projects using professional staff and qualified consultants to ensure compliance with State and Federal environmental requirements and various initiatives including, but not limited to, the National Environmental Policy Act, Federal and State wetland permitting requirements, the Maine Department of Transportation's Best Management Practices for Erosion and Sediment Control (BMP's), the MaineDOT Waterway and Wildlife Crossing Policy and Design Guide, and the Memorandum of Agreement for Stormwater Management. MTA licensed engineering staff and consultants design projects in accordance with applicable standards including, but not limited to, the State of Maine Department of Transportation Standard Specifications for Highways and Bridges, and the American Association of State Highway and Transportation Officials (AASHTO) Design Standards. MTA has licensed engineers, land surveyors, planners, environmental compliance and legal staff, and supplements its internal staff through consulting contracts with several recognized engineering firms and an environmental compliance firm. MTA procedures and policies (as amended from time to time) relevant to meeting Site Law standards are listed below under sections specific to the standards.

**B. Purpose:** This General Permit for the Maine Turnpike Authority, hereinafter described as the MTA General Permit for Site Location of Development projects (GP), authorizes the MTA to construct or cause to be constructed or operate or cause to be operated all developments under MTA's authority for which approval is required pursuant to the Site Law, 38 M.R.S.A. §§ 481-490, after the approval by the DEP of a Notice of Intent as set forth in 38 M.R.S.A. § 486-B(3).

**C. Authorization:** This GP is authorized by 38 M.R.S.A. § 486-B. This permit does not affect requirements under other applicable Maine statutes such as the Natural Resources Protection Act, 38 M.R.S.A. § 480-A through 480-JJ (NRPA).

**D. Effective period:** This GP is effective February 29, 2016, and authorized through February 28, 2021. The DEP intends subsequent re-issuance of this GP. Performance and compliance under this GP will be assessed on an annual basis by MTA and DEP.

## II. Standards

A development authorized by this GP is required to meet all applicable requirements of the Site Law pursuant to 38 M.R.S.A. § 484, the specific conditions listed in this section, and any conditions attached to an approval of a Notice of Intent.

**A. Financial Capacity (38 M.R.S.A. § 484(1)):** The MTA shall have the financial capacity and technical ability to develop a project in a manner consistent with state environmental standards and consistent with the Site Law. Funding commitments are authorized by the MTA's board through the MTA's Four Year Capital Investment Plan, Thirty Year Financial Plan, and annual Reserve Maintenance Deposit requirements.

**Link to MTA Projects:** <http://www.maineturnpike.com/getattachment/project-and-planning/Transportation-Planning/4-Year-Capital-Plan-12-18-2014.pdf.aspx>



**B. No Adverse Effect on the Natural Environment (38 M.R.S.A. § 484(3)):** In its construction and operation of the project, the MTA shall not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality.

1. MTA staff and expert design consultants will review all projects for potential impacts to wetlands, vernal pools, streams, significant wildlife habitats, rare, threatened, and endangered species and unusual natural areas; coordinate with state and federal natural resource agencies; and incorporate agency recommendations as appropriate and practicable to minimize impacts to affected resources. When state and federal natural resource agencies and MTA cannot agree on recommendations to minimize impacts, MTA shall abide by DEP's requirements.
2. MTA will file NRPA permit applications with the DEP when appropriate or document exempt activities.
3. MTA will file applications with the U.S. Army Corps of Engineers (ACOE) in accordance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.
4. MTA will design and construct all stream crossings in accordance with the *MaineDOT Waterway and Wildlife Crossing Policy and Design Guide for Aquatic Organism, Wildlife Habitat and Hydrologic Connectivity*, dated July 1, 2008. This document was developed by MaineDOT in cooperation with state and federal agencies; including DEP, Maine Department of Marine Resources (DMR), Maine Inland Fish & Wildlife (IF&W), National Marine Fisheries Service (NMFS), ACOE, United States Fish and Wildlife Service (USFWS), and Environmental Protection Agency (EPA).

**Link to 2008 Waterway and Wildlife Crossing Policy and Design Guide:**

[http://digitalmaine.com/mdot\\_docs/59/](http://digitalmaine.com/mdot_docs/59/)

5. MTA will review projects for impacts to historic and cultural resources by consulting with the Maine State Historic Preservation Officer (SHPO) in compliance with the process that is described in Section 4 of the Programmatic Agreement between Federal Highway Administration (FHWA), Federal Transit Administration (FTA), the Advisory Council on Historic Preservation (ACHP), SHPO, and MaineDOT, dated November 2004. However, because the MTA does not normally receive federal funds, the MTA will consult with the federal agency, if any, that is responsible for permitting the MTA project at issue rather than with FHWA or FTA. In almost all cases, this agency would be the ACOE. In all cases, the results of the consultation will be subject to review and approval from DEP. This process will be utilized on all projects that trigger the Site Law.

**Link to Section 106 Programmatic Agreement:**

<http://www.maine.gov/mdot/env/docs/Section106ProgrammaticAgreement.pdf>

6. If the applicable MTA project is included in a MaineDOT Statewide Transportation Improvement Program (STIP) that has undergone an air quality analysis, the project "will not significantly affect the ambient air quality" for permitting purposes. If the applicable MTA project is not included in a MaineDOT STIP, the MTA will comply with Chapter 375, Section 1 of the DEP rules which may require, among other things, modeling of non-point sources of air pollution and the submittal of the results with the Notice of Intent for review by the DEP.

**Link to MaineDOT Statewide Transportation Improvement Program:**

<http://www.maine.gov/mdot/stip/>



7. MTA has adopted a statewide Noise Policy, effective January 2015, which is identical in all important respects to the FHWA-approved MaineDOT noise policy, and serves to guide decision-makers on all noise related matters associated with transportation. In addition, all projects will meet the noise standards of Chapter 375 §10 of the DEP Rules, as applicable.

**Link to MTA Noise Policy:**

<http://www.maineturnpike.com/getattachment/Business-With-MTA/Neighbors-Abutters/Noise-Policy/NoisePolicy2015Final.pdf.aspx>

8. MTA will hold public meetings on all proposed projects to allow public input, per Section II(I) of this GP. These meetings are an opportunity for the public to identify issues of local interest including areas with unique or scenic character.

Professional landscape architects will review site plans and design landscape plans as appropriate for the type of project, its surrounding area, and any identified scenic resource. The MTA has a licensed landscape architect on staff.

The MTA right-of-way department and planning staff will identify all public parks, recreation areas, public wildlife and waterfowl refuges, and land of significant historic properties associated with a transportation project and will avoid and minimize impacts to these categories of resources in consultation with DEP.

- C. **Soil Types (38 M.R.S.A. § 484(4)):** MTA developments shall be built on soil types that are suitable to the nature of the undertaking. MTA employs or contracts with geotechnical engineers that are part of the design team for all projects to evaluate the suitability of existing soils and determine the need for engineering practices to address soil limitations.

MTA employs or contracts with licensed site evaluators that design new or replacement septic systems in accordance with the Maine State Plumbing Code and the Maine Subsurface Wastewater Disposal Rules. These systems are reviewed and permitted by the Maine Department of Health and Human Services (DHHS) and/or the applicable municipality.

- D. **Storm Water Management and Erosion Control (38 M.R.S.A. § 484(4-A)):** MTA shall comply with the Storm Water Management and Erosion Control Standard of the Site Law through implementation of the requirements outlined below. The definitions included in the *Memorandum of Agreement for Stormwater Management between the Maine Department of Transportation, Maine Turnpike Authority, and the Maine Department of Environmental Protection*, effective November 2007, are incorporated in this GP.

**Link to MaineDOT/MTA/DEP's MOA on Stormwater:**

<http://www.maine.gov/mdot/env/docs/StormwaterMOA.pdf>

1. **Basic Standards:** MTA requires an Erosion Control Plan (developed by the contractor and approved by MTA) for all projects in accordance with the *Maine Department of Transportation's Best Management Practices for Erosion and Sediment Control (BMP's)*, dated February 2008. All projects meeting this GP shall comply with the Basic Standards of the DEP Stormwater Rules.



**Link to MaineDOT's Best Management Practices for Erosion and Sediment Control:**

<http://www.maine.gov/mdot/env/docs/bmp/BMP2008full.pdf>

2. General Standards: For projects that are large enough to trigger the General Standard threshold in the DEP's Chapter 500 Stormwater Management Rules, MTA shall meet the General Standards for all projects as follows:
  - a) A linear portion of a project associated with an existing travel corridor shall meet the General Standards to the extent practicable using existing available right of way as determined through consultation with, and agreement by, DEP.
  - b) A linear portion of a project that is not associated with an existing travel corridor shall meet the General Standards to the extent practicable as determined through consultation with, and agreement by, DEP.
  - c) A non-linear portion of a project shall meet the General Standards, except that redevelopment of existing impervious area may qualify for the exception in DEP's Chapter 500 § 4(C)(2)(d).
3. Phosphorus Standard. Projects triggering the Phosphorus Standard shall instead apply the General Standards in accordance with Section D(2) above of this GP.
4. Urban impaired stream standard. A linear or non-linear portion of a project that is not associated with an existing travel corridor, is located within the watershed of an urban impaired stream and triggers the Urban Impaired Stream Standard shall meet the Urban Impaired Stream Standard in Chapter 500 § 4(E) to the extent practicable as determined through consultation with, and agreement by, DEP. MTA may use mitigation credit measures within the same watershed as that portion of a project in order meet the requirements of Chapter 501 § 3(A) of the DEP Rules.
5. Flooding Standard. For a state transportation system project that triggers the thresholds of the Flooding Standard, MTA shall apply design and engineering measures to the extent practicable such that project drainage avoids adverse impacts to offsite property resulting from project-related peak flows.

**E. Groundwater (38 M.R.S.A. § 484(5)):** MTA shall construct and operate the development project in a manner that will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur. MTA engineering staff and consultants will develop viable and sustainable water extraction practices for both potable and production systems. The MTA's Environmental Coordinator, in conjunction with its environmental consulting firm, has developed and continuously updates sound management practices for, and training in, the storage of hazardous materials. These actions are directed toward minimizing impacts to waters recharging the groundwater regime. In the event of a release of hazardous materials, contingencies are in place to undertake prompt response actions to minimize environmental harm.

MTA's Maintenance facilities comply with relevant sections of DEP's Spill Prevention, Control and Countermeasures (SPCC) Plan requirements as applicable. Facilities that exceed regulatory petroleum storage thresholds have site specific plans and perform required training and inspections. This initiative focusing on the proper management and response to releases and discharges is further supported by MTA's internal procedures related to spill prevention and response.



- F. Infrastructure (38 M.R.S.A. § 484(6)):** MTA developments shall make adequate provisions for utilities, including water supplies, sewerage facilities and solid waste disposal required for the development, and developments shall not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services.

In locations where a subsurface wastewater disposal facility may be constructed, it must be designed, installed and operated in accordance with relevant sections of Maine DHHS's subsurface disposal system regulations to ensure effluent emanating from the systems is readily attenuated thereby minimizing groundwater quality concerns.

The MTA's right-of-way department will identify all utilities within a project area and will be responsible for coordinating with municipal and private utilities to ensure no unreasonable burden on, disruption of, or interference with, service.

MTA's Environmental Coordinator reviews projects to ensure that all solid, special, universal, and hazardous wastes associated with transportation projects are managed in accordance with State and Federal Requirements.

- G. Flooding (38 M.R.S.A. § 484(7)):** MTA developments shall not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure. MTA will design all projects to meet this criterion through consultation with DEP.

MTA will evaluate potential impacts of a proposed development to flood zones and adjacent properties and will design, construct and operate the development to avoid or mitigate such impacts. Presidential Executive Order 11988 applies to MTA projects requiring a federal permit.

**Link to Presidential Executive Order 11988:**

<http://www.archives.gov/federal-register/codification/executive-order/11988.html>

- H. Blasting (38 M.R.S.A. § 484(9)):** MTA shall conduct any blasting for developments in accordance with the standards in 38 M.R.S.A. § 490-Z (14). MTA Standard Specifications for contractors (Section 105.2.7) provides detailed requirements for blasting which meet or exceed the statutory requirements. These standard specifications require that the contractor submit a detailed blasting plan for approval prior to blasting, and require consultation with the MTA, State Police and owners of nearby utilities prior to blasting. MTA specifications require pre- and post-blast surveys of structures in the area, including pre-blast water quality tests of private wells. MTA specifications contain detailed safety procedures to be observed during blasting, require that a qualified vibration and blasting expert monitor all blasting and require that seismographic recordings are taken in the blast vicinity and supplied to MTA personnel within 2 days of every blast. MTA specifications incorporate by reference the Bureau of Mines ground vibrations limits contained in the Bureau of Mines Report #8507.

**Link to MTA Standard Specifications for Blasting:**

<http://www.maineturnpike.com/getattachment/project-and-planning/Construction-Contracts/Special-Provisions-Use-of-Explosives.pdf.aspx>

- I. Public Involvement:** MTA will treat every project under this GP as a "Substantial Public Interest Project" under its existing Public Participation Plan, effective May 2010, and will include at least one preliminary public meeting and one final public meeting on every project, depending on the scope of the





project and anticipated level of public interest. Project details must be presented at all public meetings. MTA will notify the public in accordance with Chapter 2, the DEP's Rule Concerning the Processing of Applications and Other Administrative Matters for all projects performed under this GP.

**Link to MTA's Public Participation Plan:**

<http://www.mainturnpike.com/getattachment/Construction-Info/Transportation-Planning/Public-Participation-Policy-Board-Approved-June-17-2010.pdf.aspx>

### III. Submittals

- A. Notice of Intent Form:** The Notice of Intent (NOI) form shall be completely filled out and signed by the Executive Director of the MTA.
- B. Location Map:** A map showing the location and extent of the project shall be submitted. A U.S.G.S. topographic map or Maine Atlas and Gazetteer map are acceptable for this purpose.
- C. Plans:** MTA shall submit site plans of the proposed development with the NOI. Plans shall include, at a minimum, existing and proposed structures, permanent erosion and sedimentation measures, stormwater management structures, best management practices and buffers, clearing limits, and impervious areas. Other information may be required by the DEP as described in section 2(B)(6) above or on a case by case basis.

### IV. Conditions of Approval

The DEP may attach reasonable conditions to the approval of the NOI to ensure compliance with standards under the Site Law in addition to the following conditions:

- A. Retention of Records:** MTA shall retain copies of all reports, certifications and approvals required by this GP, and records of all data used to complete the NOI of the project to be covered by this GP, for a period of at least three (3) years from the date the NOI is filed. The DEP may extend the time of record retention at any time.
- B. Accessibility:** MTA shall make a copy of the NOI and all supporting data available to the public.
- C. Inspection and Entry:** Employees and Agents of the DEP may enter any property that is the subject of the NOI at reasonable hours in order to determine compliance.
- D. Approval of Variations from Plans:** The granting of this approval is dependent upon and limited to the proposals and plans contained in the NOI and supporting documents submitted by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.
- E. Transfer of Development:** In the event that the ownership of a project that is subject to this General Permit is transferred to a new owner, the MTA shall notify the DEP of a change in ownership. Subsequent development of the project by other parties is not covered under this GP.
- F. Time frame for approvals:** If the construction or operation of the project is not begun within four years, this approval shall lapse and the MTA must submit a new NOI to the DEP for approval. The MTA may not begin construction or operation of the development until a new NOI is approved. A new NOI may



include information submitted in the initial NOI by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the MTA must submit a new NOI, and receive approval prior to continuing construction.

## V. Review

The DEP will approve a proposed MTA development upon receipt and review of a completed NOI, acceptable for processing, for a project determined to be in compliance with the standards of this GP. The DEP reserves the right to require additional documentation or adjustments to procedure to ensure that all requirements of this GP will be met.

## VI. Procedure

- A. Notice of Intent:** An NOI must be submitted by MTA for a proposed development with submittals as described in Section III above. By submitting the NOI MTA agrees to comply with the terms and conditions of this GP.
- B. NOI Submission:** MTA shall file the NOI on a form provided by the DEP. The NOI shall contain all information required in this GP and the NOI form.
- C. Deficient NOI:** If any portion of the NOI does not meet one or more of the minimum requirements, or if the DEP requests additional information to ensure compliance with standards of the Site Law, the applicant will be notified of the deficiency within fourteen (14) calendar days. It is the responsibility of the MTA to make all required changes and resubmit the NOI or submit the required additional information. A new review period will begin when the revised NOI or supplemental information is received by the DEP.
- D. Processing the NOI:** Prior to the authorization of a development pursuant to this GP, an NOI must be reviewed and approved by the DEP within thirty (30) calendar days of receipt unless the DEP approves or denies the NOI prior to that date. If MTA does not receive correspondence from the DEP within the thirty (30) calendar day period after the submission of an NOI, then MTA is authorized to carry out the activity. If an NRPA permit is required for any portion of the development, the NOI and the NRPA application shall be submitted together. Excepting those situations where only a Permit by Rule Notification is required to satisfy an NRPA permitting requirement, the NOI review period will run concurrently with the NRPA permit review period and the length of the NOI review period will be the same as the review period for the NRPA permit application.
- E. Individual Permit:** Pursuant to 38 M.R.S. §486-B(4), the DEP may require the MTA to apply for an individual permit for a development that would otherwise be authorized to file an NOI under this General Permit. The DEP may require an individual permit application to be filed when it determines that a proposed development warrants a more extensive analysis under the Site Law licensing criteria, 38 M.R.S. §484, than that provided in the General Permit process. If an individual permit is required under this subsection and 38 M.R.S. §486-B(4), the DEP will notify the MTA within 30 days of receipt of a complete NOI. When the DEP notifies the MTA that an individual permit is required, no construction may occur unless and until an individual permit is issued.
- F. Where to Submit:** A completed and signed NOI must be submitted to:





**Director  
Land Division  
Bureau of Land Resources  
Maine Department of Environmental Protection  
17 State House Station  
Augusta, Maine 04333-0017**

**VII. Approval**

An MTA development is considered to be authorized under this GP upon approval of an NOI in accordance with Section VI of this GP.

**VIII. Fee**

The DEP will not charge a fee for processing and approval of an NOI under this GP in accordance with 38 M.R.S.A. § 486-B (6).

**IX. Modification of General Permit and NOI**

The DEP may modify this GP and/or the NOI at any time with notification to the MTA.

**X. Right to Appeal**

All final license or permit decisions made by the Commissioner may be appealed to the Board of Environmental Protection pursuant to 38 M.R.S.A. § 341-D (4).

DONE AND DATED AT AUGUSTA, MAINE, THIS 29<sup>TH</sup> DAY OF FEBRUARY, 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:   
For: Paul Mercer, Commissioner

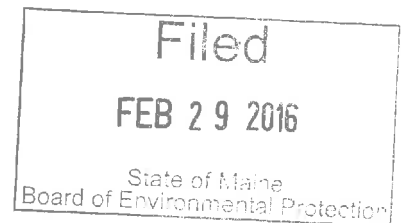
PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

MM/L26824AN/ATS#80071

Date of Public Notice: January 11, 2016

Date filed with Board of Environmental Protection: February 29, 2016

This Order prepared by Michael K. Mullen, BUREAU OF LAND RESOURCES



APPENDIX E

MDEP SITE LOCATION OF DEVELOPMENT  
ACT AND NATURAL RESOURCES  
PROTECTION ACT

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DEPARTMENT ORDER

IN THE MATTER OF

MAINE TURNPIKE AUTHORITY	) SITE LOCATION OF DEVELOPMENT ACT
York, York County	) GENERAL PERMIT
YORK TOLL PLAZA	) NATURAL RESOURCES PROTECTION ACT
	) FRESHWATER WETLAND ALTERATION
L-27241-TG-A-N (approval)	) WATER QUALITY CERTIFICATION
L-27241-TP-B-N (approval)	) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S. §§ 481–489-E and §§ 480-A–480-JJ, Section 401 of the Federal Water Pollution Control Act (33 U.S.C. § 1341), and Chapters 310, 315, 335, 375, and 500 of Department rules, the Department of Environmental Protection has considered the application of the MAINE TURNPIKE AUTHORITY with the supportive data, the public hearing testimony, agency review comments, the written comments submitted by the general public, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION AND PROCEDURAL HISTORY:

A. Project Description: The Maine Turnpike Authority (MTA or applicant) is seeking Department approval for the construction of a new barrier toll plaza at Mile 8.8 of the Maine Turnpike that will include six open, E-ZPass lanes (three northbound and three southbound) with overhead open framed gantries with electronic toll collection equipment, called Open Road Tolling (ORT). In addition to the highway speed electronic tolling lanes, the toll plaza will include nine lanes with toll booths designed for cash collection (four northbound and five southbound); a 2,400-square foot administration building on the west side of the Turnpike; a service tunnel running underneath the Turnpike for the safe passage of staff from the administration building to the toll booths and for the storage of toll equipment and utilities; an access drive from Chase’s Pond Road to the administration building on land owned by the applicant; expansion of the existing Turnpike mainline for approach and departure lanes; construction of stormwater treatment units; the demolition of the existing barrier toll plaza and administration building at Mile 7.3; and the reduction in the pavement at the existing toll plaza.

The proposed project will disturb approximately 58 acres and will include the redevelopment of approximately 38.5 acres of existing impervious area and the creation of approximately 15 acres of new impervious area. The proposed project will extend from Mile 7.0 to Mile 9.5. The existing toll plaza (toll booths and administration building) will be removed and a portion of the existing pavement will be reconfigured from a 17-lane toll plaza to a six-lane throughway. At Mile 8.8 the new toll plaza will result in the alteration of approximately 7,200 linear feet of highway within the right-of-

way of the existing travel corridor to accommodate lane widening and the toll collection infrastructure. Development of the new administration building, with its associated parking and the access drive, will occur on a 32.6-acre parcel of land owned by the applicant that abuts the right-of-way of the travel corridor to the west of the project site.

The proposed project will alter approximately 24 linear feet of stream, approximately 63,659 square feet (1.46 acres) of freshwater wetlands, including alteration of wetlands located within the 250-foot, critical terrestrial habitat surrounding significant vernal pools, and wetlands associated with habitat for rare, threatened, and endangered species. The proposed project will also alter 62,195 square feet (1.43 acres) of upland within the critical terrestrial habitat of significant vernal pools.

The proposed project is shown a set of plans, the first of which is titled “York Toll Plaza, General Plan 1”, prepared by Jacobs Engineering Group, Inc. and Sebago Technics, Inc. and dated August, 2016, with a last revision date on any of the sheets of April 3, 2017.

B. Current Use of the Site: The highway and toll collection portion of the project site will be located within the right-of-way of the Interstate I-95 travel corridor in which a six-lane divided highway is currently located. The adjacent 32.6-acre parcel, through which the access road from Chase’s Pond Road to the administration building will be constructed, is currently undeveloped woodlands and forested wetlands.

C. Procedural History: On October 19, 2016, the MTA filed an application with the Department of Environmental Protection (Department) for a Natural Resources Protection Act (NRPA) Permit for the construction of a barrier toll plaza at Mile 8.8 on the Maine Turnpike (Turnpike) which is part of Interstate I-95 in the Town of York.

The applicant also submitted a Notice of Intent (NOI #81265) to comply with the standards and requirements of the Site Location of Development Act (Site Law) General Permit (General Permit) for the Maine Turnpike Authority (DEP #L-26825-TP-A-N, effective February 29, 2016). The General Permit authorizes the applicant to construct all developments under the applicant’s authority for which approval is required pursuant to the Site Location of Development Act, 38 M.R.S. §§ 481-490, after the Department’s approval of the NOI. Section VI(D) of the General Permit stipulates that when an NRPA permit is required for a project, the NOI review period will run concurrently with the NRPA permit application review period and the length of the review period will be the same as the review period for the NRPA permit application.

Several interested persons, including the Town of York and a citizens’ group, Think Again, requested that the Department conduct a public hearing. Based upon the information submitted by the interested persons and pursuant to the Department’s Chapter 2 *Rules Concerning the Processing of Applications and Other Administrative Matters*, Sections 7(B) and 17(C), the Department determined, and conveyed in a letter dated December 2, 2016, that it would not recommend that the Board of Environmental Protection (Board) assume jurisdiction over the processing of the application, but that the Department would hold a public hearing on the proposed project.

On January 30, 2017, the Department received a Petition to Intervene from the Town of York and from the citizens' group, Think Again. Both petitions were granted on February 14, 2017 and the two intervenors consented to being consolidated into one.

During the Department's public hearing process, the Department's Presiding Officer issued four procedural orders:

1. The First Procedural Order, dated February 14, 2017, granted intervenor status to the Town of York and Think Again and consolidated the two intervenors into one called Citizens for Responsible Toll Collection (CRTC, or the Intervenors).
2. The Second Procedural Order, dated March 14, 2017, set a date for the public hearing and established procedures for pre-filed testimony.
3. The Third Procedural Order, dated May 12, 2017, ruled on the applicant's objection to certain witnesses testifying at the public hearing and established a public hearing schedule. This Order also acknowledged CRTC's request that the Presiding Officer ask the applicant to submit an updated version of the model prepared by its consultant, CDM Smith. The request was not acted upon in the Order, and the Department's decision was deferred on this matter until after the public hearing.
4. At the public hearing, CRTC renewed its request that the Presiding Officer ask the applicant for an updated model that calculates the necessary surcharge for an all-electronic tolling (AET) facility to maintain net revenue neutrality with an ORT facility over the initial ten-year period between 2020 and 2029. The Intervenors asserted that, because construction of an ORT toll plaza would not be completed until 2020, the model inputs should be revised to reflect predicted conditions for that period. The applicant responded that running the 2014 model with a seven-year delay would create unreliable predictions that could not be used in the decision-making process utilized by the MTA Board. The Presiding Officer allowed the two parties to file post hearing briefs on the request. The Fourth Procedural Order, dated June 16, 2017, ruled that the Department would not request submission of an updated model by the applicant.

The public hearing on the application was held on May 22, 2017 at the Kittery Community Center's Star Theater in the Town of Kittery. A portion of the public hearing was devoted to receiving testimony from members of the general public. Written comments were accepted throughout the application processing period, until the close of the hearing on May 22, 2017.

The Department released a Draft Order on September 5, 2017 for public comment. The Draft Order was sent to all of the interested parties and a copy was also placed on the Department's website. The comment period on the Draft Order closed on September 12, 2017. The Department received comments from the applicant and the Intervenors. All

the comments were reviewed and given consideration in relation to the statutory review criteria.

2. EXISTING SCENIC, AESTHETIC, RECREATIONAL OR NAVIGATIONAL USES:

The NRPA, in 38 M.R.S. §480-D (1), requires the applicant to demonstrate that the proposed project will not unreasonably interfere with existing scenic, aesthetic, recreational and navigational uses.

To demonstrate that its proposed project meets this criterion, the applicant submitted a description of the uses of the site, which include a multi-lane highway, tolling structures, and associated facilities. The applicant also submitted several photographs of the proposed project site and surroundings, including an aerial photograph of the project site. In accordance with Chapter 315, *Assessing and Mitigating Impacts to Scenic and Aesthetic Uses* (06-096 C.M.R. ch. 315, effective June 29, 2003), the applicant submitted a copy of the Department's Visual Evaluation Field Survey Checklist as Appendix A with the application. Department staff visited the project site on August 28, 2015, December 17, 2015, and April 5, 2017.

The proposed project is not located in a scenic resource visited by the general public, for the use, observation, enjoyment and appreciation of its natural and cultural visual qualities. The proposed project is adjacent to a scenic resource, the Whippoorwill Conservation Area. This area is an approximately 180-acre open space associated with the Whippoorwill Subdivision and subject to a conservation easement held by the York Land Trust. The easement limits public access to primarily the residents of the Whippoorwill Subdivision and the Grantor of the easement, and states that the general public will not be excluded unless such use becomes obtrusive or destructive. In written comments from interested persons and from testimony at the hearing, it was established that the conservation area is frequently used for recreational pursuits such as walking and bird-watching. The established trails within the conservation area are approximately 600 to 700 feet east of the Turnpike near the proposed location of the northbound toll booths. Because of land topography and forest cover between the project site and the scenic resource, the proposed project site is not visible from the currently established trails on the open space conservation parcel.

In response to questions from the general public, the applicant proposes to limit the effects from illuminating the new toll plaza by utilizing LED, fully cut-off lighting. Cut-off lights are designed such that no light is emitted above the horizon. The applicant also proposes to use lights that will emit light in the warmer (yellow) side of the spectrum as opposed to the blue hues typically associated with LED lights. To further minimize lighting impacts, the applicant proposes to place house-side light shields to control light intensities leaving the project site. Final lighting designs are being prepared. Prior to the start of construction, the applicant must submit a final photometric plan for the proposed project to the Department for review.

The Department staff utilized the Department's Visual Impact Assessment Matrix in the evaluation of the proposed project, and the Matrix showed an acceptable potential visual impact rating for the proposed project. Based on the information submitted in the application, the distance from the scenic resource, the visual impact rating, and the site visits, the Department determined that the location and scale of the proposed activity is compatible with the existing visual quality and landscape characteristics found within the viewshed of the scenic resource in the project area.

In its determination of the proposed project's potential impacts to existing scenic, aesthetic, and recreational uses, the Department considered the significance of the Whippoorwill Conservation Area, the existing character of the surrounding area, the distance between this scenic resource and the project site, and the expectations of the typical user. The Department also considered the significance and public purpose of the proposed project and the applicant's actions to mitigate for impacts from overhead lighting. Based on the information submitted in the application, the visual impact rating, the site visits, and for the reasons stated above, the Department finds that the location and scale of the proposed activity is compatible with the existing visual quality, recreational uses, and the landscape characteristics found adjacent to the scenic resource.

The application included the MTA Noise Policy and a noise study of the project area. The MTA Noise Policy stated that highway noise is generated from four major sources: vehicle engines, vehicle exhaust, aerodynamics, and tire-to-pavement friction; with tire noise being the dominant source from vehicles travelling at speeds greater than 20 miles per hour. The MTA Noise Policy also stated that the level of highway noise is dependent on the volume of free-flow traffic, the speed of that traffic, and the number of trucks in the flow of traffic. The MTA Noise Policy noted that geographic factors, such as steep inclines affect noise levels. The applicant's report titled "Noise Analysis Report," prepared by Jacobs Engineering Group, Inc. and dated September 27, 2016, documented potential noise impacts associated with the proposed project. Estimated vehicle noise emissions were calculated for different periods of time and considered the build/no-build alternatives using the Federal Highway Administration's Traffic Noise Model. The model was calibrated using seven sites within the project area, including the Whippoorwill Subdivision. The model results predicted that noise levels resulting from the proposed project would result in a one decibel increase in noise over the no-build scenario, which is considered to be equivalent to existing conditions. The report highlighted that moving the toll plaza from its current location will eliminate the need to accelerate up the northbound hill and hard braking down the same hill when traveling southbound, which would reduce current noise levels. Regarding construction noise, the MTA Noise Policy stated that during the design phase of transportation projects, the applicant will work with local public officials and the local community to limit and minimize adverse construction noise, as practicable. Based on the information provided by the applicant, the Department finds that noise resulting from the proposed project is compatible with existing conditions.

The applicant's report titled "Air Quality Report," prepared by Jacobs Engineering Group, Inc. and dated September 1, 2016, compared the results of air modeling that



examined total pollutant burdens from the proposed project and existing conditions. Modeling results predict an improvement in ambient air quality at the existing toll plaza location. Although the model predicted that the new toll plaza location would have a minor reduction in ambient air quality, the improvements in traffic moving through at highway speeds would reduce traffic congestion. Correspondingly, the reduced congestion will result in less brake and tire wear, which contribute to particulate matter and emissions of volatile organic compounds, carbon monoxide, and nitrous oxide. Based on the information provided by the applicant, the Department finds that changes to air quality resulting from the proposed project is compatible with existing conditions.

There are no navigational uses of any resources that would be unreasonably impacted by the proposed project.

The Department finds that the proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses of the protected natural resource provided that prior to the start of construction, a final photometric plan for the proposed project is submitted to the Department for review.

3. SOIL EROSION:

The NRPA, in 38 M.R.S. §480-D(2), requires the applicant to demonstrate that the proposed project will not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

Included on the set of plans referenced in Finding 1 were the proposed location of silt fence intended to capture sediment mobilized in stormwater runoff.

To meet the terms of the Site Law General Permit, the applicant is required to develop an erosion control plan for the proposed project that conforms with the *Maine Department of Transportation's Best Management Practices for Erosion and Sediment Control (BMP's)*, dated February 2008. To comply with the requirements of the General Permit, the contractor for the proposed project will be required to submit an erosion control plan to the applicant prior to the start of construction for approval by the applicant. This plan will provide specifications for the installation and implementation of soil erosion and sedimentation control measures based on site-specific conditions, the construction sequence, timing, and weather.

Prior to the start of construction, the applicant must submit an erosion control plan for the proposed project to the Department for review and approval.

The Department finds that the activity will not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment provided that the erosion control plan is submitted to the Department for review and approval prior to the start of construction.

#### 4. WETLANDS AND HABITAT:

The NRPA, in 38 M.R.S. §480-D(3), requires the applicant to demonstrate that the proposed project will not unreasonably harm significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life.

The applicant proposes to directly alter approximately 24 linear feet of stream, approximately 63,659 square feet (1.46 acres) of freshwater wetlands, including alteration of wetlands located within the critical terrestrial habitat of significant vernal pools, and wetlands associated with habitat for rare, threatened, and endangered species. The proposed project will also result in the alteration of 62,195 square feet (1.43 acres) of upland within the critical terrestrial habitat of significant vernal pools. The NRPA-regulated streams on the project site that are proposed to be altered are waterbodies that connect wetlands and either cross under the Turnpike through culverts or run adjacent to the highway in roadside ditches. The freshwater wetlands comprise a drainage network collecting water from the upland adjacent to the Turnpike and directing it into the Cape Neddick River, Whipoorwill Swamp, or Little River watersheds.

##### A. Wetlands

The *Wetlands and Waterbodies Protection Rules*, 06-096 C.M.R. ch. 310, interpret and elaborate on the NRPA criteria for obtaining a permit. The rules guide the Department in its determination of whether a project's impacts would be unreasonable. A proposed project would generally be considered to result in an unreasonable impact if it would cause a loss in wetland area, functions and values and there is a practicable alternative to the project that would be less damaging to the environment; however, the extent and severity of impacts to the wetlands and the value and functions of the wetlands impacted are weighed against the practicability of a potential, less damaging, alternative to the proposed project. The balancing of these factors underlies the Department's analysis of whether the impacts from the project as proposed are found to be unreasonable.

Each application for a NRPA permit that involves a freshwater wetland alteration must provide an analysis of alternatives. An applicant's analysis of whether there is a practicable alternative to the project that would be less damaging to the environment is considered by the Department in its assessment of the reasonableness of any impacts. Chapter 310 defines practicable as available and feasible considering cost, existing technology, and logistics based on the overall purpose of the project. In determining whether a practicable alternative exists, the applicant must consider using, managing, or expanding other locations that would avoid impacts to protected natural resources; reducing the size, scope, configuration, or density of the proposed project, and thereby avoiding or reducing impacts; and developing alternative project designs to further avoid or reduce impacts.

The applicant's stated project purpose is to replace the existing barrier toll plaza at Mile 7.3 of the Turnpike with highway-speed electronic tolling lanes (ORT) and cash

collection lanes that will address safety deficiencies at the existing plaza. The applicant states that ground settling and subsidence are occurring at the current toll plaza and facility deficiencies include substandard tolling equipment. The applicant states that its goal is to have the ability to adequately handle current and projected traffic volumes, and the ability to limit impacts to motorists while meeting expectations.

The Department finds that the applicant's description of its project purpose cannot be so narrow as to eliminate consideration of potential practicable alternatives. Thus, the Intervenor's evidence regarding a potential alternative which would be less environmentally damaging to the environment, in the form of an AET installation, was considered by the Department. The applicant also submitted evidence on this alternative.

#### 1) Analysis of Avoidance: Alternative Tolling Methods

##### a) Applicant's Toll System Alternatives Analysis and Evidence.

The applicant submitted an alternatives analysis for the proposed project completed by Sebage Technics, Inc. and dated October 17, 2016. The applicant considered two methods of toll collection that provide highway-speed electronic tolling: open road tolling (ORT) and all-electronic tolling (AET). The ORT method includes both highway-speed tolling lanes for vehicles with an electronic toll collection device as well as conventional toll booths, similar to that which currently exists for cash toll collection, while the AET method is comprised of only highway-speed electronic tolling and eliminates roadside cash collection. The AET method uses cameras mounted on overhead gantries that record all vehicle license plates and records passing vehicles using electronic toll collection devices. For users that otherwise would pay a cash toll, AET utilizes a pay-by-mail system to identify license plate images, match license plates with addresses, prepare and mail invoices, and track payments. For both tolling methods, users that have an electronic toll collection device in their vehicle are assessed a toll which is then charged against the balance of their account.

The applicant commissioned two studies to evaluate the practicability of each tolling method. The results of the first study were published in a report titled "Maine Turnpike, Southern Toll Plaza, Initial All-Electronic Tolling Feasibility Review," prepared by HNTB and dated February 20, 2009. The HNTB report stated that the benefits that could be realized with an AET plaza included a significantly reduced physical presence, reduced capital construction costs, reduced operational and maintenance costs of the infrastructure, reduced traffic congestion, improved safety at the toll plaza, elimination of fare collection staffing and support, and reduced environmental impacts resulting from traffic moving through the toll plaza without having to slow or stop. The HNTB report also identified negative impacts such as increased costs for back office and customer service center operations; logistical difficulties such as weather impacts on the reliability of equipment to read license plates and retrofitting the other toll plazas to integrate into the AET system; significant revenue loss because of non-payment transactions resulting from patrons

choosing to simply not pay the invoice, improperly read license plates, and limitations of interstate agencies for providing vehicle-user data; and cost shifting onto patrons enrolled in electronic toll collection regimes resulting from non-payments from users that previously paid cash. The report concluded that there would be theoretical benefits to converting to an AET system, but noted that there would also be significant uncertainty related to the business costs. Based on the conclusion that revenue loss from an AET system poses a threat to the applicant and the lack of comparable industry information at the time of the report, converting to an AET system was not recommended by HNTB, the author of the report.

The results of the second study were published in a report, titled “Maine Turnpike ORT/AET Impact Analysis,” prepared by CDM Smith and dated April 14, 2014. The purpose of the CDM Smith report was to compare traffic, toll rates, operating costs and net revenue of an AET system over a 10-year forecast period to a continuation of the current cash collection of tolls. The applicant considers an ORT system to be equivalent to the current system because the only difference between the two is that motorists with electronic toll collection devices can move through an ORT toll plaza at highway speeds while the current system requires that they slow to pass through the toll gates. Impacts from installation of an AET system to net revenue were determined by estimating impacts to toll collection and operating costs, and potential revenue from administrative fees associated with non-payments. Because of uncertainties associated with an AET system that would no longer collect cash at the toll plaza, the CDM Smith report included a risk analysis of this tolling method that involved testing a range of assumptions regarding customer payments, image recognition, and other factors.

The CDM Smith report examined the predicted redistribution of traffic that currently utilizes cash payments. A portion of this traffic would be expected to convert to using the current electronic toll collection devices, another portion was estimated to divert from the Turnpike and use alternative routes, and the majority of motorists would have their license plate information captured by video with toll charges collected by a pay-by-mail system (video toll). The transactions of the video toll users were then subdivided into four basic groups: those transactions that would pay the toll; those transactions that would go unpaid; those transactions that were unbillable (i.e., vehicle owner addresses were not available); and, those transactions that resulted in unreadable license plates. The report predicted that 42% of all current cash collections would be lost following conversion to the AET method.

The CDM Smith report included a multi-variable model that was created to allow a comparison of the two tolling methods. ORT revenue generation was considered to be essentially the same as the current tolling method, so the ORT method was treated as the base case net revenue forecast. Based on this comparison, it was determined that a toll surcharge would be necessary to offset revenue loss predicted using an AET system. Surcharge rates ranging from zero to \$4.00, using \$1.00 intervals, were examined. For the first three years, net toll revenues from all of the AET options were less than the (ORT) base case; however, the model predicts that AET-based net

revenues with surcharges of \$3.00 and \$4.00 would rise above the base case after three years, while the AET-based net revenue with a \$2.00 surcharge would rise above the base case after five years. After considering both operating and capital investment cost, the CDM Smith report concluded that the best 10-year net total revenue would come from an AET system; however, the CDM Smith report states that for this to be achieved, a significant increase in charges, as much as \$3.00, would have to be assessed on vehicles that do not have electronic toll collection devices. As a result of the surcharge, the report predicts, there would be a significant increase in the number of traffic diversions off the Turnpike, and the report states that the additional traffic would create a negative impact on local area roads. Notwithstanding the net total 10-year revenue figures, given the financial risk discussed below, the CDM Smith report concluded that the selection of an ORT plaza at York would be the more prudent business decision.

The application included an April 30, 2014 MTA Staff Report on the status of tolling on the Turnpike at that time that documented the efforts the applicant had taken to improve management of the Turnpike, evaluated the information provided in the 2014 CDM Smith Report, and discussed MTA policy issues associated with converting to an AET system. These policy issues included fairness and equity for toll payers, traffic diversion from the Turnpike, customer service, safety, landowner impacts, environmental impacts, consistency with existing toll plazas, privacy, staffing and operations, financial responsibilities, and operational flexibility. The MTA Staff Report acknowledged that implementation of an AET system would involve lower capital costs, minimal environmental impacts, and enhanced safety. The detriments to AET implementation listed in the MTA Staff Report included higher operating costs associated with back office collection operations, loss of revenue from uncollectable tolls, the need to place a significant surcharge on pay-by-mail customers and with that, fairness issues (that one group is paying a disproportionate share over other groups), financial obligations related to current bonds and future borrowing, traffic diversions, and operational conflicts with the current tolling method at other toll plazas.

The applicant evaluated the findings of each of the three reports and concluded at its July 24, 2014 Board meeting that an AET system would not be a practicable alternative that meets the project purpose because of the estimated doubling of the current toll rate at the York Plaza for pay-by-mail customers; the projected loss of revenue resulting in the first years of initiation of an AET tolling method, regardless of the additional surcharge and from uncollectable transactions, estimated to be as high as 42%; the loss of confidence from bondholders and current lenders which would result in lower bond ratings and higher future borrowing costs; overall customer dissatisfaction for fare increases and changes to the point of service (change from pay cash at the toll plaza to a pay-by-mail system); the risk of significant traffic impacts on local roads resulting from the projected diversions off the Turnpike by motorists seeking to avoid the toll; the need to replace existing ORT toll plazas to implement an AET system over the entire Turnpike system; and the negative reaction of other toll agencies, bond rating firms, and bond investors to the precedent that a

permitting decision by an environmental agency would decide the toll collection methodology for the MTA.

The applicant further addressed the cost and financial impacts of implementing an AET system in a draft report submitted from the applicant's Chief Financial Officer, dated August 24, 2016. This report stated that the applicant has independent bonding capacity and that it receives no state funding, although it is subject to legislative review. The ability of the applicant to assure revenue is essential because in issuing its own bonds, the only collateral is the revenue stream. Bondholders are protected by means of bond resolutions, some of which include pledges that all revenues and cash are applied to the payment of the principal and interest to the bondholders; that the applicant may only use revenues in accordance with the terms of the bonds and may not impair the bondholders' rights; that with narrow exceptions, no free vehicular passage will be permitted and that no cost shifting favoring one group of users over another is permissible; and that specific steps for changing toll rates, schedules, classifications, and methodologies have been established and that the applicant must have a traffic consultant prepare a report showing that toll changes will meet the net revenue requirement in the fiscal year of the requested toll change and in the subsequent five years. The Chief Financial Officer's draft report stated that because all revenue is pledged and the applicant cannot accept annual losses, the applicant determined that projected revenue losses resulting from conversion to an AET system, as shown in the CDM Smith report, would require an extensive traffic and revenue analysis across the entire Turnpike. In addition, the Chief Financial Officer stated that an AET system carries an inherently higher risk which could result in a downgrade of the ratings on current or future bonds, which would increase borrowing costs, which would have to be covered by toll increases. This report supports the conclusion in the CDM Smith report that the selection of an ORT plaza at York would be the more prudent business decision.

b) Intervenors' Toll System Analysis and Evidence.

Beginning in 2008, the Town and the people that constitute the CRTC have been involved with the applicant's efforts to replace the existing toll plaza by requesting and participating in public meetings, and by providing input on the reports commissioned by the applicant.

The Town of York commissioned the eTrans Group to review the HNTB and CDM Smith reports. The eTrans Group produced a report titled, "Shortfalls in MTA's Response to the Army Corps of Engineers," dated March 30, 2016. The report listed a number of items not addressed by the applicant in its September 1, 2015 correspondence to the Corps as part of the Phase I Avoidance assessment for the Corps licensing process. It stated the acknowledged environmental and safety benefits of constructing an AET system and offered a possible location on the Turnpike for placement of AET gantries. The eTrans Group report also described shortfalls in the applicant's financial analyses, specifically, that the CDM Smith report focused only on what the eTrans Group considered worst-case conditions, that

the CDM Smith report only examined impacts of converting only two of the 18 toll collection locations on the Turnpike, and that the CDM Smith report only considered a ten-year study period. The eTrans Group report asserted, in part, that estimates of the more significant benefits of converting to an AET system were not considered, that the assumed surcharge fees were inconsistent with industry practices, that capital cost estimates will continue to rise over time, and that the traffic diversion projections were overestimated.

In a letter dated June 16, 2016, the Town of York argued that the applicant's decision to reject AET as the most practicable tolling method to meet the project purpose is not supported by the CDM Smith report. The Town of York reiterated the previously identified benefits to implementing an AET system versus an ORT system but acknowledged that, in doing so, additional costs from video toll transactions would be required and that there would be some loss of revenue from uncollectable toll transactions. The letter highlighted those portions of the CDM Smith report that predict that the AET system will generate more revenue over time, and questioned the applicant's assertion that a \$3.00 surcharge would be inappropriate or problematic.

c) Public Hearing.

The testimony at the May 22, 2017 public hearing was focused on those issues related to the licensing criteria relevant to the NRPA permit application filed by the applicant, for the most part the issue of the alternatives analysis.

The pre-filed testimony from the applicant described the process by which the MTA decided on the ORT option for the proposed new York toll booth, including the factors that led to commissioning traffic and tolling studies and the evaluation of the HNTB and the CDM Smith reports resulting from the studies. Witnesses for the applicant described the analysis of the practicability the AET alternative as compared to ORT, as they relate to conditions specific to the Turnpike, and outlined the anticipated financial impacts that would result from implementing an AET system.

CRTC's pre-filed testimony and cross-examination of the applicant's witnesses focused on the benefits of an AET system and described the increasing use of AET systems in other states. Further, CRTC witnesses testified that improvements in video technology, increased use of electronic toll collection devices, and the collective enforcement agreement between Maine, New Hampshire, and Massachusetts would reduce the percentage of uncollectable toll transactions to less than 10%. CRTC raised questions as to the validity of the model used in the CDM Smith report. Specifically, it questioned whether the financial performance of an AET system, as outlined in the CDM Smith report and used by the applicant in its dismissal of this tolling method as a practicable alternative, was outdated and that the model overestimated the number of traffic diversions to avoid payment of the toll. CRTC also asserted that it was inappropriate for the applicant to have a separate evaluation of the construction capital costs and operational/maintenance differences between the two systems in its practicability determination.

In response to the questions raised by CRTC, the applicant testified that since the CDM Smith report was prepared, there have been improvements in video technology and license plate identification. The applicant also listed the actions it has undertaken to increase the use of electronic toll collection devices. The applicant stated that a large percentage of motorists who pay by cash are tourists. Thus, unlike other examples of tolled roads cited by the Intervenor where AET is used, these infrequent users of the Maine Turnpike are not expected to obtain an electronic toll collection device.

Regarding reciprocity between Maine, New Hampshire, and Massachusetts, the applicant testified that each state has different rules directing how the applicant may collect tolls from motorists from those States who travel on the Turnpike who do not use E-ZPass devices or pay cash. The number of violations or toll amounts that must be accrued before formal enforcement is triggered varies by State and uncollected tolls represent a risk to the revenue stream. The applicant stated that despite the reciprocity agreements, uncollected tolls from New Hampshire and Massachusetts motorists are still 46% and 53%, respectively. The applicant's pre-filed testimony noted that approximately 63% of all cash tolls are obtained from out-of-state motorists, including approximately 5% from Canada. The applicant stated during the public hearing, that given the challenges in obtaining driver information from other states and Canada, the 42% revenue loss predicted in the model is likely.

The applicant provided testimony that the model used in the CDM Smith report was an investment grade study to determine the feasibility of implementing an AET system. An investment grade study is performed when new revenue bonds for a new facility, an expansion, or a new toll plaza requires issuance of new revenue bonds. The applicant's witness testified that in this case, because a surcharge was deemed necessary to ensure revenue neutrality, an investment grade study was deemed appropriate for proper analysis. Further, the applicant pointed out that an investment grade study is reviewed by bond rating agencies, bond insurers, and bond buyers who evaluate potential changes to the revenue stream. The applicant's witness stated that due to the sensitivity of the model to the input parameters, the model's timeline for implementing an AET system was set at one year following the collected input data.

Specific to the practicability of implementing an AET system, the applicant testified that bonds issued by the applicant are revenue bonds and not general obligation bonds, and that revenue bonds are a claim against the revenue stream, not against assets owned by the applicant. As security for these bonds, the applicant pledges to raise tolls to meet any deficiencies in operations, capital, or debt service, and in the event that payments are not made, the Bond Trustee has the right to dictate toll rates. The applicant stated that imposing a surcharge is in effect a toll increase, and that increasing toll fees to make an AET financially feasible negatively impacts the applicant's or a Bond Trustee's ability to increase tolls in the future.

The applicant explained that calculating risk and revenue stream are determinants for bond rating, and it is this rating that affects the interest rate paid on a bond. The



applicant stated that the need to include a surcharge to the existing toll fee for pay-by-mail users in order to ensure the financial viability of an AET system added to the risk of implementing this system. In contrast, the applicant testified that it determined that there is no risk with implementing an ORT system because this system would be financially equivalent to the current tolling system. The applicant's witness testified that the MTA's determination that a surcharge would be necessary to address lost revenue from uncollectable toll transactions with an AET led to its decision that an AET system was not a practicable tolling method.

The CRTC's witnesses testified that an AET system would be less costly, more efficient, and would have little to no environmental impacts because installation of an AET system simply requires the construction of overhead gantries for the camera system. CRTC's pre-filed testimony stated that when a side-by-side comparison of an AET system with an added surcharge is compared with an ORT system that includes capital costs for a new toll plaza along with operating and maintenance costs over a 10-year period, then the AET system is more cost effective. The CRTC contended that this determination, in addition to the lack of any environmental impact from an AET system, should therefore be considered the most practicable alternative, less damaging to the environment.

In an effort to understand why capital costs were not included in the model calculations, the Intervenor's questioned the applicant's witnesses about a table in the CDM Smith report that predicted the "bottom line" cost difference between the two toll methods for a 10-year period. In response, the applicant explained that for ORT, the entirety of the capital costs would be depreciated over the life span of the toll plaza, a period between 35 to 40 years, not in the first 10 years of the project, and further stated that compressing the full capital costs of the proposed toll plaza into the first 10 years of the project would result in an overstatement of the cost difference between the two tolling methods.

The applicant's witnesses were questioned by the Intervenor's regarding the predicted number of traffic diversions as a result of a possible surcharge, and whether the CDM Smith model predicting traffic delays on local streets was calibrated to existing field conditions. The applicant's witnesses responded that the number of traffic diversions predicted by the CDM Smith model were taken by a second traffic engineer and used to predict traffic delays on local streets in a second traffic model. Given that this second model predicted significant delay and that there would be the expectation that motorists would be aware of these delays, the Intervenor's questioned whether the CDM Smith model was rerun to account for this and whether the predicted number of motorists diverting from the Turnpike would decrease. The applicant's witnesses stated that a second iteration of the CDM Smith model was not run based on the predicted traffic delays on local area streets predicted in the second traffic model. The Intervenor's were seeking clarification as to how the number of traffic diversions were calculated and did not submit its own evidence to challenge the applicant's conclusions.

d) Testimony from the General Public on Alternatives.

During the evening portion of the public hearing, approximately 28 persons provided testimony both opposed to and in support of the proposed project. The testimony in opposition to the proposed project generally asserted that the ORT alternative proposed by the applicant would be costlier, that there would be significant benefits from the AET alternative, and that an AET system would be safer, less noisy, and would result in a reduction in air pollution. Some speakers who opposed the proposed project testified that implementing an AET system is consistent with actions being taken by tolling agencies in other states and that this system would not result in any impacts to the environment. One person testified in favor of the proposed project, emphasizing the need for a cash toll collection option.

e) Department Analysis of Toll System Alternatives.

In its analysis of the reasonableness of impacts under the NRPA criteria the Department must consider the level of impacts to the resources resulting from the proposed activity (construction of the proposed toll plaza) and its use and the value of the impacted resources weighted against the practicability of any less damaging alternative. The mere existence of an alternative does not deem impacts to be unreasonable and result in the denial of a permit application for a proposed project.

The first step in the analysis of the reasonableness of impacts is the determination of the extent of any loss in wetland area, functions, or values. The proposed project will alter freshwater wetlands at 18 locations. These wetlands are mostly located immediately adjacent to the cleared right-of-way of the existing Turnpike. Except for two large, but isolated pockets of wetlands located at the center of the proposed new toll plaza which will be entirely lost, most of the wetland impacts will occur along the wetland edges. Typical impacts will be the result of culvert extensions or from shaping new road side slopes.

The application included a Functional Assessment, prepared by Sebago Technics and dated February 8, 2016. The Functional Assessment identified the relevant functions and values of the freshwater wetlands that will be altered as a result of the proposed project to be sediment and toxicant removal, nutrient removal, and wildlife habitat. The applicant proposes to mitigate for alterations to freshwater wetlands and uplands in the critical terrestrial habitat by making a contribution into the In-Lieu Fee program of the Maine Natural Resource Conservation Program, as discussed below.

The two isolated pockets of wetlands proposed to be filled entirely are 19,287 and 8,497 square feet respectively, and the functions these wetlands provide, sediment and toxicant removal and nutrient removal, will be lost. Although these are the primary functions of the two wetlands that will be filled, these wetland functions were also identified in the Functional Assessment to be the primary functions of other wetlands within the project site. Wetlands that provide sediment and toxicant removal and nutrient removal are not rare in this area. Given the size of the other

wetland areas providing these functions, and the amount of proposed alteration resulting from the project, the Functional Assessment did not identify any loss or degradation of other wetland functions or values. The Department finds that impacts along the edge of the wetlands will not significantly impair the functions of the wetlands proposed to be altered.

The Department agrees with the Intervenor, that the use of an AET system could result in little to no wetland impacts and thus would be less damaging to the environment. The Department recognizes that AET systems have been implemented in many states and for a diverse number of road systems. While the Intervenor argues that evidence of the usage by other road systems suggests that AET would be practicable in Maine, the applicant provided credible evidence of factors at the current York toll plaza that would affect the practicability of implementing an AET system. These factors include impacts to the revenue generated at the York toll plaza compared to the entire system, estimated to be 40% of the MTA's revenue; the percentage of out-of-State and Canadian traffic, their infrequent use of the Turnpike, and the difficulty in billing these users; and that the percentage of motorists using electronic toll collection devices (E-ZPass) passing through the current toll plaza is not likely to equal the percentage found on other roadways utilizing AET. The Department also recognizes that based on CDM Smith's model, an initial loss in revenue is predicted if an AET system is implemented and, as stated during the hearing, the loss of revenue could negatively affect the applicant's ability to issue and pay back bonds.

The record reflects that the applicant decided in 2014 that an AET system is not practicable. Following this decision, toll plaza design requirements were established, the process of site selection began, and site-specific design details were drafted by the applicant.

The Department finds credible the applicant's conclusions that conversion to an AET system represents a change in how tolls are collected, not only at the York Toll Plaza, but across the entire system, and that imposition of a surcharge to make an AET system financially viable constitutes a toll increase that limits the flexibility of the applicant to raise tolls in the future. When asked during the hearing if it was appropriate to use the model as a forecast tool for projecting further in the future, the applicant responded that the model is not designed to be used for that purpose because the input data would have changed and thus the reliability of the projected model output, whether a rate adjustment is necessary and what that adjustment should be, would be suspect.

Based on the factors which distinguish the southern section of the Turnpike from other toll roads that have adopted AET, the Department finds that the AET alternative has serious drawbacks in terms of its practicability. The Department finds that in light of the difficulties the applicant would have with an AET system at this location, the AET alternative is not practicable. The Department further recognizes that although conditions that influence the viability of each tolling method may change

over time, at some point the applicant must decide on the tolling method and move forward to design the project, and that it is impracticable to continue to reconsider the original decision as to which tolling method should be developed.

After consideration of the types of wetlands, impacts to the wetlands from the proposed project, the purpose of the proposed project, and the credible evidence of the impracticability of the AET alternative at this location, the Department finds the wetland impacts not to be unreasonable.

## 2) Analysis of Alternative Sites

### a) Site Alternatives.

The applicant stated that it considered several possible locations for the proposed new toll plaza. The option of re-building at the existing site was dismissed because of several physical impediments that do not meet current highway safety standards for barrier toll plazas. The current site's drawbacks are its proximity to an interchange and a bridge, and that it is situated at the bottom of a hill and horizontal curve. These impediments do not provide adequate "decision sight distance" recommended by the Federal Highway Administration, and they negatively affect vehicle movement through the toll plaza. In addition, the applicant determined that required infrastructure repairs and environmental impacts associated with retrofitting the existing plaza would be costlier than constructing a new toll plaza in a different location. Initial consideration of a split plaza (one for northbound traffic and one for southbound traffic) was dismissed because of the likelihood of increased environmental impacts, impacts to abutters, and infrastructure redundancies (administration buildings, utilities, and access roads) resulting from two toll plazas.

In a technical memorandum titled "Southern Toll Plaza, Technical Memorandum on Alternatives Analysis," prepared by Jacobs Engineering Group, Inc. and dated October 13, 2015, five potential locations were evaluated based on the following categories: engineering and safety; abutter impacts; environmental impacts; cultural/historical resources costs; and logistical difficulties during construction. Initial capital and operational cost estimates for each location were also examined. The memorandum concluded that the selected site at Mile 8.8 is the most practicable location that meets the design criteria for a new toll plaza while minimizing impacts to the environment and to abutters. As design of the toll plaza at this location became more complete, the applicant was able to reduce the initial amount of wetland alteration and encroachments in significant vernal pool habitat.

Review of alternative sites for a similar ORT with cash lanes facility determined that while one location, at Mile 13.2, would likely result in less alteration to freshwater wetlands, use of that site would result in impacts to many more abutters than the selected site. This alternative site was not as advantageous from an engineering and safety perspective as well, and so was not selected by the applicant.

Based on the potential impacts to wetlands and abutters, as well as the engineering and safety considerations of the five sites the applicant evaluated, the Department concludes that impacts to the freshwater wetlands from the proposed project are not unreasonable provided that mitigation for these wetland impacts is addressed as outlined below.

b) Minimal Alteration.

In support of an application and to address the analysis of the reasonableness of any impacts of a proposed project, an applicant must demonstrate that the amount of freshwater wetland to be altered will be kept to the minimum amount necessary for meeting the overall purpose of the project. To minimize resource impacts, the applicant stated that it located the access road from Chase's Pond Road to the administration building in uplands, thereby avoiding encroachment in critical terrestrial habitat of significant vernal pools and freshwater wetlands to the greatest extent practicable. The location and orientation of the freshwater wetlands in relation to the highway within the project area allowed the applicant to limit impacts to the wetland edges. Additional minimization of wetland impacts was achieved by designing sideslopes at 2H:1V within the delineated wetland areas.

The Department finds that the road design and the angle of the sideslopes in and adjacent to the wetland edges resulted in the minimum amount of impacts necessary for the project.

c) Compensation.

In accordance with Chapter 310 §5(C), compensation may be required to achieve the goal of no net loss of wetland functions and values. Compensation is required when the Department determines that a freshwater wetland alteration will cause a wetland function or functions to be lost or degraded as identified by a functional assessment or by the Department's evaluation of the project. For the proposed project, because of the impacted or lost functions described above, the Department determined that compensation will be required.

The applicant proposes to make an In-Lieu Fee contribution to the Maine Natural Resource Conservation Program in the amount of \$281,649 to compensate for the permanent alteration of 54,022 square feet of freshwater wetlands. Prior to the start of construction, the applicant must submit a payment in the amount of \$281,649, payable to "Treasurer, State of Maine," and directed to the attention of the In-Lieu Fee Program Administrator at 17 State House Station, Augusta, Maine 04333.

The Department finds that the applicant has avoided and minimized freshwater wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging practicable site alternative that meets the overall purpose of the project, provided that prior to the start of project construction, the applicant submits the In-Lieu Fee payment as described above.

## B. HABITATS

The applicant's proposed project will alter 62,195 square feet (1.43 acres) of upland within the critical terrestrial habitat of significant vernal pools and wetlands associated with habitat for rare, threatened, and endangered species. According to the Department's Geographic Information System database there are no mapped Essential Habitats located at the site. The Maine Natural Areas Program's assessment, in a letter dated March 26, 2017, was that its existing maps and documents did not include any records documenting the existence of rare or unique botanical features within the area proposed for development on the project site.

### 1) Significant Vernal Pools

To address potential impacts to significant vernal pools and wetlands associated with habitat for rare, threatened, and endangered species the applicant submitted, in addition to its wetland report, a vernal pool survey of the project area. The vernal pool survey identified four vernal pools (VP 54-2, VP 54-3, VP 54-4, and VP 56-1) that meet the definition of significant vernal pool, pursuant to the Department's *Significant Wildlife Habitat* Rules, Chapter 335 § 9(A)(6)&(7). As a result, the freshwater wetlands where these significant vernal pools are located are classified as wetlands of special significance, pursuant to Chapter 310 § 4 of the Department's *Wetlands and Waterbodies* Rules. The applicant determined that two other vernal pools (VP 13-1 on the west side and VP 19-1 on the east side of the project site) were the result of excavation. Although each of those pools contained high numbers of amphibian egg masses, they are not considered significant vernal pools because they are human-made. VP 13-1 is within 500 feet of the emergent wetland to the south and the area between the two waterbodies is suspected by staff from the Maine Department of Inland Fisheries and Wildlife (MDIFW) to be used as a travel corridor by ribbon snakes and spotted turtles. Spotted turtles are listed as threatened under the Maine Endangered Species Act, and ribbon snakes are listed as species of special concern.

Of the four significant vernal pools, VP 54-4 was determined to be significant because a 2008 survey documented the presence of fairy shrimp in the pool. Although vernal pool surveys conducted in 2015 and 2016 did not document the presence of any indicator species in this vernal pool, based on Chapter 335 of the Department's rules, VP 54-4 is still considered to be a significant vernal pool. VP 54-4 is located less than 100 feet from the clearing limit of the existing highway, and the proposed road widening for the toll booth lanes will further encroach on the critical terrestrial habitat of this vernal pool, reducing the existing habitat. This vernal pool is separated from the highway by a line of ledge that runs parallel to the Turnpike. Approximately 53,729 square feet of upland and 4,064 square feet of wetland will be altered within the critical terrestrial habitat of VP 54-4.

The proposed access drive that extends from Chase's Pond Road to the administration building will be located between the significant vernal pools on the 32.6-acre parcel owned by the applicant, and will encroach on the critical terrestrial habitat of significant

vernal pools VP 54-2 and VP 56-1. Approximately 8,466 square feet of upland will be altered within the critical terrestrial habitat of these significant vernal pools.

Following an August 28, 2015 site visit by staff from the MDIFW and the Department, which was attended by representatives of the applicant, MDIFW stated in comments dated November 13, 2015 that the loss of forested habitat and potential changes to pool hydrology from the proposed project could negatively affect VP 54-4. MDIFW also stated that the access drive will have an indeterminate negative effect on wildlife movements between the significant vernal pools on either side of the access drive.

Chapter 335 of the Department's rules interprets and elaborates on the NRPA criteria pertaining to wildlife habitat. The rules guide the Department in its determination of whether a project's impacts would be unreasonable. A proposed project would generally be considered to result in an unreasonable impact if it would degrade the significant wildlife habitat, disturb the subject wildlife, or affect the continued use of the significant wildlife habitat by the subject wildlife, either during or as a result of the activity, and there is a practicable alternative to the project that would be less damaging to the environment. Like the analysis for wetland impacts, each application for an NRPA permit that involves a significant vernal pool alteration must provide an analysis of alternatives. The extent and severity of the impacts are considered with the practicability of any alternatives in the determination of whether the impacts would be unreasonable.

a) Avoidance.

The applicant submitted an alternatives analysis for the proposed project completed by Sebago Technics, Inc. A full discussion of the applicant's alternatives analysis and the evidence submitted on this issue by the Intervenors and members of the public, as well as the Department's findings on the practicability of the AET alternative, are in Finding 4(A) of this Order.

The applicant stated that its proposed access drive from Chase's Pond Road to the administration building that will service the toll plaza is designed to avoid any direct impact on the vernal pool depressions and, to the greatest extent practicable, the wetlands on the site. Given the location and orientation of the significant vernal pools and other protected natural resources, the applicant stated that impacts to the critical terrestrial habitat of the significant vernal pools cannot be entirely avoided.

As with wetland impacts, the reasonableness of impacts to significant vernal pools is based primarily on the determination of the extent of any loss in habitat area, functions, or values. The proposed project will encroach on the critical terrestrial habitat of three significant vernal pools, but will not affect any of the pool depressions. Encroachment on VP 54-4 is unavoidable given the pool's proximity to the existing highway. VP 54-4 was determined to be significant because of the presence of fairy shrimp. Because fairy shrimp are only found in the pool depression and do not migrate from pool to adjacent upland or wetland, the loss of critical terrestrial habitat will not affect the continued used of this vernal pool by fairy

shrimp, provided the forest canopy over the pool depression remains intact. Approximately 25 feet of natural forest cover will remain around VP 54-4 following completion of the proposed project. The construction and use of the access road from Chase's Pond Road to the administration building will result in only minimal disturbance to the critical terrestrial habitat of VP 56-1, VP 54-2, and VP 54-3. The access road could affect the movement of wildlife that use the pools. Given that the access road will be located in the uplands, and avoids wetlands and drainage swales leading to or from the significant vernal pools, and that the majority of the forest canopy and duff layer around the pools will remain undisturbed, impacts to wildlife movement through this area are expected to be minimal.

As with the wetland impacts, the Department finds that the amount of impact to the edges of the significant vernal pool habitat is not unreasonable given the drawbacks of the AET alternative, which would otherwise allow an avoidance of impacts to the critical terrestrial habitat. The impacts resulting from the proposed project are not anticipated to result in a loss in significant vernal pool functions or values. The Department finds that the practicability of implementing an AET system is low, and that the impacts to significant vernal pools are reasonable in light of the public need for the project and the project purpose.

b) Minimal Alteration and Habitat Maintenance.

The amount of significant wildlife habitat to be altered must be kept to the minimum amount necessary for meeting the overall purpose of the project. The applicant stated that it considered several design layouts and chose the one that meets the project goals while minimizing impacts to the habitat, and that due to the location of the significant vernal pools, there is only one possible point of entry for the access road from Chase's Pond Road to the location of the proposed administrative building that avoids the critical terrestrial habitat around the significant vernal pools and other wetlands. The access drive and development around the administration building were configured to limit disturbance of the critical terrestrial habitat around the significant vernal pools to the outermost edges of the 250-foot setback of the critical terrestrial habitats. The applicant is proposing to alter a small portion of the critical terrestrial habitat of significant vernal pools VP 56-1, VP 54-2, and VP 54-3. As noted above, the eastern portion of the critical terrestrial habitat associated with VP 54-4 has already been compromised by the existing Turnpike, and the proposed project will expand the highway closer to the vernal pool depression.

The Department finds that the proposed location of the access road and administration building results in the minimum amount of impacts necessary for the project.

c) Compensation.

In accordance with Chapter 335 §3(D)(1), compensation is required when the Department determines that an impact to significant wildlife habitat will cause habitat functions or values to be lost or degraded as identified by the Department. After



considering several compensation options, the applicant proposes to make a contribution into the In-Lieu Fee (ILF) program of the Maine Natural Resource Conservation Program. Compensation for project impacts is discussed further in Finding 4(A).

The Department finds that the applicant has avoided and minimized impacts to significant wildlife habitat to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project provided that, prior to the start of construction, the applicant submits the ILF payment as described in Finding 4(A).

The applicant's compliance with Chapter 335 is not an independent criterion equivalent to the standards of 38 M.R.S. § 480-D that must be met as a condition of approval, but the availability of alternatives and their practicability are factors considered by the Department in its determination as to whether the proposed project will result in unreasonable impacts. The Department balances the extent of the impacts to the resource and the relevant uses of the resource with the availability and feasibility of the alternatives. Based on a balancing of the extent of the impacts and the nature of the alternatives in light of the purpose of the project, the Department finds that the proposed project will not result in unreasonable impacts under the wildlife habitat criteria set forth in 38 M.R.S. § 480-D.

## 2) Rare, Threatened, and Endangered Species

The applicant identified several rare, threatened, and endangered species that may be present within the project site. These include the northern long-eared bat, the New England cottontail rabbit, the ribbon snake, and the spotted turtle.

The application included a bat acoustic survey performed by Stantec Consulting Services, Inc, and dated September 22, 2015. During two nights of operation in July 2015, sensors identified almost 1,500 bat passes. Of these, five passes were determined to be from northern long-eared bats. Based on the limited number of passes from northern long-eared bats, the survey concluded that this species of bat is not expected to use the forests in and around the project site. The Department finds that the proposed project will not unreasonably affect the forested habitat used by northern long-eared bats.

The application included excerpts from a New England cottontail pellet survey performed by Normandeau Associates, Inc. and dated July 2010. The report stated that the project area contains potential habitat for cottontails at Mile 7.3, the location of the existing toll plaza. Although no evidence of the presence of New England cottontails was found, the report did not consider the absence of evidence of cottontails in the area to be conclusive. In its comments, dated November 13, 2015, MDIFW stated that although New England cottontails have not been documented at the site of the proposed toll plaza and no evidence of their presence was noted during the August 28, 2015 site visit, thick brush cover which allows for dispersal of rabbits can be found along the east side of the project site and would be the most likely location for an impact to New England cottontails to

occur, if they are present. The west side of the project site had very little early successional habitat which would be used by New England cottontails. The Department finds that the proposed project will not unreasonably affect the habitat used by New England cottontails.

MDIFW commented that populations of ribbon snake and spotted turtles have been documented at the emergent wetland located on the west side of the project site and north of the proposed administration building. The April 2016 vernal pool survey documented the presence of a spotted turtle at VP 13-1 which is approximately 300 to 400 feet north of the emergent wetland. MDIFW commented that it is likely that both snakes and turtles travel between these two areas following a seasonal outlet from the emergent wetland, which is channelized in a roadside ditch running north along the highway before turning northwest and into the woods, returning to a natural stream. MDIFW further commented that maintaining the hydrological connection between these two wetlands is critical to the reptiles that move through this area. The proposed project includes lane widening and installation of new side slopes beginning at a point approximately 150 feet south of the outlet of the emergent wetland and continuing approximately 450 feet north, beyond the point where the stream cuts northwest into the woods. Approximately 20,287 square feet of upland; 3,900 square feet of wetland; and 20 linear feet of stream between the emergent wetland and VP 13-1 will be altered. The applicant proposes to maintain the natural drainage between the emergent wetland and VP 13-1; thus, although altered, the hydrologic connection between the two waterbodies will remain. The cumulative wildlife habitat impacts resulting from the proposed project will be approximately 25,900 square feet, including approximately 5,619 square feet of wetland at four locations and approximately 20 linear feet of stream channel. The Department finds that the applicant's plan will adequately protect the travel corridor for snakes and turtles.

During the August 28, 2015 site visit, a spotted turtle nest was found by MDIFW staff next to a culvert on the eastern edge of the highway. The discovery provided new evidence of a breeding population on the east side of the project site. At this location, the proposed project will encroach approximately 20 to 25 feet into the adjacent wetland where the turtle nest was found.

In its November 13, 2015 comments, MDIFW stated that the proposed project is expected to adversely impact populations of ribbon snakes and spotted turtles because of direct impacts to suitable wetland habitat and forested buffers and from increased noise, lights, and ground vibration. MDIFW described several mitigation options which the applicant could propose to compensate for these impacts. One option was to replace a 36-inch culvert crossing north of the emergent wetland with bridges or box culverts to facilitate wildlife movement under the Turnpike to allow connectivity between the two populations of turtles. The applicant did not propose this form of mitigation due to the high costs associated with a bridge or large culvert crossing, and due to the length of the culvert that will lack natural light that is desirable for a wildlife tunnel.

The applicant consulted with MDIFW to develop acceptable plans to address potential impacts to wildlife and wildlife habitat pursuant to the Maine Endangered Species Act.

To account for the predicted loss of wildlife habitat, the applicant and MDIFW negotiated a Memorandum of Understanding (MOU) that formalizes a proposed mitigation plan for impacts to wildlife habitat resulting from the proposed project if a permit is issued for the project. The MOU was signed on October 17, 2016 and included the applicant, MDIFW and the Maine Department of Transportation (MDOT) as signatories. In the MOU, the applicant agrees to place the remaining undeveloped portion of the 32.6-acre parcel adjacent to the Turnpike under a conservation easement for the protection of habitat for spotted turtles, ribbon snakes, and other species, to erect wildlife barrier fencing in the vicinity of the new toll plaza, and to provide funds, in the amount of \$170,000, to the MDOT for a planned wildlife connectivity crossing (including wildlife barrier fencing) at a site on State Route 236 in Eliot, approximately 11 miles to the southwest. A copy of the MOU was included in the application. The wildlife connectivity crossing, which would be a tunnel under State Route 236, would be located on a stretch of road that bisects two wetland areas, where there has been a high incidence of documented turtle mortality as a result of turtles trying to cross the road. The Department finds that this proposed connectivity crossing proposal will reduce turtle mortality along State Route 236 and mitigates for encroachment of turtle habitat along the project site.

The final design specifications of the wildlife barrier fencing and its specific location around the project site have not been determined. Both the applicant and MDIFW agreed that, prior to the start of construction, the applicant will submit to the Department final design specifications and plans showing the location of the wildlife barrier fencing as approved by MDIFW.

At the time of the signing of the MOU, the final language of the conservation easement and its specific location around the project site had not been determined. Both the applicant and MDIFW agreed that, prior to the start of construction, the applicant will submit to the Department the recorded conservation easement protecting the parcel identified in the MOU. The Department finds that the conservation easement on the remaining portion of the 32.6-acre parcel and wildlife barrier fencing along the Turnpike will protect the habitat and reduce mortality of spotted turtles on the Turnpike.

In accordance with 38 M.R.S. §480-D(3), the Department may consider proposed mitigation in determining whether an activity will result in an unreasonable harm to significant wildlife habitat. The Department finds that the applicant has made adequate provision for compensation for the potential impacts to wildlife and wildlife habitat provided that the applicant submits the recorded conservation easement and final design specifications of the wildlife barrier fencing and plans showing the location of the wildlife barrier fencing to the Department for review prior to the start of construction.

The Department finds that the activity will not unreasonably harm any freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life provided that the applicant complies with the requirements of the MOU, and final design specifications and plans showing the location of the wildlife barrier fencing and the

recorded conservation easement are submitted to the Department for review prior to the start of construction.

5. WATER QUALITY:

The waters that are or may be affected by the proposed project are currently classified (38 M.R.S. §468(9)) as Class B. As discussed in Finding 3, the applicant proposes to use erosion and sediment control during construction to minimize impacts to water quality from siltation.

The Department does not anticipate that the proposed project will violate any state water quality law, including those governing the classification of the State's waters.

6. OTHER NRPA STANDARDS:

The Department finds, based on the design, proposed construction methods, and location of the proposed project, the proposed project will not interfere with the natural flow of any surface or subsurface waters (38 M.R.S. §480-D(4)) and will not cause or increase flooding (38 M.R.S. §480-D(6)). The proposed project is not located in a coastal sand dune system (38 M.R.S. §480-D(7)), is not a crossing of an outstanding river segment (38 M.R.S. §480-D(8)), does not involve dredge spoils disposal or the transport of dredge spoils by water (38 M.R.S. §480-D(9)), and does not involve withdrawal of groundwater from a significant groundwater well (38 M.R.S. §480-D(10)).

7. SITE LOCATION OF DEVELOPMENT ACT GENERAL PERMIT:

The applicant filed a Notice of Intent to Comply with attachments providing evidence to demonstrate that for the proposed project, it will comply with the terms and conditions of the General Permit for the Maine Turnpike Authority, Department Order DEP #L-26825-TP-A-N, dated February 29, 2016. A development authorized by the General Permit is required to meet all the applicable requirements of the Site Law pursuant to 38 M.R.S. § 484, the specific conditions listed in the General Permit, and any conditions attached to an approval of a Notice of Intent.

Standards of the General Permit.

A. Financial Capacity (38 M.R.S. § 484(1)): The applicant is required to have the financial capacity and technical ability to develop the proposed project in a manner consistent with state environmental standards and consistent with the Site Law.

Funding commitments are authorized by the applicant's Board of Directors through the applicant's Four Year Capital Investment Plan, Thirty Year Financial Plan, and annual Reserve Maintenance Deposit requirements. The applicant submitted a copy of the draft 4-Year Capital Investment Plan for the period 2018-2021 which listed the proposed project. The Plan indicates that this project was funded in 2017.

The Department finds that the applicant has demonstrated adequate financial capacity to comply with Department standards.

B. No Adverse Effect on the Natural Environment (38 M.R.S. § 484(3)): The construction and operation of the proposed project, may not adversely affect existing uses, scenic character, air quality, water quality or other natural resources.

Analysis of the evidence regarding impacts to the natural environment is found in Findings 2, 4, and 5.

The Department finds that the applicant has demonstrated that the proposed project will not adversely affect the existing uses, scenic character, or natural resources within the Town of York.

C. Soil Types (38 M.R.S. § 484(4)): The proposed project is required to be built on soil types that are suitable to the nature of the undertaking.

The applicant employs or contracts with geotechnical engineers to evaluate the suitability of existing soils and determine the need for engineering practices to address soil limitations. The applicant submitted a soil survey map based on the soils found at the project site and a geotechnical report. This report was prepared by a professional engineer and reviewed by staff from the Division of Environmental Assessment (DEA) of the Bureau of Water Quality.

The Department finds that, based on this report and DEA's review, the soils on the project site present no limitations to the proposed project that cannot be overcome through standard engineering practices.

D. Storm Water Management and Erosion Control (38 M.R.S. § 484(4-A)): The proposed project is required to comply with the Storm Water Management and Erosion Control Standard of the Site Law through implementation of the General Permit requirements. The proposed project triggers the thresholds of the Basic, General, and Flooding Standards of the Chapter 500, *Stormwater Management* (06-096 C.M.R. ch. 500, effective August 12, 2015), thus the applicant is required to apply design and engineering measures to the extent practicable such that project drainage avoids adverse impacts to offsite property resulting from project-related peak flows.

A full analysis of the evidence pertaining to erosion control is found in Finding 3 above.

The applicant submitted a stormwater management plan based on the Basic, General, and Flooding standards contained in Chapter 500 Stormwater Management rules. The proposed stormwater management system consists of drainage swales, catch basins, a subsurface drainage system, and nine vegetated underdrained soil filters. The stormwater management system proposed by the applicant was reviewed by, and revised in response to comments from, the Bureau of Land Resources. After a final review, the Bureau of Land Resources commented that the proposed stormwater management system is

designed to the greatest extent practicable with the General and Flooding Standards contained in Chapter 500.

Based on the stormwater system's design and the Bureau of Land Resources' review, the Department finds that the applicant has made adequate provision to ensure that the proposed project will meet the General Standards contained in Chapter 500 to the greatest extent practicable.

E. Groundwater (38 M.R.S. § 484(5)): The applicant is required to construct and operate the proposed project in a manner that will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur.

The applicant's engineering staff and consultants will develop viable and sustainable water extraction practices for both potable and production systems. The applicant's Environmental Coordinator, in conjunction with its environmental consulting firm, has developed and continuously updates sound management practices for, and training in, the storage of hazardous materials. These actions are directed toward minimizing impacts to waters recharging the groundwater regime.

The project site is not located over a mapped sand and gravel aquifer. The proposed project does not propose any withdrawal from, or discharge to, the groundwater.

The Department finds that the proposed project will not have an unreasonable adverse effect on groundwater quality or quantity.

F. Infrastructure (38 M.R.S. § 484(6)): The applicant is required to make adequate provisions for utilities, including water supplies, sewerage facilities and solid waste disposal required for the proposed project, and the proposed project may not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services.

The applicant identified approximately 1,500 linear feet of water main within the project area that must be relocated and has initiated coordination with the York Water District to ensure that there will be no unreasonable burden on, disruption of, or interference with, service. Wastewater will be disposed of by an individual subsurface wastewater disposal system designed to meet the requirements of the Maine State Plumbing Code. This information was reviewed by DEA. The applicant's Standard Specifications for contractors provides detailed requirements to ensure that all solid, special, universal, and hazardous wastes associated with transportation projects are managed in accordance with State and Federal Requirements.

The Department finds that the applicant has made adequate provisions for utilities, including water supplies, sewerage facilities and solid waste disposal.

G. Flooding (38 M.R.S. § 484(7)): The proposed project must not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure.

Approximately 0.3 acres of development from the proposed project will be located within the 100-year flood plain. The applicant submitted a stormwater management plan to control stormwater runoff from the project site. Stormwater controls will reduce the rate of runoff on impervious surface not currently treated; thus, increased flooding of the project area or adjacent properties is not anticipated.

The Department finds that the proposed project is unlikely to cause or increase flooding or cause an unreasonable flood hazard to any structure.

H. Blasting (38 M.R.S. § 484(9)): The applicant is required to conduct any blasting for the proposed project in accordance with the standards set forth in 38 M.R.S. § 490-Z (14).

The applicant's Standard Specifications for contractors (Section 105.2.7) provide detailed requirements for blasting. These standard specifications were reviewed by staff from DEA, and based on DEA's, were revised to ensure compliance with 38 M.R.S. § 484(9).

The Department finds that, with those revisions, the applicant has made adequate provision to ensure that any blasting for the proposed project will be conducted in accordance with the standards in 38 M.R.S. § 490-Z (14).

I. Public Involvement: The applicant is required to treat the proposed project as a "Substantial Public Interest Project" under its existing Public Participation Plan, effective May 2010, that includes at least one preliminary public meeting and one final public meeting on the proposed project, depending on the scope of the project and anticipated level of public interest. The applicant is also required to notify the public in accordance with Chapter 2 of the Department's Rules for the proposed project.

The NOI included a list of the public meetings held regarding the proposed project for the period 2006 through 2016. The NOI also included printed material available to attendees of the October 17, 2016 Public Informational Meeting.

The Department finds that the applicant has made adequate provision to ensure that the general public has appropriate notice of the proposed project.

The applicant is authorized to construct the facility in accordance with the applicant's Notice of Intent, received by the Department on October 19, 2016 in accordance with the terms and conditions of the General Permit.

**Natural Resources Protection Act Conclusions**

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to the Natural Resources Protection Act, 38 M.R.S. §§ 480-A–480-JJ, and Section 401 of the Federal Water Pollution Control Act:

- A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses provided that a final photometric plan is submitted to the Department prior to the start of construction, as outlined in Finding 2.
- B. The proposed activity will not cause unreasonable erosion of soil or sediment provided that the final erosion control plan is submitted to the Department prior to the start of construction as discussed in Finding 3.
- C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.
- D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life provided that the applicant complies with the requirements of the MOU with MDIFW and DOT and final design specifications and plans showing the location of the wildlife barrier fencing and the recorded conservation easement are submitted to the Department prior to the start of construction as outlined in Finding 4; and that, prior to the start of construction, the applicant makes a contribution to the ILF program as discussed in Finding 4.
- E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.
- F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.
- G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.
- H. The proposed activity is not on or adjacent to a sand dune.
- I. The proposed activity is not on an outstanding river segment as noted in 38 M.R.S. § 480-P.



THEREFORE, the Department APPROVES the above noted application of the MAINE TURNPIKE AUTHORITY to construct a new barrier toll plaza as described in Finding 1, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

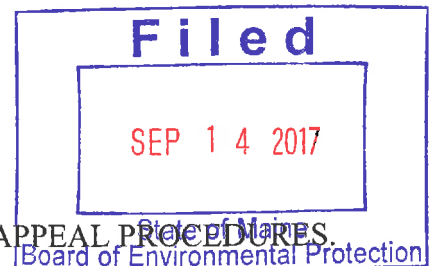
1. Standard Conditions of Approval, a copy attached.
2. The applicant shall take all necessary measures to ensure that its activities or those of its agents do not result in measurable erosion of soil on the site during the construction of the project covered by this approval.
3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.
4. Prior to the start of construction, the applicant shall submit the recorded conservation easement to the Department.
5. Prior to the start of construction, the applicant shall submit a final photometric plan to the Department for review.
6. Prior to the start of construction, the applicant shall submit the erosion control plan to the Department for review and approval.
7. Prior to the start of construction, the applicant shall submit final design specifications and plans showing the location of the wildlife barrier fencing to the Department for review.
8. Prior to the start of construction, the applicant shall submit a payment in the amount of \$281,649, payable to "Treasurer, State of Maine", to the attention of the In-Lieu Fee Program Administrator at 17 State House Station, Augusta, Maine 04333.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 14<sup>th</sup> DAY OF September, 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie [Signature] for  
For: Paul Mercer, Commissioner



PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

RLG/L27241ANBN/ATS#81093&81263



## Natural Resources Protection Act (NRPA) Standard Conditions

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THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCES PROTECTION ACT, 38 M.R.S. § 480-A ET SEQ., UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

- A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.
- B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.
- C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.
- D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.
- E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.
- F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.
- G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.
- H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.



# DEP INFORMATION SHEET

## Appealing a Department Licensing Decision

**Dated: March 2012**

**Contact: (207) 287-2811**

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### **SUMMARY**

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

### **I. ADMINISTRATIVE APPEALS TO THE BOARD**

#### **LEGAL REFERENCES**

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

#### **HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD**

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

#### **HOW TO SUBMIT AN APPEAL TO THE BOARD**

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

## **WHAT YOUR APPEAL PAPERWORK MUST CONTAIN**

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status.* The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

## **OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD**

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

## **WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD**

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

## **II. JUDICIAL APPEALS**

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

### **ADDITIONAL INFORMATION**

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

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**Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.**

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APPENDIX F

USACE MAINE GENERAL PERMIT  
AUTHORIZATION LETTER

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REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS  
696 VIRGINIA ROAD  
CONCORD, MASSACHUSETTS 01742-2751

Regulatory Division  
CENAE-RDC  
File Number: NAE-2007-01211

Sara Zografos  
Maine Turnpike Authority  
2360 Congress Street  
Portland, Maine 04102

Dear Ms. Zografos:

We have reviewed your application to fill approximately 58,086 s.f. of freshwater wetlands adjacent to the Maine Turnpike at York, Maine in order to construct a replacement for the existing deteriorated and deficient York Toll Plaza.

Based on the information you have provided, we have determined that the proposed activity, which includes a discharge of dredged or fill material into waters of the United States, including wetlands, will have only minimal individual or cumulative environmental impacts. Furthermore, we have determined that the proposed replacement facility represents the least environmentally damaging practicable alternative. Therefore, this work is authorized as a Category 2 activity under the enclosed Federal permit known as the Maine General Permit (GP). This work must be performed in accordance with the terms and conditions of the GP and also in compliance with any additional special condition(s).

You are responsible for complying with all of the GP's requirements. Please review the enclosed GP carefully, in particular the GP conditions beginning on Page 5, to familiarize yourself with its contents. You should ensure that whoever does the work fully understands the requirements and that a copy of the GP and this authorization letter are at the project site throughout the time the work is underway.

This authorization does not obviate the need to obtain other Federal, state, or local authorizations required by law, as listed on Page 3 of the GP. Performing work not specifically authorized by this determination or failing to comply with any special condition(s) provided above or all the terms and conditions of the GP may subject you to the enforcement provisions of our regulations.

This authorization becomes valid only after the Maine Department of Environmental Protection (DEP) issues or waives Water Quality Certification (WQC) as required under Section 401 of the Clean Water Act. In the event the DEP denies the 401 WQC, this determination becomes null and void. The address of the DEP regional office for your area is provided on Appendix D of the attached GP.



This authorization presumes that the work as described above and as shown on your plans noted is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to this office.


This authorization expires on October 13, 2020. You must commence or have under contract to commence the work authorized herein by October 13, 2020 and complete the work by October 13, 2021. If you do not, you must contact this office to determine the need for further authorization before beginning or continuing the activity. We recommend you contact us *before* this permit expires to discuss a time extension or permit reissuance.

You must contact us immediately to discuss modification of this authorization if you change the plans or construction methods for work within our jurisdiction. This office must approve any changes before you undertake them.

We continually strive to improve our customer service. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at [http://corpsmapu.usace.army.mil/cm\\_apex/f?p=regulatory\\_survey](http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey).

Please contact Jay Clement, of my staff, at our Manchester, Maine Project Office at (207) 623-8367 if you have any questions.

Sincerely,

  
Frank Del Giudice  
Chief, Permits & Enforcement Branch  
Regulatory Division

Enclosures



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS  
696 VIRGINIA ROAD  
CONCORD, MASSACHUSETTS 01742-2751

MAINE GENERAL PERMIT (GP)  
AUTHORIZATION LETTER AND SCREENING SUMMARY

SARA ZOGRAFOS  
MAINE TURNPIKE AUTHORITY  
2360 CONGRESS STREET  
PORTLAND, MAINE 04102

CORPS PERMIT # NAE-2007-01211  
CORPS PGP ID# 16-517  
STATE ID# NRPA

DESCRIPTION OF WORK:

Fill approximately 58,086 s.f. of freshwater wetlands adjacent to the Maine Turnpike, in the vicinity of Mile 8.8, at York, Maine in order to construct a replacement for the existing deteriorated and deficient York Toll Plaza. This work is shown on the attached plans entitled "PROJECT LOCATION MAP OF SOUTHERN MAINE TOLL PLAZA" in one sheet dated "3/18/2016", "YORK TOLL PLAZA" in two sheets dated "06/17/16", "YORK TOLL PLAZA" in 16 sheets revised "01/11/17", and "I-95 CROSS SECTIONS" in 38 sheets dated "08/16".

LAT/LONG COORDINATES : 43 179284° N -70.649289° W USGS QUAD: YORK HARBOR, ME

I. CORPS DETERMINATION:

Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine General Permit (GP). Accordingly, we do not plan to take any further action on this project.

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed GP carefully, including the GP conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 37 of the GP (page 16) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GP on October 12, 2020. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 12, 2021.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.**

II. STATE ACTIONS: PENDING [ X ], ISSUED[ ], DENIED [ ] DATE: \_\_\_\_\_

APPLICATION TYPE: PBR: \_\_\_\_\_, TIER 1: \_\_\_\_\_, TIER 2: \_\_\_\_\_, TIER 3: X, LUPC: \_\_\_\_\_, DMR LEASE: \_\_\_\_\_, NA: \_\_\_\_\_

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 11/10/16 LEVEL OF REVIEW: CATEGORY 1: \_\_\_\_\_ CATEGORY 2: X

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10 \_\_\_\_\_, 404 X 10/404 \_\_\_\_\_, 103 \_\_\_\_\_

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA NO, USF&WS NO, NMFS NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Manchester, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at <http://per2.nwp.usace.army.mil/survey.html>

*Jay L. Clement*  
JAY L. CLEMENT  
SENIOR PROJECT MANAGER  
MAINE PROJECT OFFICE

*FRANK J. DEL GIUDICE* 5-18-2017  
FRANK J. DEL GIUDICE DATE  
CHIEF, PERMITS & ENFORCEMENT BRANCH  
REGULATORY DIVISION



**US Army Corps  
of Engineers**®  
New England District

**PLEASE NOTE THE FOLLOWING GENERAL CONDITIONS FOR  
DEPARTMENT OF THE ARMY  
GENERAL PERMIT  
NO. NAE-2016-01211**

1. This authorization requires you to 1) notify us before beginning work so we may inspect the project, and 2) submit a Compliance Certification Form. You must complete and return the enclosed Work Start Notification Form(s) to this office at least two weeks before the anticipated starting date. You must complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work and any required mitigation (but not mitigation monitoring, which requires separate submittals).
2. The permittee shall assure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.
3. Adequate sedimentation and erosion control devices, such as geotextile silt fences or other devices capable of filtering the fines involved, shall be installed and properly maintained to minimize impacts during construction. These devices must be removed upon completion of work and stabilization of disturbed areas. The sediment collected by these devices must also be removed and placed upland, in a manner that will prevent its later erosion and transport to a waterway or wetland.
4. All exposed soils resulting from the construction will be promptly seeded and mulched in order to achieve vegetative stabilization.
5. Mitigation shall consist of payment of \$56,589.60 to the Natural Resource Mitigation Fund. The completed ILF Project Data Worksheet which must be mailed with a cashiers check or bank draft, made out to "Treasurer, State of Maine", with the permit number noted on the check. The check and worksheet should be mailed to: ME DEP, Attn: ILF Program Administrator, State House Station 17, Augusta, ME 04333. **This authorization is not valid until the permittee provides the Corps with a copy of the check, with the permit number noted on the check.** The ILF amount is only valid for a period of one year from the date on the authorization letter. After that time, the project would need to be reevaluated and a new amount determined.

# IN-LIEU-FEE (ILF) PROJECT DATA WORKSHEET

DEP Invoice # \_\_\_\_\_

*[Note: Will be filled in by ILF Administrator at DEP]*

Project name: Maine Turnpike Authority; York Toll Plaza Replacement

Applicant (s): Maine Turnpike Authority

DEP Permit #: L-27241-TG-A-N

Corps Permit #: NAE-2007-01211

ILF Contribution Amount \$281,649.01

*[Note: Please attach a copy of the check]*

Project address: Maine Turnpike; York, Maine

Biophysical region: Southern Maine; Gulf of Maine Coastal Lowland Subsection

Size of total impact subject to compensation: 58,086 s.f. (1.33 acres)

Resources Impacted: Refer to attached table

DEP Project manager: Green

Corps Project manager: Clement

## Corps ILF Processing Procedure:

Within 3 days of final permit approval the Corps project manager MUST send via e-mail to the ILF Administrator at DEP with the following attachments:

1. A Microsoft word version of this completed ILF project worksheet including the resource impact table. Please make sure that you double check the information to make sure that the worksheet is accurate and reflects the actual impacts that are stated in the permit and the correct biophysical region.

*[Note: The DEP Invoice # section of the worksheet should be left blank and will be filled in by the ILF Program Administrator.]*

2. A copy of a location map for the project site. The map MUST be made in GIS and saved as a pdf and MUST include a call out box to physically locate the project site and enough reference information so that project site can be geo-located on the MNRCP GIS data layer.
3. A pdf copy of the Corps permit for the project.

Corps permittees MUST be instructed to send all required ILF payments to the attention of the ILF Administrator Maine Department of Environmental Protection, State House Station 17, Augusta, Maine 04333. All checks must have the ILF program routing # 014.06A.1776.14 on the memo line.

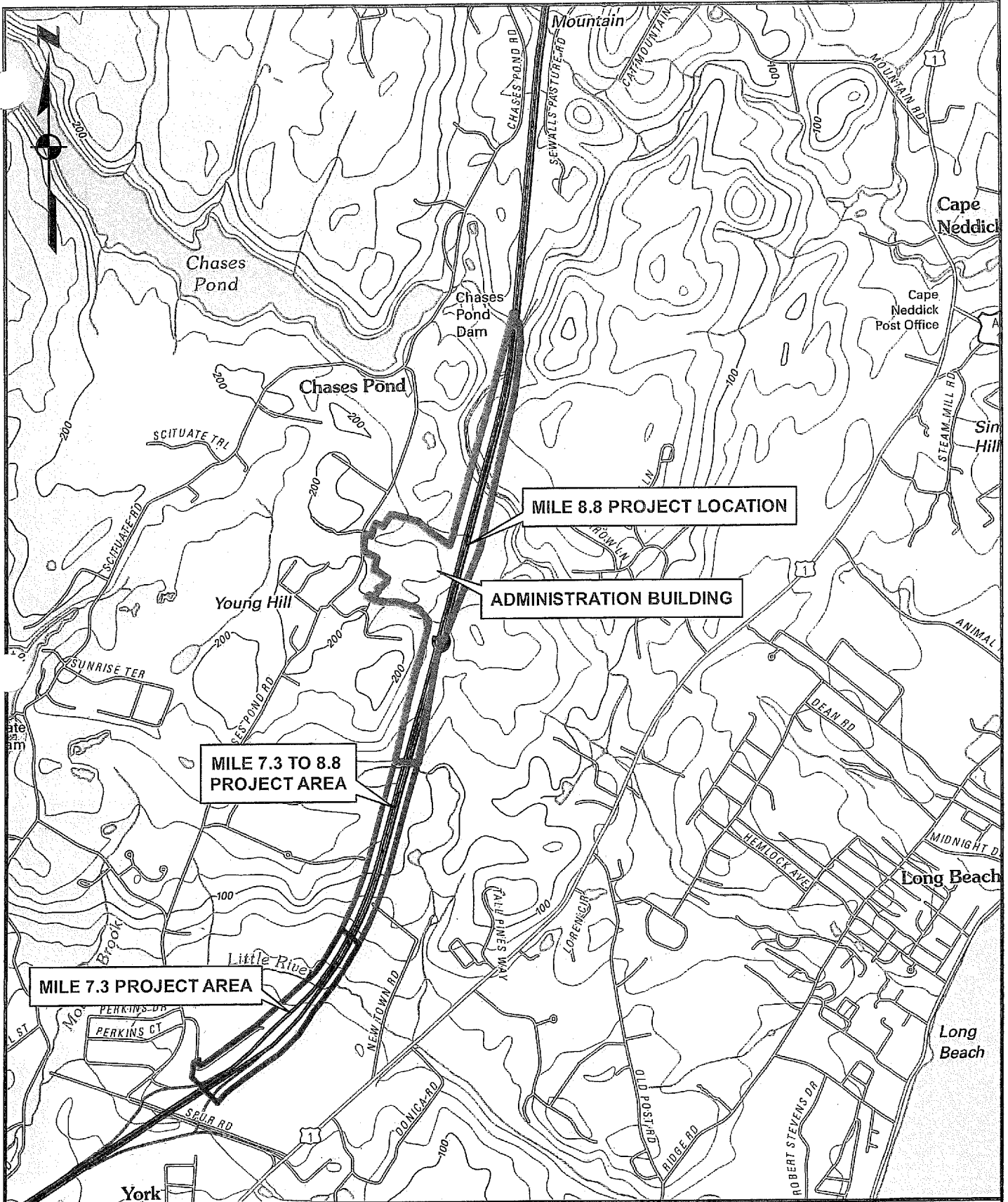
## Resource(s) Impacted:

**Resource Type:** (Wetlands by NWI Type (PFO, PSS, M1, M2, E1, E2, etc), significant vernal pool (SVP), shorebird feeding & staging habitat (Shorebird), inland waterfowl & wading bird habitat (IWWH), tidal waterfowl & wading habitat (TWWH), and river, stream, or brook (RSB).

**Wetland Functions & Values:** Groundwater recharge/discharge (GWR); floodflow alterations (FF); fish & shellfish habitat (FSH); sediment toxicant retention (STR); nutrient removal (NR); production export (PE); sediment/shoreline stabilization (SS); wildlife habitat (WH); recreation (R); education/scientific value (ESV); uniqueness/heritage (UH); and visual quality/aesthetics (VQ).

**Types of impacts:** may include filling, dredging, vegetation conversion (e.g. forested to shrub/scrub), others.

<b>Resource type</b> (list all that apply)	<b>Functions (for wetland impacts)</b> (list all that apply, by resource type)	<b>Type of Impact</b> (by resource type)	<b>Sq Feet Impacted</b> (by resource type)
PFO1	WH, FF, STR, NR, GWR	Filling	54,022
PFO/SVP	WH, FF, STR, NR, GWR, PE	Filling	4,064
<b>Total square feet impacted</b>			58,086



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South Portland, ME 04106  
Tel. 207-260-2100

250 Goddard Rd. - Suite B  
Leicester, ME 04240  
Tel. 207-783-5656

**PROJECT LOCATION MAP  
OF SOUTHERN MAINE TOLL PLAZA**

LOCATION:

MILE MARKER 8.8  
YORK, MAINE

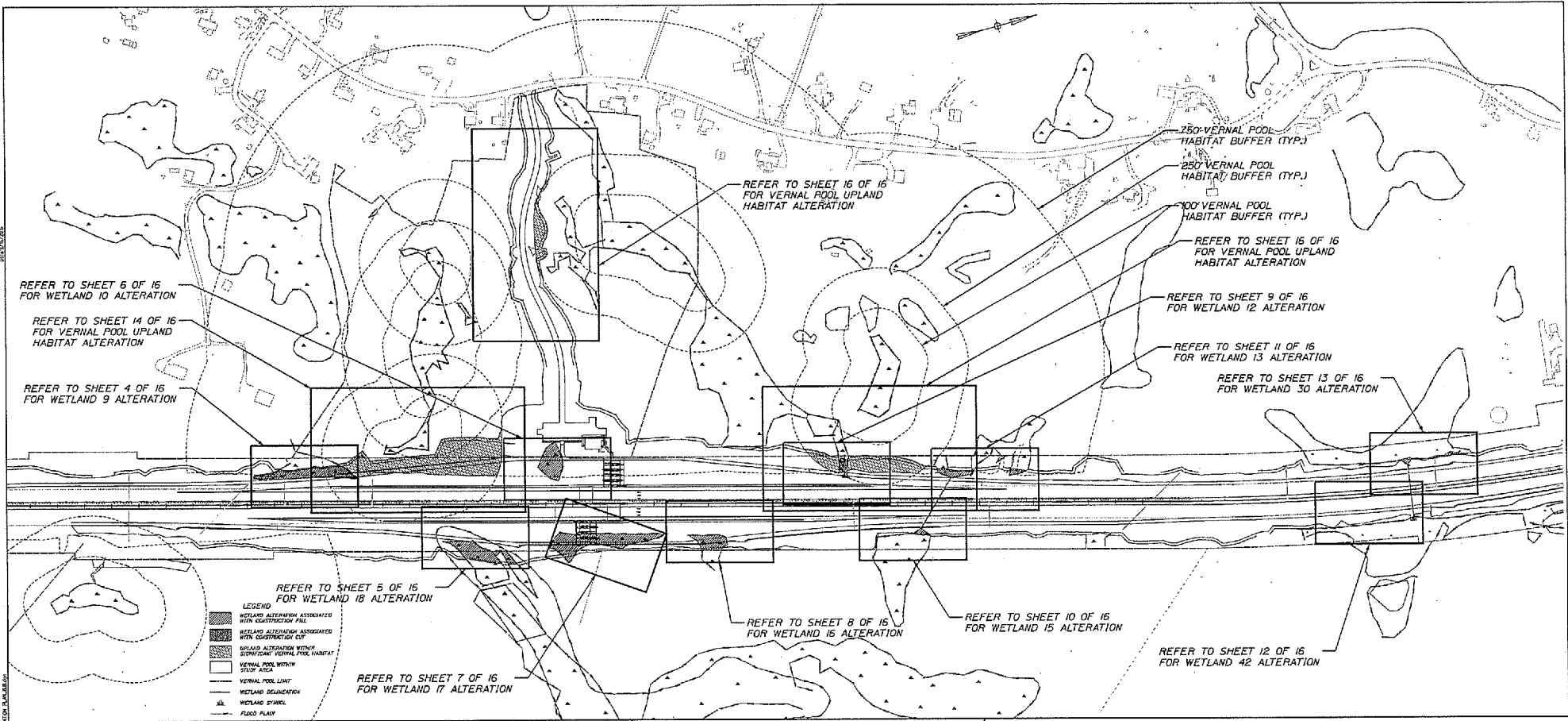
INFORMATION:

2011 USGS QUADRANGLE  
(YORK HARBOR, MAINE)



SCALE: 1" = 2,000'

DATE: 3/18/2016

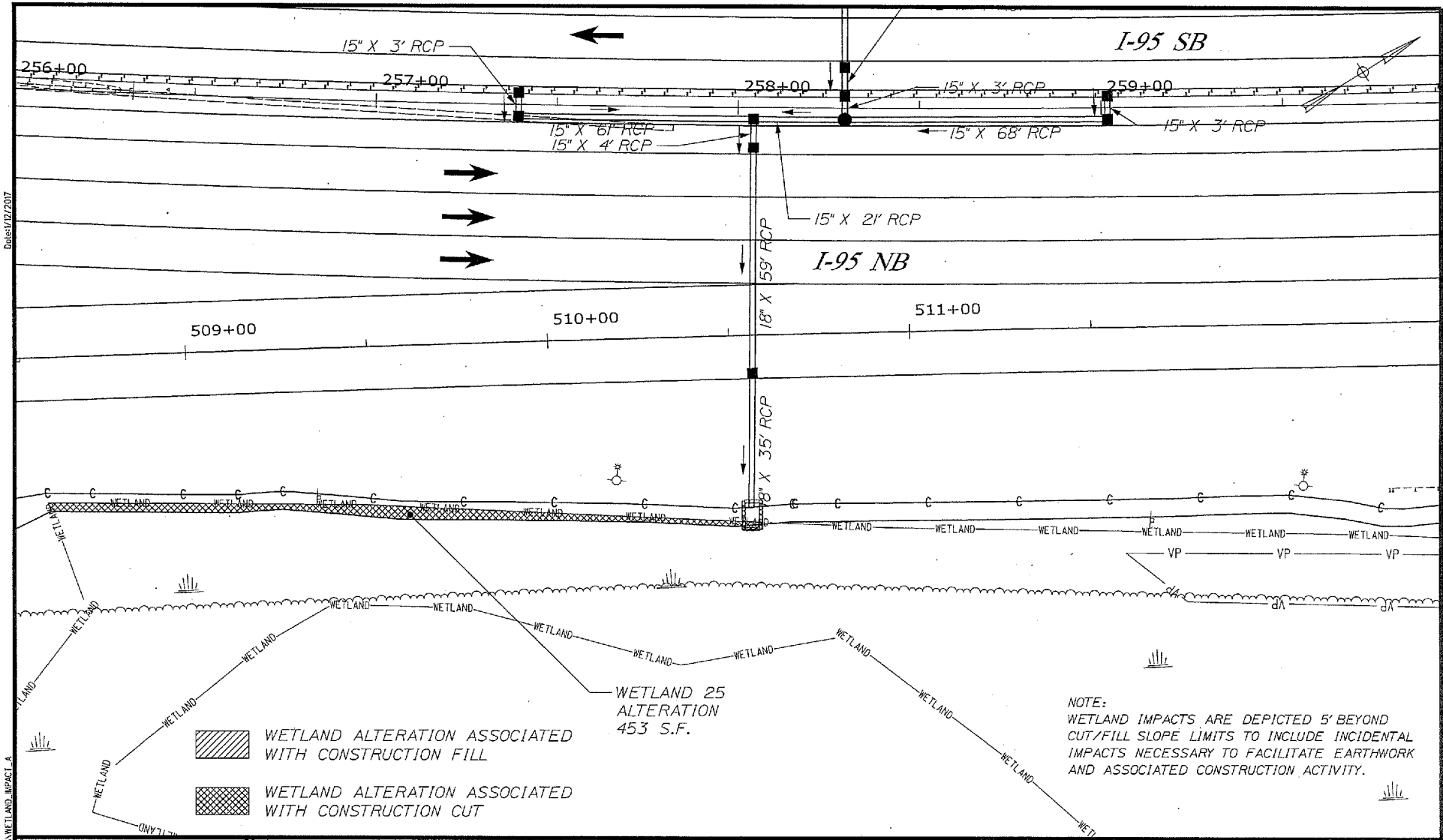


Scale: 0 100 200 Feet		Designed by <b>SEBAGO</b> TECHNICAL SERVICES 78 JOHN ROBERTS ROAD, SOUTH PORTLAND, ME 04106 TEL: 1007-200-2100	THE GOLD STAR MEMORIAL HIGHWAY	YORK TOLL PLAZA WETLAND ALTERATION/COMPENSATION PLAN	CONTRACT: 2007-09 SHEET NUMBER: 0-1 10F1
No. 1 ADDRESS: SURMITAL PROJECT: SURMITAL	By Date 01/15/08 12/17/08 02/10/08 02/10/08	PROJECT MANAGER: S. SANDER, P.E. DRAWN BY: S. SANDER CHECKED BY: S. SANDER	CONTRACT NO.: 2007-09	SHEET NUMBER: 0-1	10F1





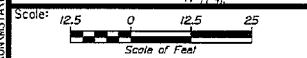
Date: 1/12/2017



WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION FILL  
 WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION CUT

WETLAND 25 ALTERATION 453 S.F.

NOTE:  
WETLAND IMPACTS ARE DEPICTED 5' BEYOND CUT/FILL SLOPE LIMITS TO INCLUDE INCIDENTAL IMPACTS NECESSARY TO FACILITATE EARTHWORK AND ASSOCIATED CONSTRUCTION ACTIVITY.



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No.	Revision	By	Date
1	PROGRESS SUBMITTAL	QAMI	06/20/16
2	MISCELLANEOUS REVISIONS	QAMI	09/01/16
3	UPDATED MAPS	QAMI	09/16/16
4	REV. PER USAGE COMMENTS	QAMI	01/11/17

Designed	By	Date	Checked	By	Date
DLR	DLR	1/11/17	QAMI	QAMI	1/11/17
Drawn	DB	1/11/17	In Charge of	---	---

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TEL (207) 200-2100



THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: R. NORWOOD

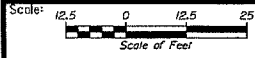
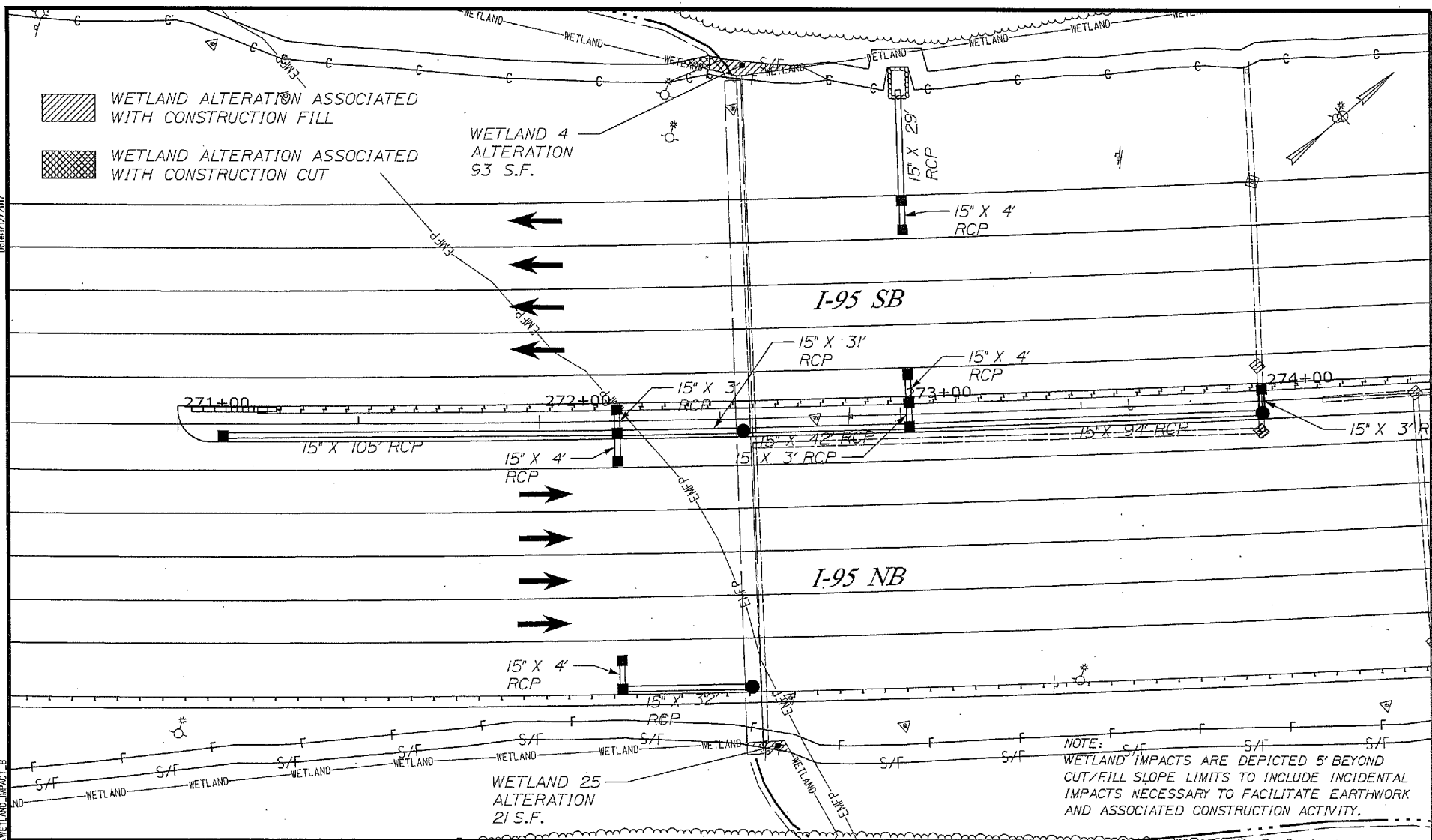
YORK TOLL PLAZA  
WETLAND 25 ALTERATION

SHEET NUMBER: WA-A  
1 OF 16

CONTRACT: 2017.09

Filename: NEWBID\MAINT\WETLAND IMPACT\_A

Date: 1/19/2017  
Filename: ...NEWBORN JUST WETLAND IMPACT.B



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No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	06/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/16/16
4	REV. PER USAGE COMMENTS	OAM	01/11/17

By	Date	By	Date
Designed	DLR 1/11/17	Checked	OAM 1/11/17
Drawn	DR 1/11/17	In Charge of	---

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SUITE 1A  
SOUTH PORTLAND, ME 04108  
TEL (207) 200-2100



THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: R. NORWOOD

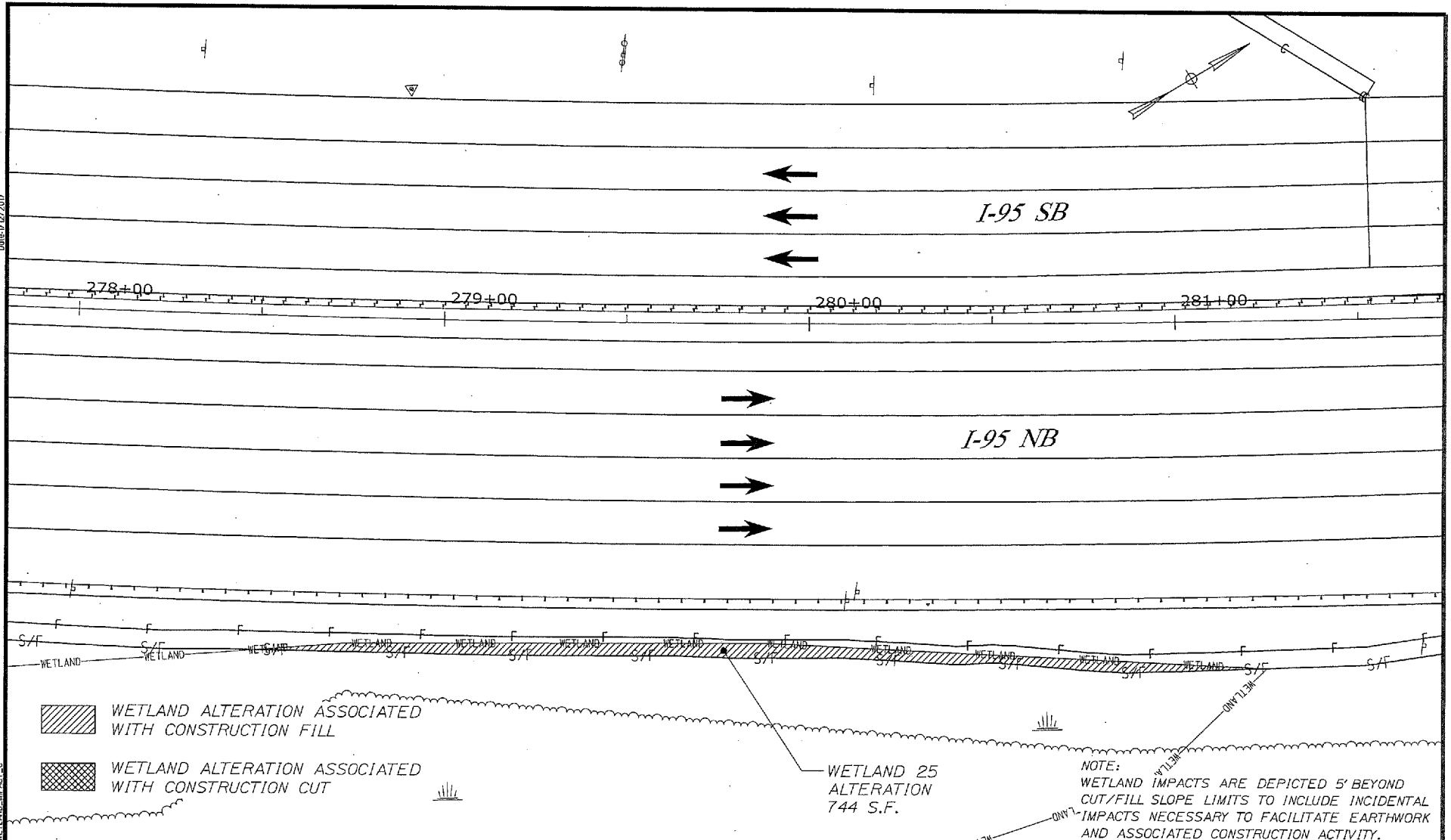
YORK TOLL PLAZA  
WETLAND 4 & 25 ALTERATION


NOTE: S/F WETLAND IMPACTS ARE DEPICTED 5' BEYOND CUT/FILL SLOPE LIMITS TO INCLUDE INCIDENTAL IMPACTS NECESSARY TO FACILITATE EARTHWORK AND ASSOCIATED CONSTRUCTION ACTIVITY.


SHEET NUMBER: WA-B  
2 OF 16

Date: 12/2/2017

Filename: \\NEWBROOK\DATA\WETLAND\_IMPACT\_C

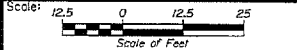


 WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION FILL

 WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION CUT

WETLAND 25 ALTERATION  
744 S.F.

NOTE:  
WETLAND IMPACTS ARE DEPICTED 5' BEYOND CUT/FILL SLOPE LIMITS TO INCLUDE INCIDENTAL IMPACTS NECESSARY TO FACILITATE EARTHWORK AND ASSOCIATED CONSTRUCTION ACTIVITY.



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No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	06/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/16/16
4	REV. PER USAGE COMMENTS	OAM	01/11/17

CONSULTANT PROJECT MANAGER: S. SAWYER, P.E.

Designated	By	Date	Checked	By	Date
DLR	DLR	1/11/17	OAM	OAM	1/11/17
DR	DR	1/11/17	In Charge of	---	--/--

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SUITE 1A  
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TEL (207) 200-2100



**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

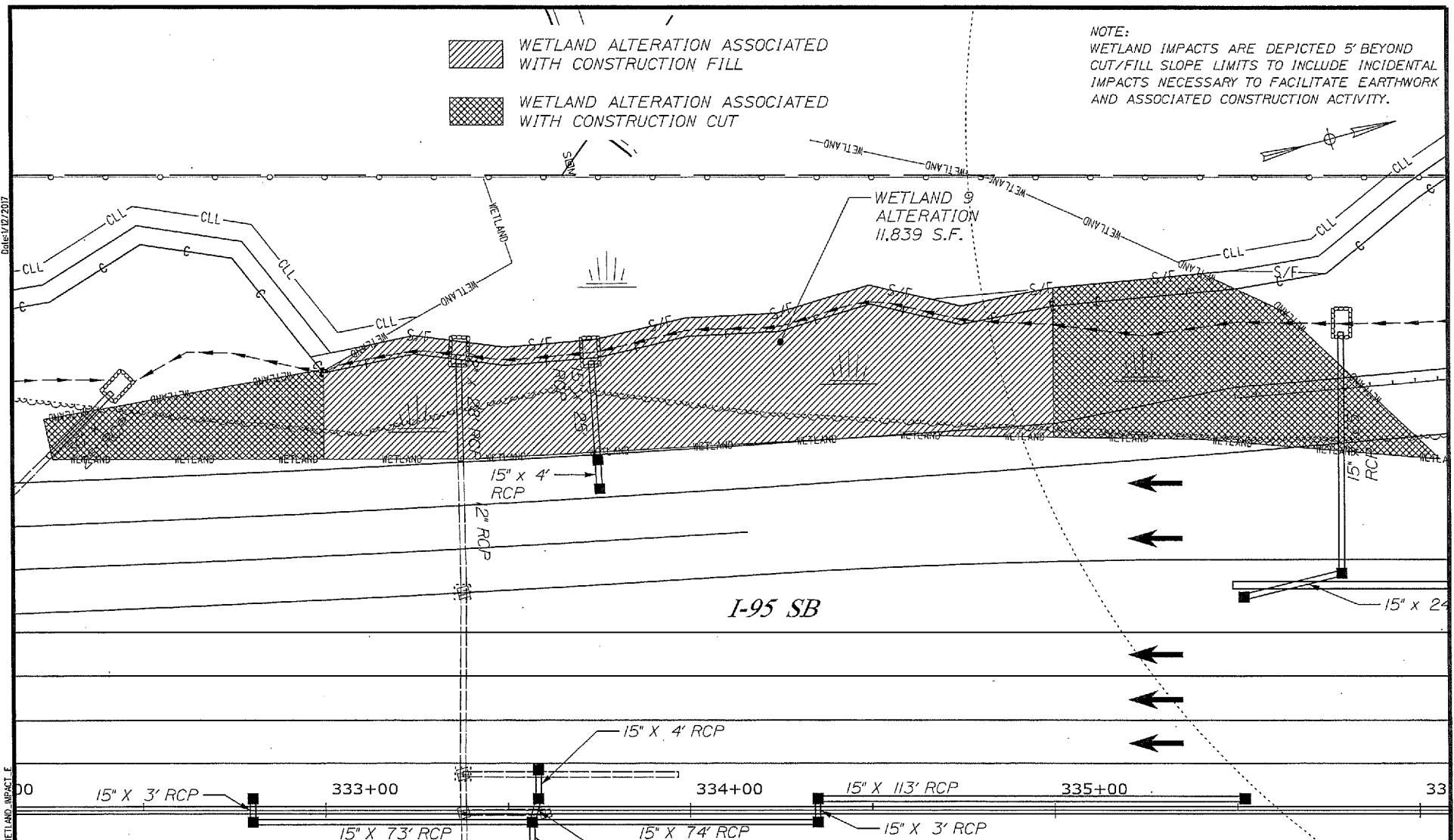
YORK TOLL PLAZA

WETLAND 25 ALTERATION



CONTRACT: 2017.09

SHEET NUMBER: WA-C

3 OF 16

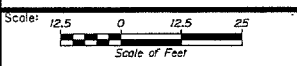


NOTE:  
WETLAND IMPACTS ARE DEPICTED 5' BEYOND CUT/FILL SLOPE LIMITS TO INCLUDE INCIDENTAL IMPACTS NECESSARY TO FACILITATE EARTHWORK AND ASSOCIATED CONSTRUCTION ACTIVITY.

 WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION FILL  
 WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION CUT

Date: 11/02/2017

Filename: \\SEBAGO\NET\WETLAND\_IMPACT.F




No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	06/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/16/16
4	REV. PER USACE COMMENTS	OAM	01/11/17

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By	Date	By	Date
Designed OAM	1/11/17	Checked OAM	1/11/17
Drawn RLM	1/11/17	In Charge of	---

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SUITE 1A  
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TEL (207) 200-2100



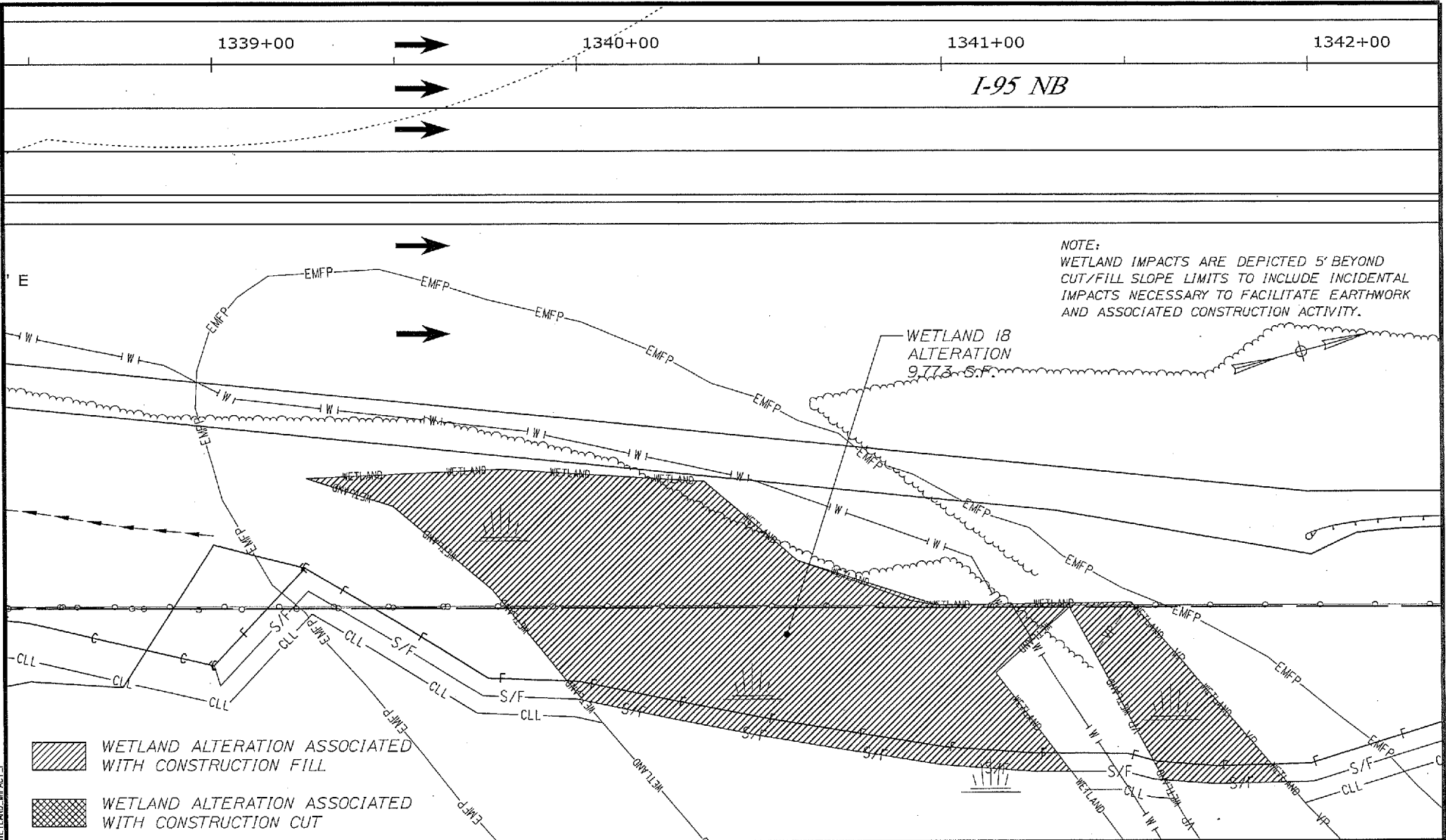
**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD


YORK TOLL PLAZA  
WETLAND 9 ALTERATION


SHEET NUMBER: WA-E  
CONTRACT: 2017.09  
4 OF 16

Date: 12/02/2017  
 Filename: NEWBURNSTOWN.WETLAND IMPACT.F



**NOTE:**  
 WETLAND IMPACTS ARE DEPICTED 5' BEYOND CUT/FILL SLOPE LIMITS TO INCLUDE INCIDENTAL IMPACTS NECESSARY TO FACILITATE EARTHWORK AND ASSOCIATED CONSTRUCTION ACTIVITY.

 WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION FILL

 WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION CUT

Scale: 12.5 0 12.5 25  
 Scale of Feet

No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	08/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/16/16
4	REV. PER USAGE COMMENTS	OAM	01/11/17


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CONSULTANT PROJECT MANAGER: S. SAWYER, P.E.

By	Date	By	Date
Designed	OAM 1/11/17	Checked	OAM 1/11/17
Drawn	RLM 1/11/17	In Charge of	---

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**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

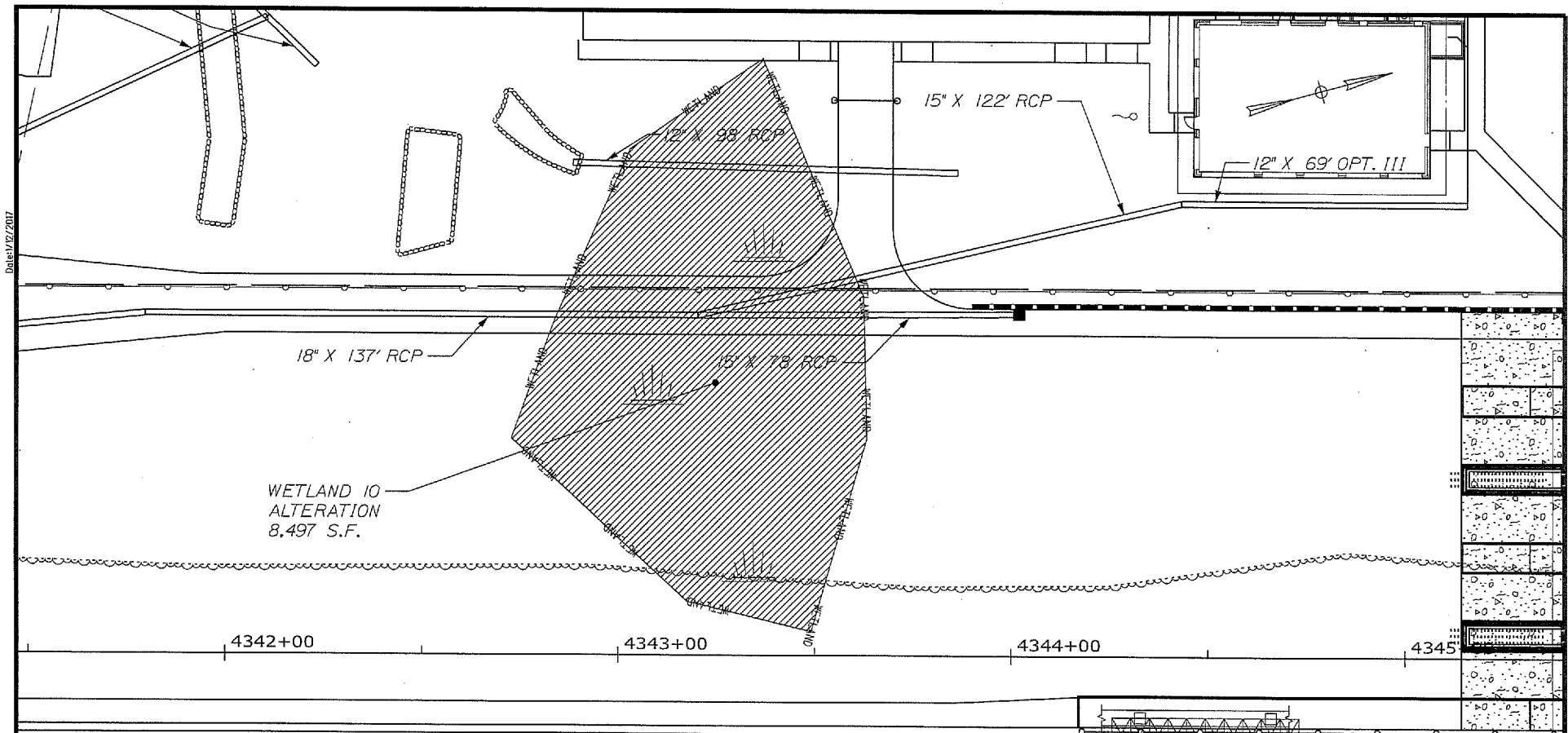
YORK TOLL PLAZA

WETLAND 18 ALTERATION

SHEET NUMBER: WA-F  
 5 OF 16

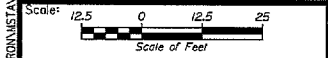
CONTRACT: 2017.09

Date: 12/2/2017



- WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION FILL
- WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION CUT *I-95 SB*

12" X 51' RCP



Designed by:

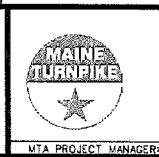
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CONSULTANT PROJECT MANAGER: S. SAWYER, P.E.

No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	06/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/18/16
4	REV. PER USACE COMMENTS	OAM	01/11/17

By	Date	By	Date		
Designed	OAM	1/11/17	Checked	OAM	1/11/17
Drawn	R.M.	1/11/17	In Charge of	---	---

SEBAGO TECHNICS  
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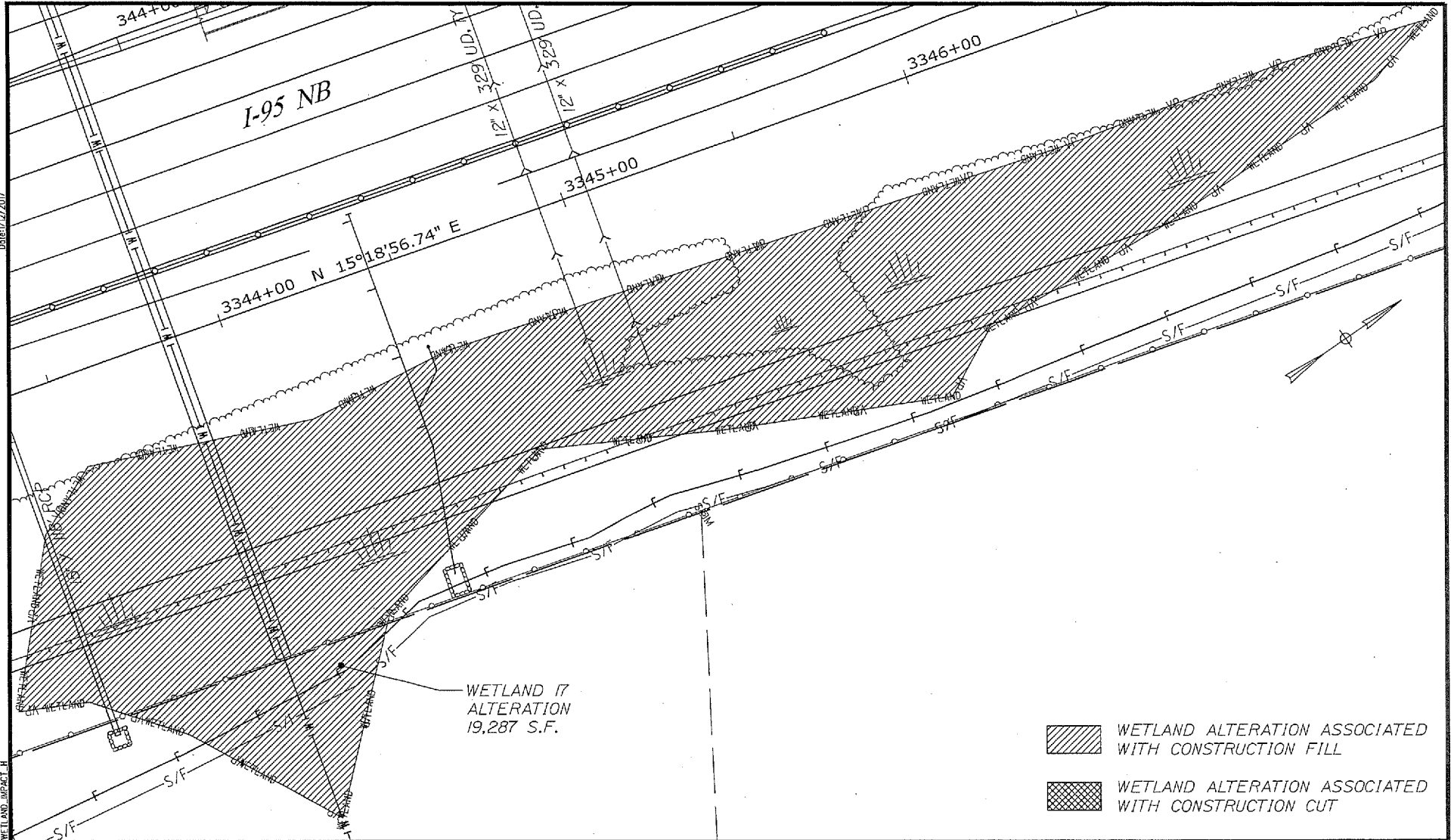
**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: B. NDRWOOD

YORK TOLL PLAZA  
WETLAND 10 ALTERATION

SHEET NUMBER: WA-G  
CONTRACT: 2017.09  
5 OF 15

Filename: \\VENRIN\DATA\WETLAND\_IMPACT\_G



Scale: 12.5 0 12.5 25  
Scale of Feet

No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	06/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/16/16
4	REV. PER USACE COMMENTS	OAM	01/11/17

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By	Date	By	Date
OAM	1/11/17	OAM	1/11/17
RLM	1/11/17	In Charge of	---

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75 JOHN ROBERTS ROAD,  
SUITE 1A  
SOUTH PORTLAND, ME 04106  
TEL (207) 200-2100

**MAINE TURNPIKE**

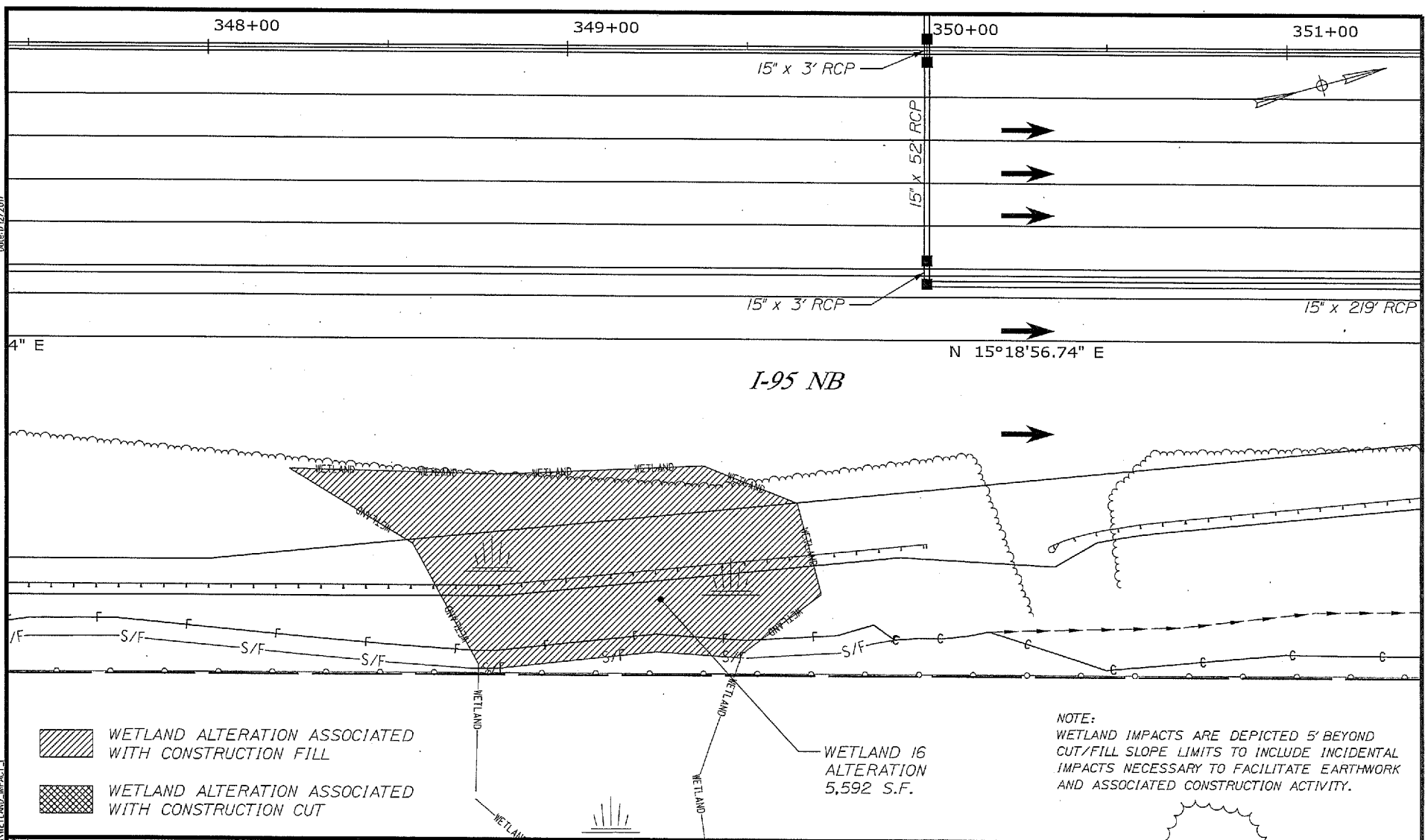
**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

YORK TOLL PLAZA  
WETLAND 17 ALTERATION

SHEET NUMBER: WA-H  
CONTRACT: 2017.09  
7 OF 16

Date: 1/22/2017



NOTE:  
WETLAND IMPACTS ARE DEPICTED 5' BEYOND CUT/FILL SLOPE LIMITS TO INCLUDE INCIDENTAL IMPACTS NECESSARY TO FACILITATE EARTHWORK AND ASSOCIATED CONSTRUCTION ACTIVITY.

WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION FILL

WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION CUT



Designed by:

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No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	08/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/16/16
4	REV. PER USAGE COMMENTS	OAM	01/11/17

CONSULTANT PROJECT MANAGER: S. SAWYER, P.E.

By	Date	By	Date
Designed	OAM 1/11/17	Checked	OAM 1/11/17
Drawn	R.M. 1/11/17	In Charge of	---

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SUITE 1A  
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TEL (207) 200-2100



THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: B. NORWOOD

YORK TOLL PLAZA

WETLAND 16 ALTERATION

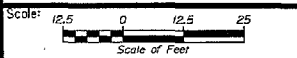
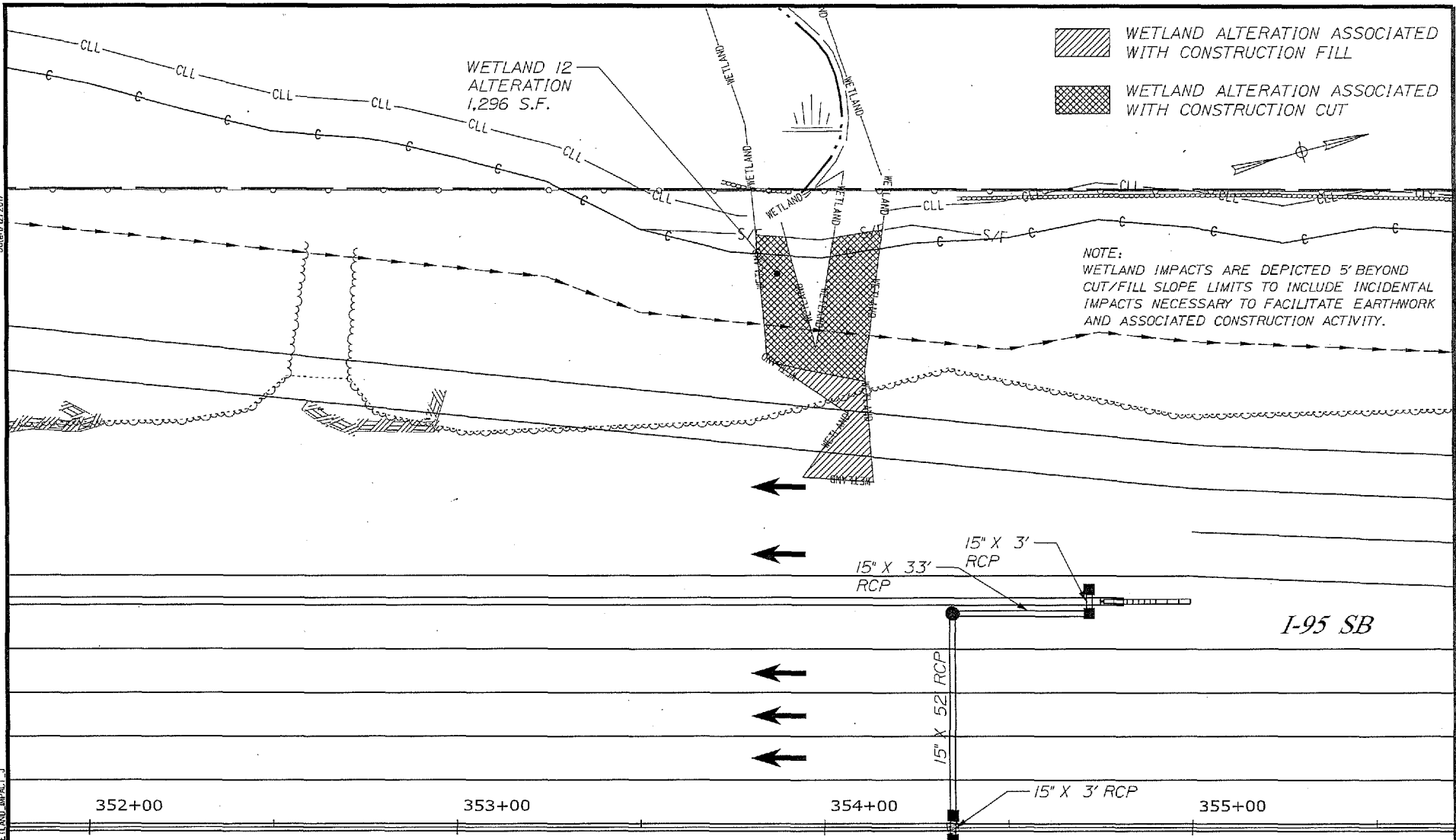
SHEET NUMBER: WA-1  
CONTRACT: 2017.09  
8 OF 16

Filename: N:\MORNINGSTAR\WETLAND\_IMPACT.rvt



DATE: 1/21/2017

CHANGE: NEW WETLAND WETLAND IMPACT...



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No.	Revision	By	Date
1	PROGRESS SUBMITTAL	DAM	06/20/16
2	MISCELLANEOUS REVISIONS	DAM	09/01/16
3	UPDATED MAPS	DAM	09/16/16
4	REV. PER USACE COMMENTS	DAM	01/11/17

CONSULTANT PROJECT MANAGER: S. SAWYER, P.E.

Designed	By	Date	Checked	By	Date
DAM	R.M.	1/11/17	DAM	---	1/11/17
Drawn	R.M.	1/11/17	In Charge of	---	--/--

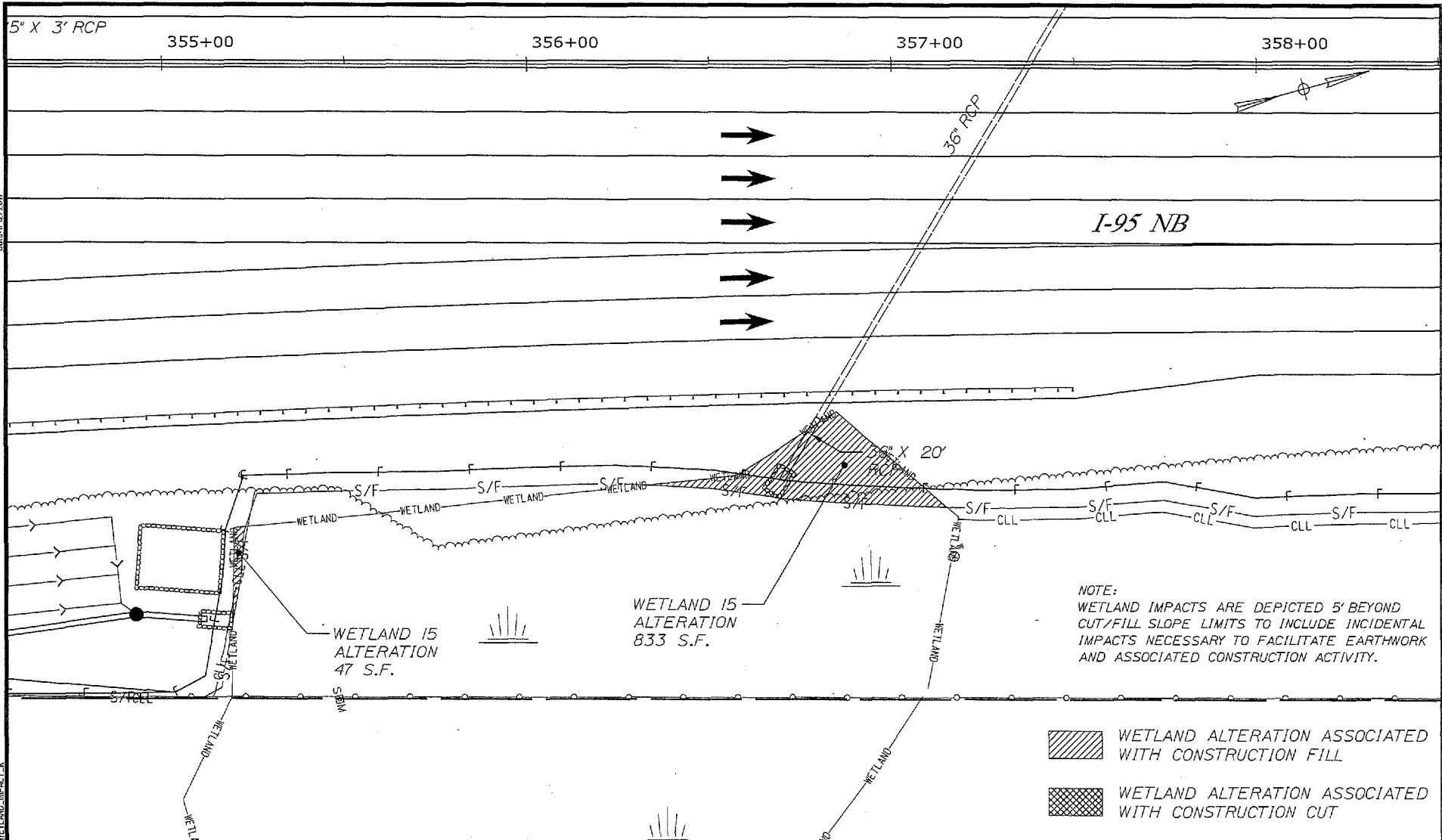
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**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

YORK TOLL PLAZA  
WETLAND 12 ALTERATION

SHEET NUMBER: WA-J  
CONTRACT: 2017.09  
9 OF 16



NOTE:  
WETLAND IMPACTS ARE DEPICTED 5' BEYOND CUT/FILL SLOPE LIMITS TO INCLUDE INCIDENTAL IMPACTS NECESSARY TO FACILITATE EARTHWORK AND ASSOCIATED CONSTRUCTION ACTIVITY.

- WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION FILL
- WETLAND ALTERATION ASSOCIATED WITH CONSTRUCTION CUT

Scale: 12.5 0 12.5 25  
Scale of Feet

No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	08/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/16/16
4	REV. PER USACE COMMENTS	OAM	01/11/17

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CONSULTANT PROJECT MANAGER: S. SAWYER, P.E.

By	Date	By	Date
Designed	OAM 1/11/17	Checked	OAM 1/11/17
Drawn	BLM 1/11/17	In Charge of	---

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SUITE 1A  
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TEL (207) 200-2100

THE GOLD STAR MEMORIAL HIGHWAY

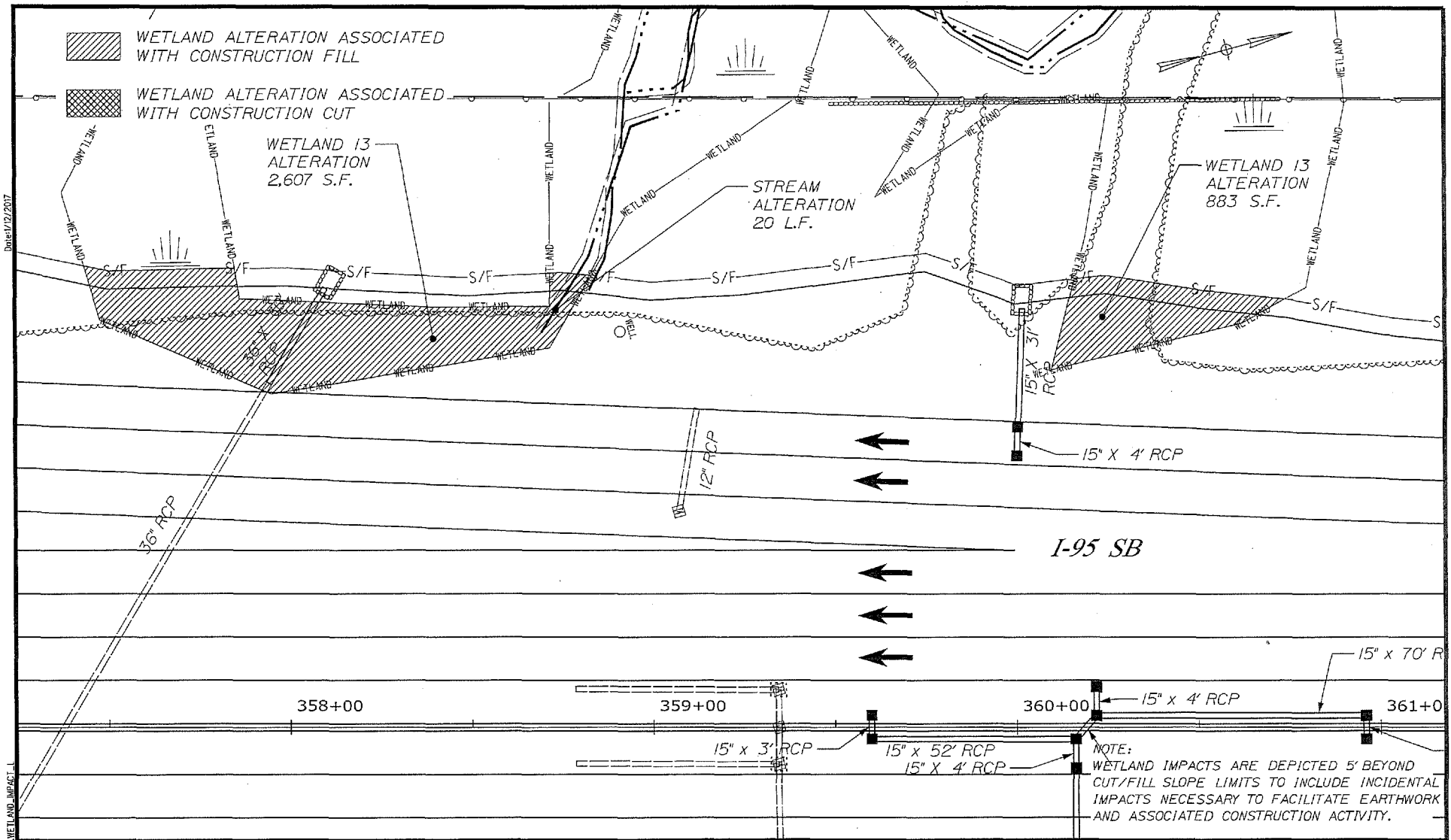
MTA PROJECT MANAGER: R. NORWOOD

YORK TOLL PLAZA  
WETLAND 15 ALTERATION

CONTRACT: 2017.09

SHEET NUMBER: WA-K  
10 OF 16

Date: 1/17/2017  
Filename: \\ENVIRON\DATA\WETLAND\_IMPACT\_K



Scale: 1/2.5 0 12.5 25  
Scale of Feet

No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	06/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/16/16
4	REV. PER USAGE COMMENTS	OAM	01/11/17

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CONSULTANT PROJECT MANAGER: S. SAWYER, P.E.

Designed	By	Date	Checked	By	Date
OAM	OAM	1/11/17	OAM	OAM	1/11/17
Drawn	R.M.	1/11/17	In Charge of	---	---

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SUITE 1A  
SOUTH PORTLAND, ME 04106  
TEL (207) 200-2100

**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

YORK TOLL PLAZA  
WETLAND 13 ALTERATION

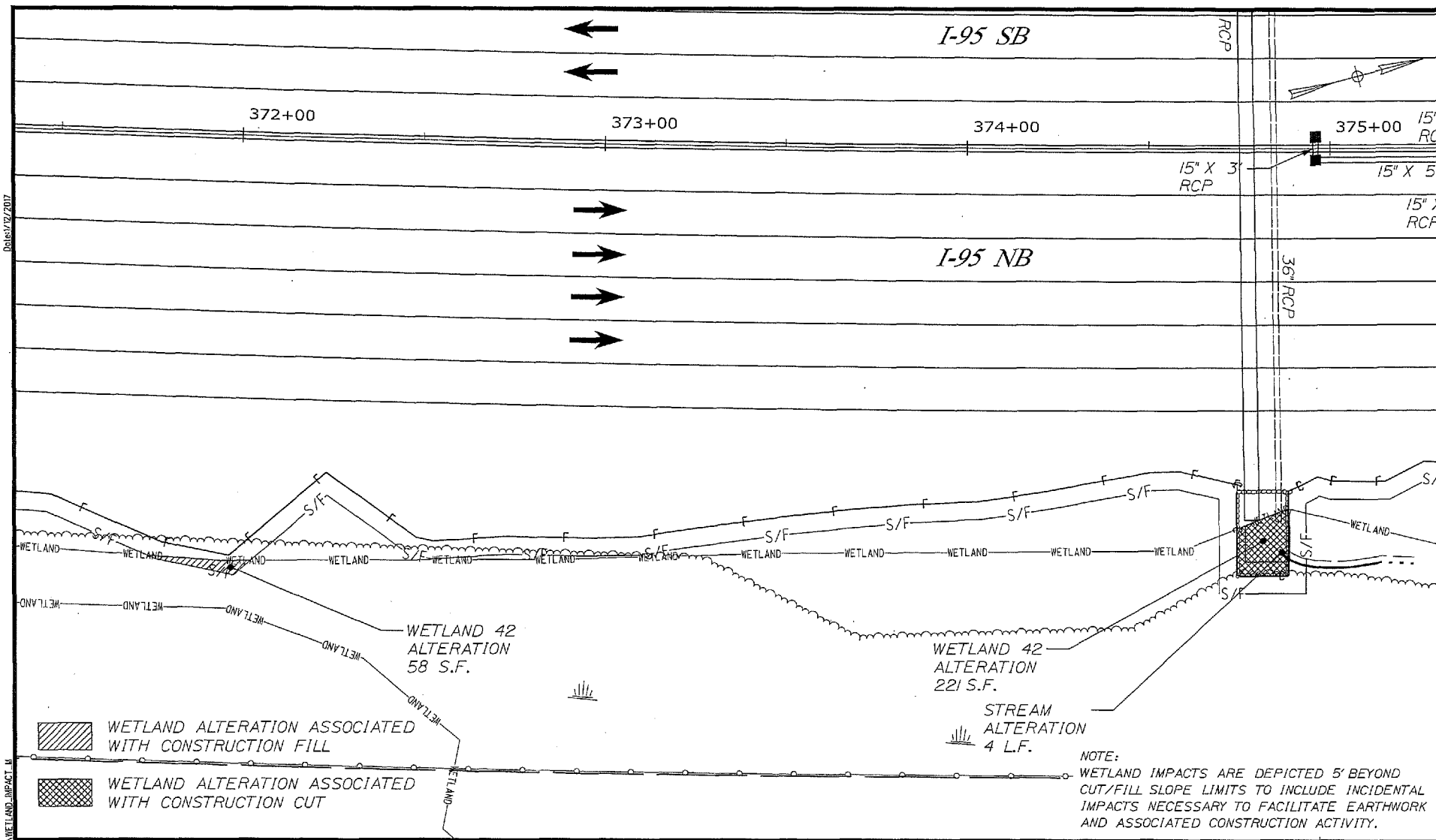
SHEET NUMBER: WA-L  
11 OF 16

CONTRACT: 2017.09

Date: 1/12/2017

Filename: ENVIRONMENTAL\_WETLAND\_IMPACT\_1

Date: 12/2/2017



Scale: 1/2.5" = 25'

No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	06/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/16/16
4	REV. PER USACE COMMENTS	OAM	01/11/17

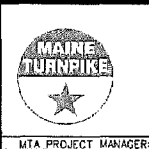
Designed by:

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CONSULTANT PROJECT MANAGER: S. SAWYER, P.E.

By	Date	By	Date
Designed	DLR 1/11/17	Checked	---
Drawn	DLR 1/11/17	In Charge of	---

SEBAGO TECHNICS  
75 JOHN ROBERTS ROAD,  
SUITE 1A  
SOUTH PORTLAND, ME 04106  
TEL (207) 200-2100



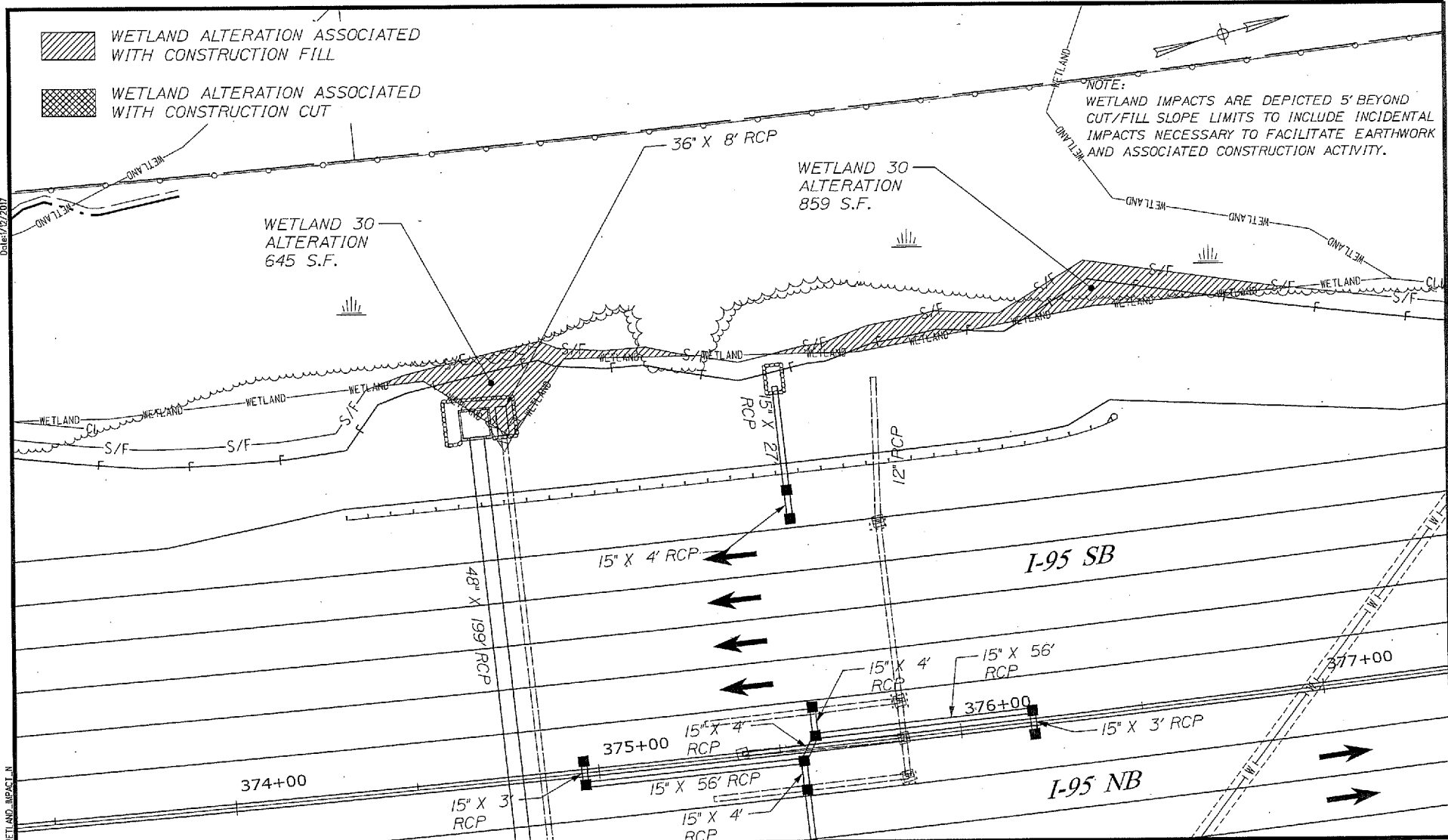
**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

**YORK TOLL PLAZA**

**WETLAND 42 ALTERATION**

SHEET NUMBER: WA-M  
CONTRACT: 2017.09      12 OF 16



Date: 12/27/2017

Filename: \\MEMPHIS\STAVELAND\_IMPACT.dwg

Scale: 12.5 0 12.5 25  
Scale of Feet

No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	06/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/16/16
4	REV. PER USACE COMMENTS	OAM	01/11/17

Designed by:

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TECHNICS  
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CONSULTANT PROJECT MANAGER: S. SAWYER, P.E.

Designed	By	Date	Checked	By	Date
OAM	OAM	1/11/17	OAM	OAM	1/11/17
Drawn	RLM	1/11/17	In Charge of	---	--7--

SEBAGO TECHNICS  
75 JOHN ROBERTS ROAD,  
SUITE 1A  
SOUTH PORTLAND, ME 04106  
TEL (207) 200-2100

**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

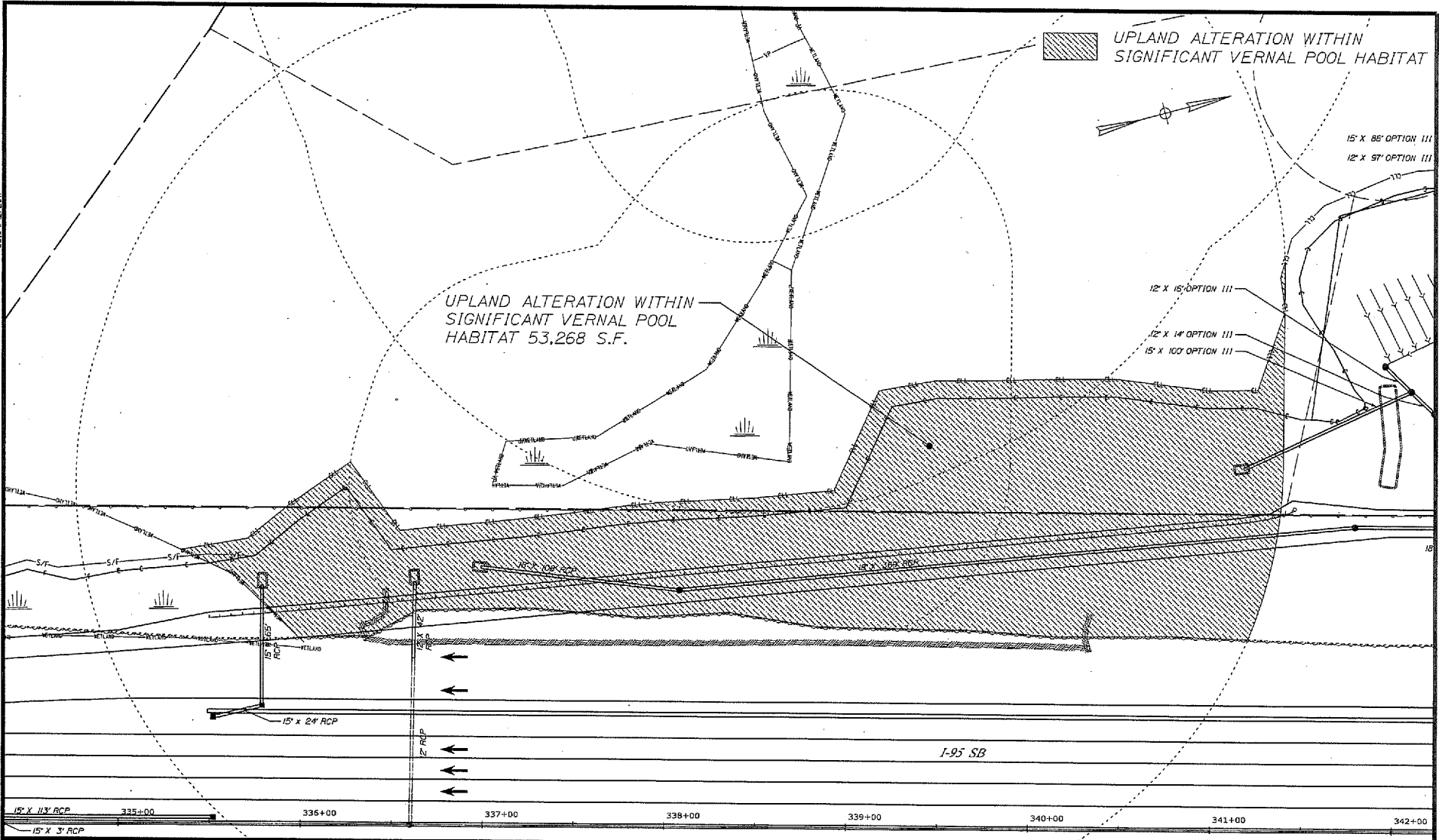
MTA PROJECT MANAGER: R. NORWOOD

YORK TOLL PLAZA  
WETLAND 30 ALTERATION

SHEET NUMBER: WA-N  
CONTRACT: 2017.09  
13 OF 16

Date: 1/12/2017

Filename: \\MSLAWELAND\IMPACT\_0.dwg



No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	06/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/16/16
4	REV. PER USAGE COMMENTS	OAM	01/11/17

Designed by:

**SEBAGO TECHNICS**  
 WWW.SEBAGOTECHNICS.COM

CONSULTANT PROJECT MANAGER: S. SAWYER, P.E.

By	Date	By	Date
Designed	OAM 1/11/17	Checked	OAM 1/11/17
Drawn	RLM 1/11/17	In Charge of	---

SEBAGO TECHNICS  
 75 JOHN ROBERTS ROAD,  
 SUITE 1A  
 SOUTH PORTLAND, ME 04106  
 TEL (207) 200-2100

**MAINE TURNPIKE**

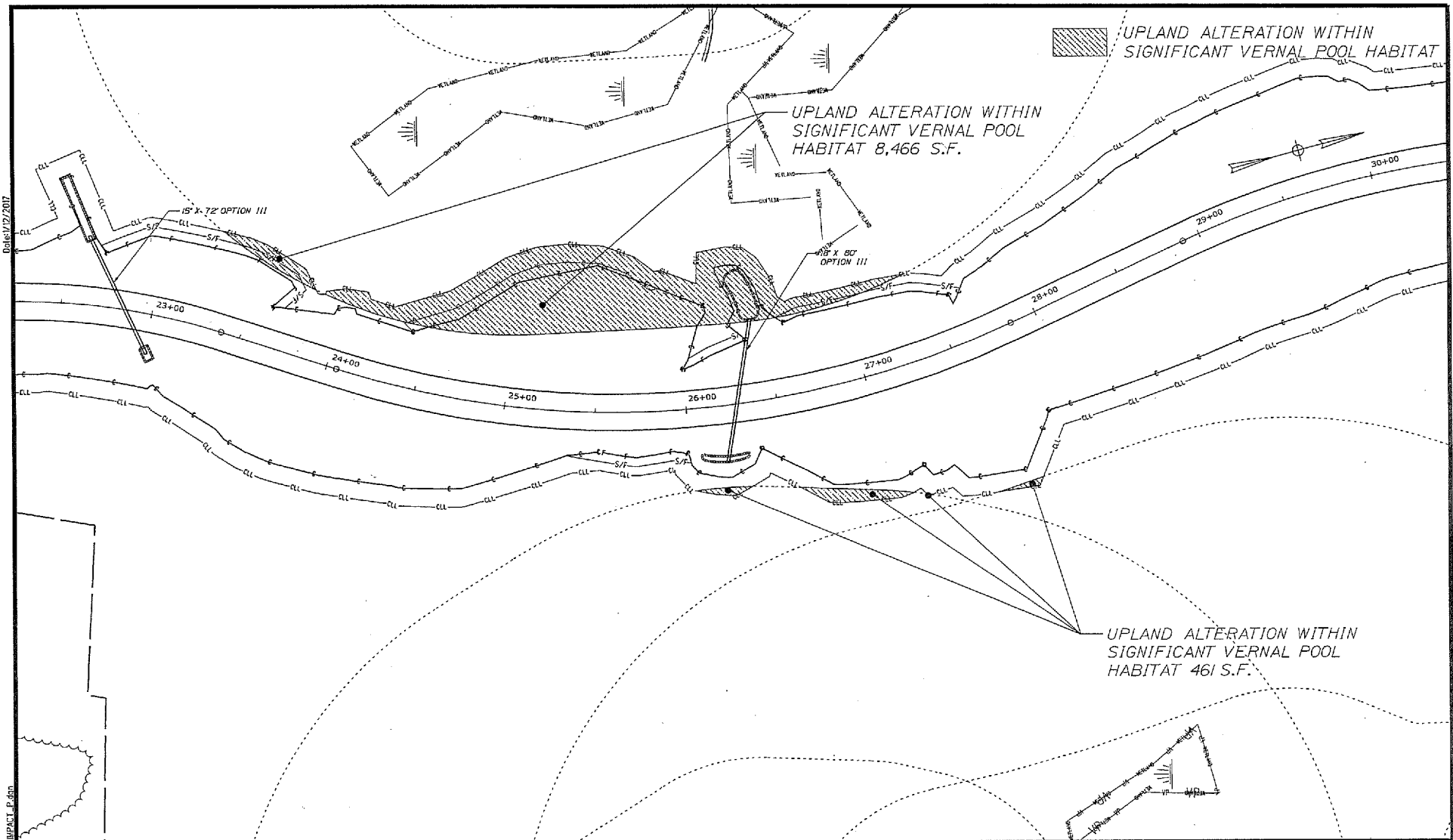
**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

YORK TOLL PLAZA  
 VERNAL POOL - 54 UPLAND  
 HABITAT ALTERATION

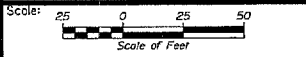
SHEET NUMBER: WA-0  
 14 OF 16

CONTRACT: 2017.09



Date: 12/12/2017

Filename: ...MSTAYWELAND\_IMPACT\_16.dgn



No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	06/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/16/16
4	REV. PER USACE COMMENTS	OAM	01/11/17

Designed by:

**SEBAGO**  
TECHNICS  
WWW.SEBAGOTECHNICS.COM

CONSULTANT PROJECT MANAGER: S. SAWYER, P.E.

Designed	By	Date	Checked	By	Date
OAM	OAM	1/11/17	OAM	OAM	1/11/17
Own	RLM	1/11/17	In Charge of	---	--/--

SEBAGO TECHNICS  
75 JOHN ROBERTS ROAD,  
SUITE 1A  
SOUTH PORTLAND, ME 04106  
TEL (207) 200-2100

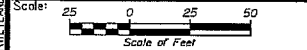
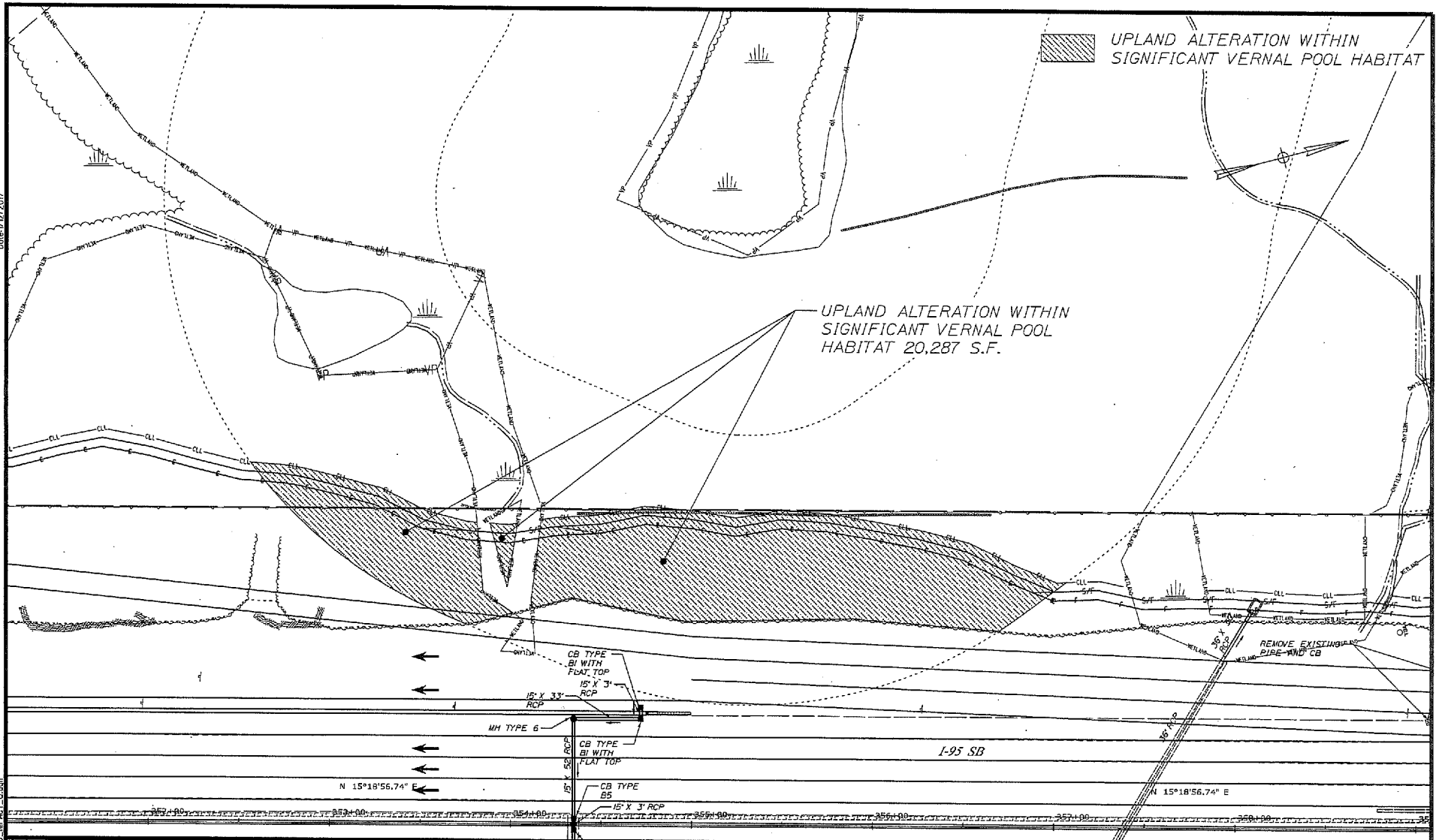
**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

**YORK TOLL PLAZA**  
VERNAL POOL - 54 AND 56  
UPLAND HABITAT ALTERATION

SHEET NUMBER: WA-P  
CONTRACT: 2017.09  
15 OF 16

Date: 1/17/2017



Designed by:  
**SEBAGO TECHNICS**  
 WWW.SEAGOTECHNICS.COM

SEBAGO TECHNICS  
 75 JOHN ROBERTS ROAD,  
 SUITE 1A  
 SOUTH PORTLAND, ME 04106  
 TEL (207) 200-2100

**THE GOLD STAR  
 MEMORIAL HIGHWAY**

YORK TOLL PLAZA  
 VERNAL POOL - 13 UPLAND  
 HABITAT ALTERATION

No.	Revision	By	Date
1	PROGRESS SUBMITTAL	OAM	06/20/16
2	MISCELLANEOUS REVISIONS	OAM	09/01/16
3	UPDATED MAPS	OAM	09/16/16
4	REV. PER USACE COMMENTS	OAM	01/11/17

Designed	By	Date	Checked	By	Date
OAM	RLM	1/11/17	OAM	RLM	1/11/17

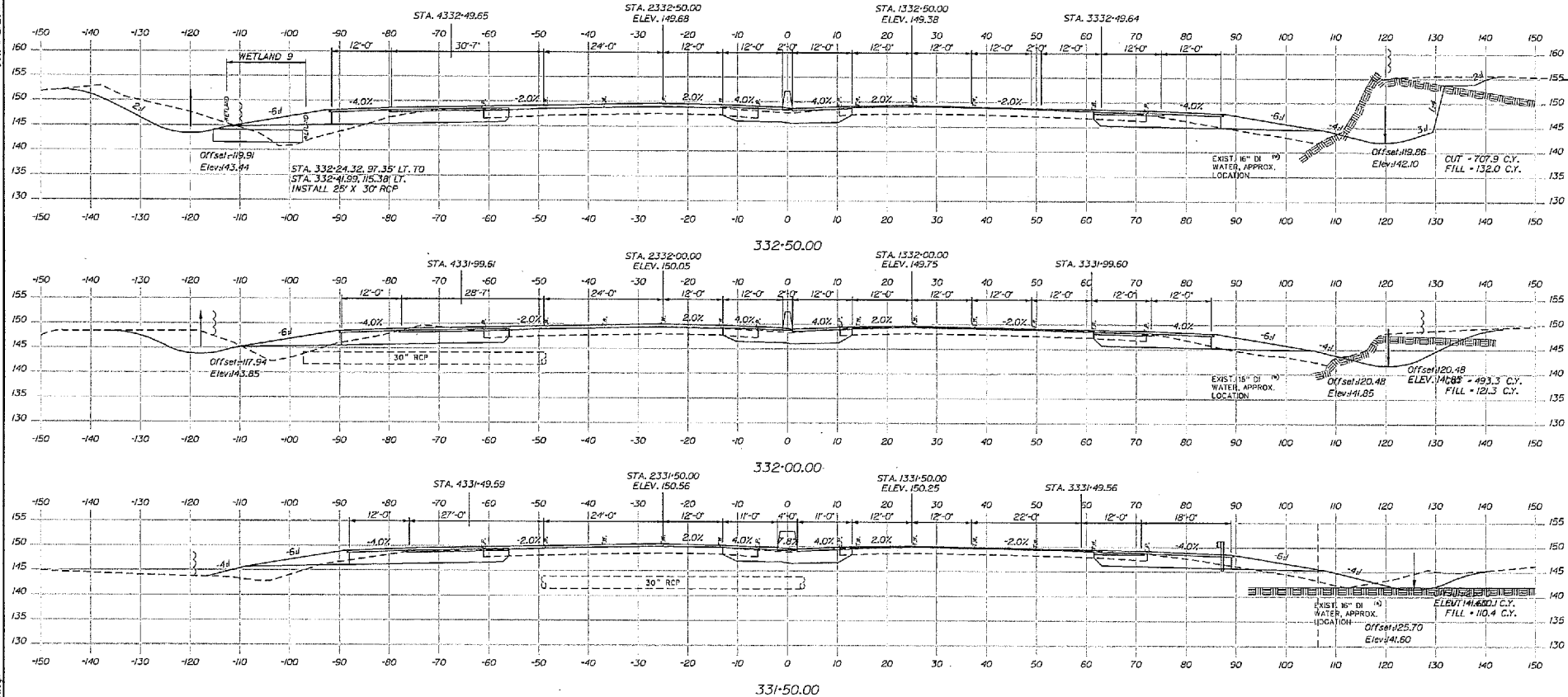
CONSULTANT PROJECT MANAGER: S. SAWYER, P.E.  
 MTA PROJECT MANAGER: R. NORWOOD

CONTRACT: 2017.09  
 SHEET NUMBER: WA-Q  
 16 OF 16

Filename: VSTAVNETL AND\_IMPACT\_0.dwg



Date: 12/12/2017



Scale: Horiz. 25' Vert. 5'

No.	Revision	By	Date


Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: \$PROJMANAGERS

By	Date	By	Date
Designed	AMS 08/16	Checked	CSM 08/16
Drawn	SMG 08/16	In Charge of	---

JACOBS ENGINEERING GROUP  
 343 CONGRESS STREET  
 BOSTON, MA 02210  
 TEL: (617) 242-9222  
 FAX: (617) 242-9824



**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

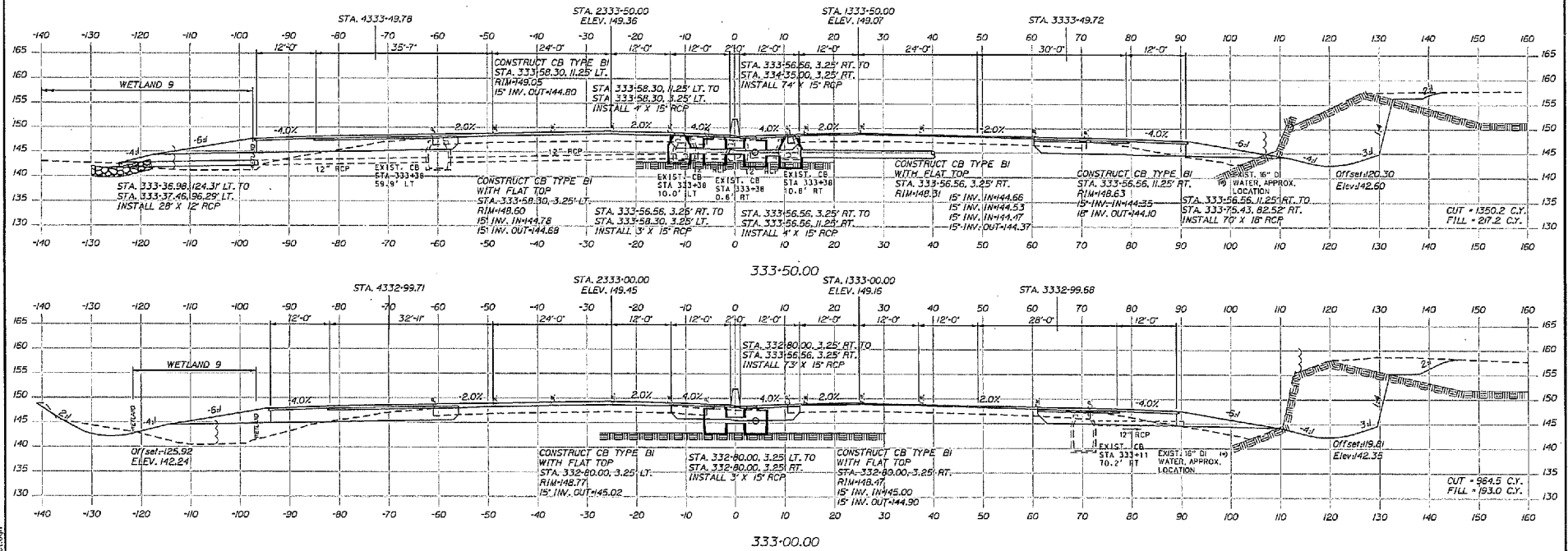
I-95 CROSS SECTIONS  
 STA. 331+50 TO STA. 332+50

SHEET NUMBER: XS-44  
 SPSET6 OF

Filename: ...MSTA\DRN\plan-sheet.dgn

Date: 1/12/2017

Filename: \\MSTA\DR\pfr-esect.dgn



Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: SPROJMANAGERS

By	Date	By	Date
Designed AMS	06/16	Checked CSM	06/16
Drawn SMG	06/16	In Charge of	---

JACOBS ENGINEERING GROUP  
 343 CONGRESS STREET  
 BOSTON, MA 02210  
 TEL (617) 242-9222  
 FAX (617) 242-9824

**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

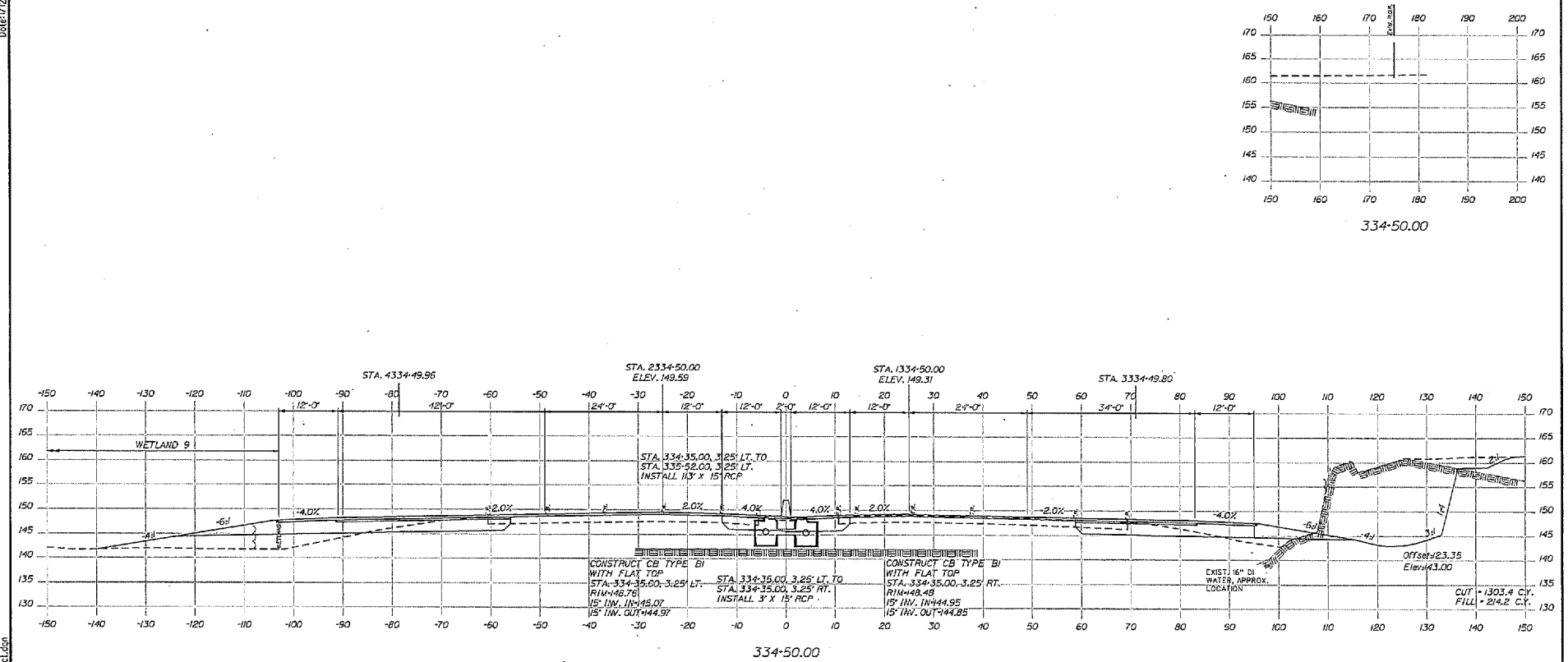
1-95 CROSS SECTIONS  
 STA. 333+00 TO STA. 333+50

SHEET NUMBER: XS-45  
 SPSETS OF

CONTRACT: WIN



Date: 7/12/2017



Scale:

No.	Revision	By	Date

Designed by:  
**JACOBS**  
 CONSULTANT PROJECT MANAGER: 4PROJMANAGERS

By	Date	By	Date
Designed AMS	06/16	Checked CSM	06/16
Drawn SMG	06/16	In Charge of ---	--/--

JACOBS ENGINEERING GROUP  
 343 CONGRESS STREET  
 BOSTON, MA 02210  
 TEL (617) 242-9222  
 FAX (617) 242-9824

**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
 STA. 334+50

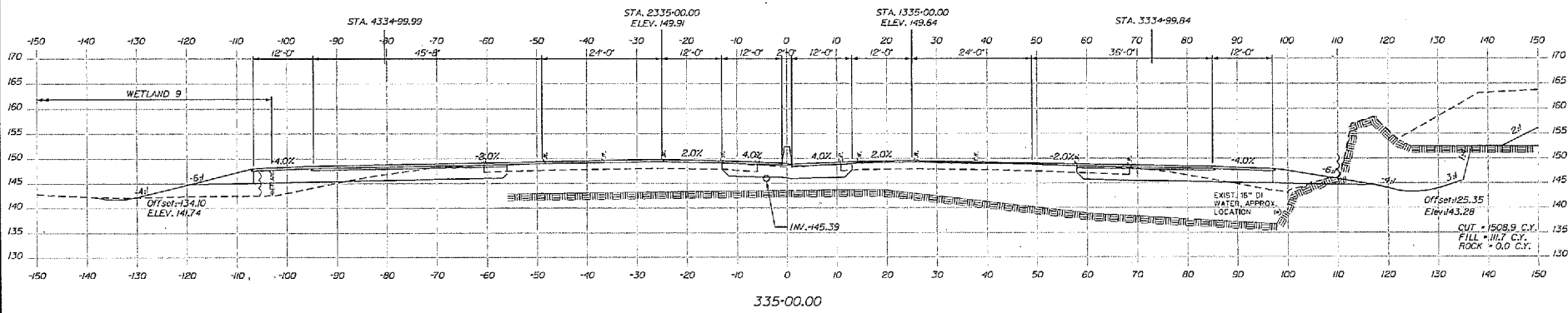
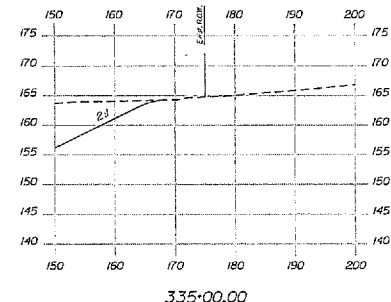
SHEET NUMBER: XS-47  
 SP5E1S OF

CONTRACT: WIN

Filename: ... \MTA\DRIP\plan-sbca.dwg

Date: 12/20/07

Filename: ... \MSTAD\DR\Plan\sscs1.dgn



Scale: 1" = 20'

No.	Revision	By	Date

Designed by:

# JACOBS

CONSULTANT PROJECT MANAGER: \*PROJ.MANAGER\*

By	Date	Checked	By	Date
Designed	AMS 06/16	Checked	CSM 06/16	
Drawn	SMG 06/16	In Charge of	---	--/--

JACOBS ENGINEERING GROUP  
 343 CONGRESS STREET  
 BOSTON, MA 02210  
 TEL (617) 242-9222  
 FAX (617) 242-9824

THE GOLD STAR  
 MEMORIAL HIGHWAY

MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
 STA. 335+00

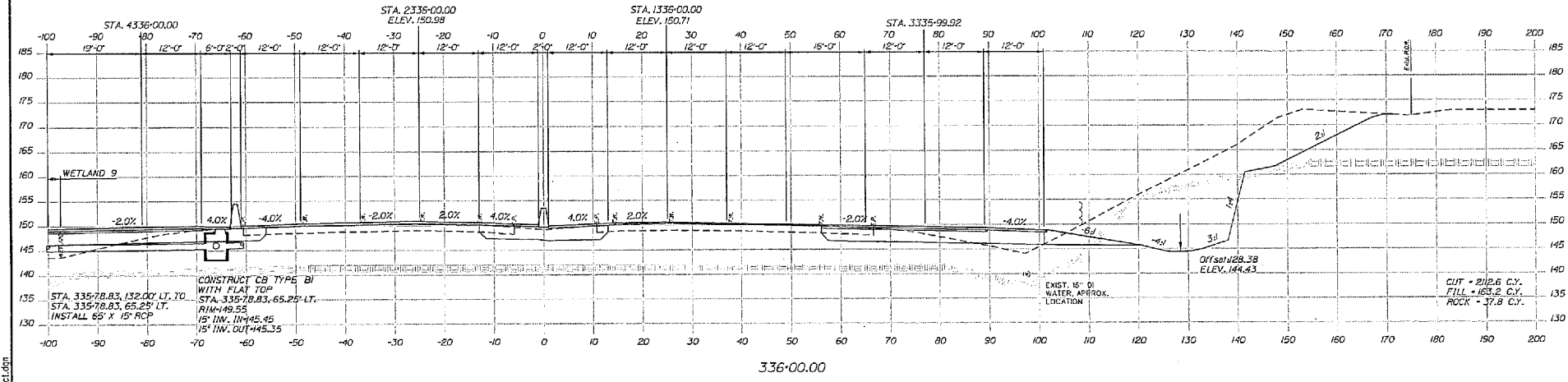
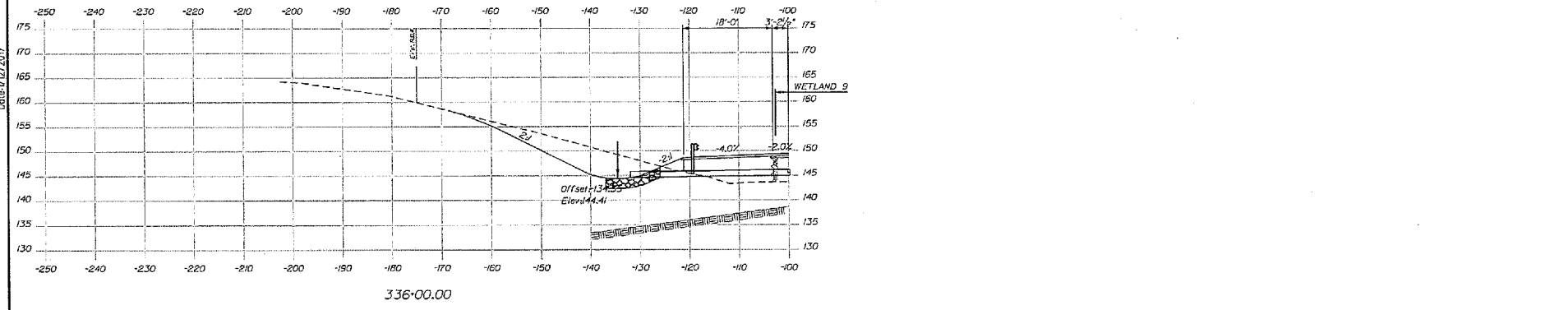
CONTRACT: WJN

SHEET NUMBER: XS-48

\$PSETS OF



Date: 12/12/2017



Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: \$PROJMANAGER\$

By	Date	Checked	By	Date
AMS	08/16		CSM	08/16
Drewn	SMG	08/16	In Charge of	---

JACOBS ENGINEERING GROUP  
 343 CONGRESS STREET  
 BOSTON, MA 02210  
 TEL (617) 242-9222  
 FAX (617) 242-9824

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

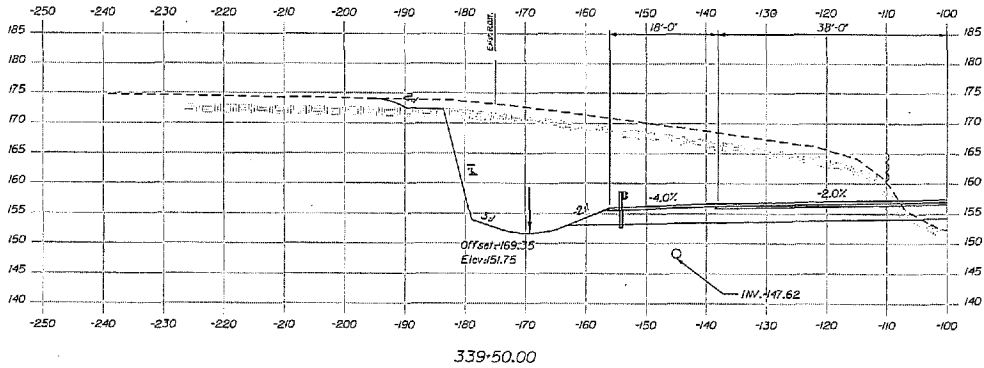
**I-95 CROSS SECTIONS  
 STA. 336+00**

CONTRACT: WIN

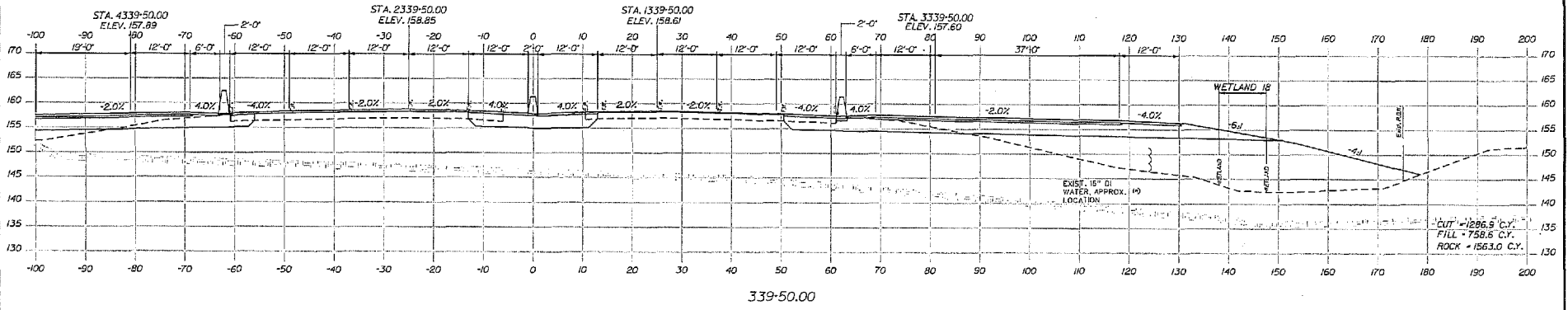
SHEET NUMBER: XS-47  
 SPSETS OF

Filename: ...MSTA\DrawPlan-sssect.dgn

Date: 12/2/2017



339+50.00



339+50.00

Scale: Scale of Feet

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: #PROJMANAGER#

By	Date	By	Date
Designed AMS	08/16	Checked CSM	08/16
Drawn SMG	08/16	In Charge of	---

JACOBS ENGINEERING GROUP  
 345 CONGRESS STREET  
 BOSTON, MA 02210  
 TEL (617) 242-9222  
 FAX (617) 242-9824

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
 STA. 339+50

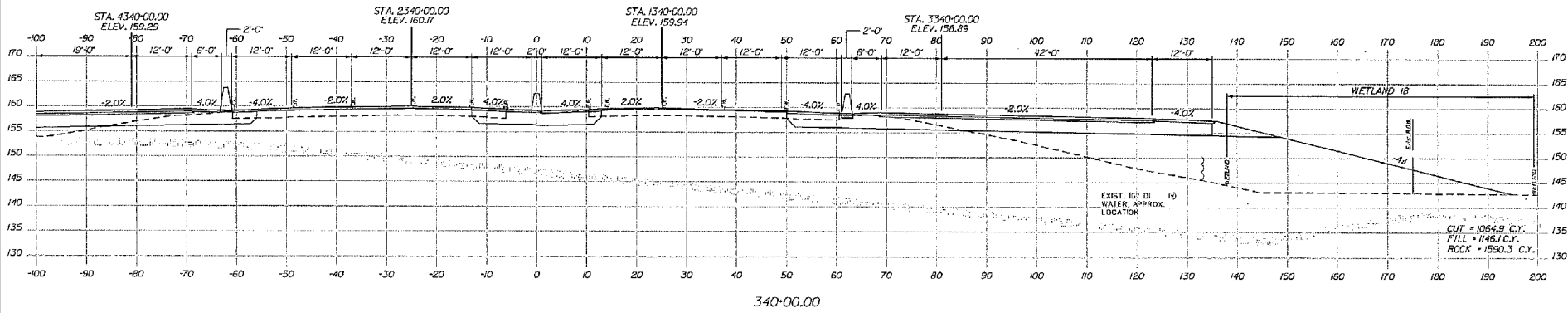
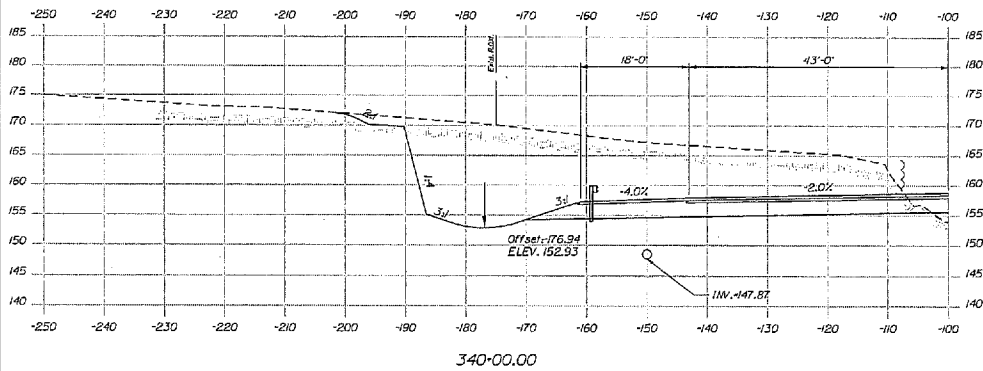
SHEET NUMBER: XS-54  
 SPSETS OF

CONTRACT: WIN

Filename: \\ANSTANOR\proj\esset\Edgn



Date: 12/12/2017  
Filename: ...MST\A\DRN\10m-rsxc1.dgn



Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: \$PROJMANAGERS

By	Date	By	Date
Designed	AMS 08/16	Checked	CSM 08/16
Drawn	SMG 08/16	In Charge of	---

JACOBS ENGINEERING GROUP  
343 CONGRESS STREET  
BOSTON, MA 02210  
TEL (617) 242-9222  
FAX (617) 242-9824

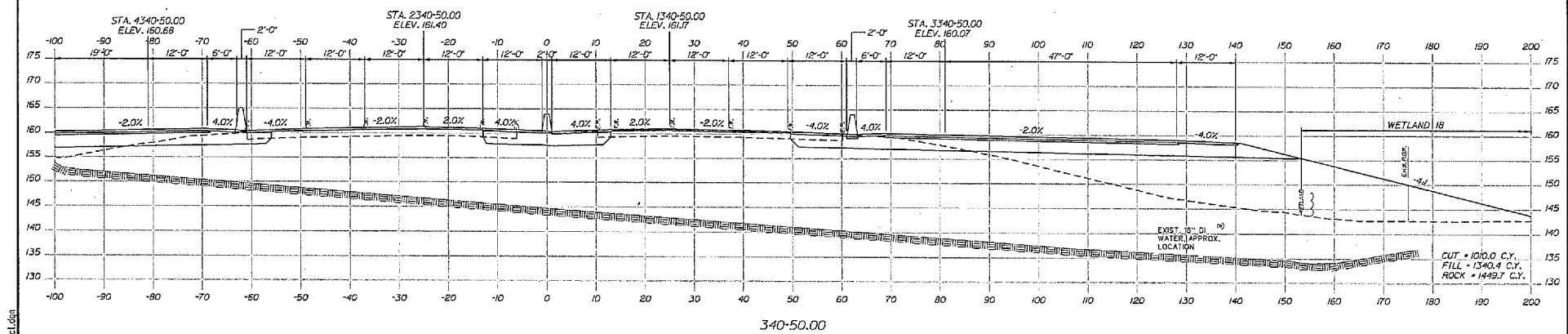
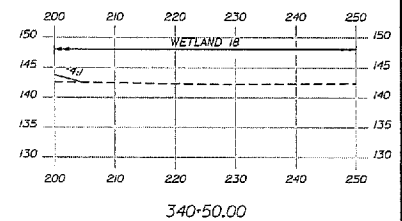
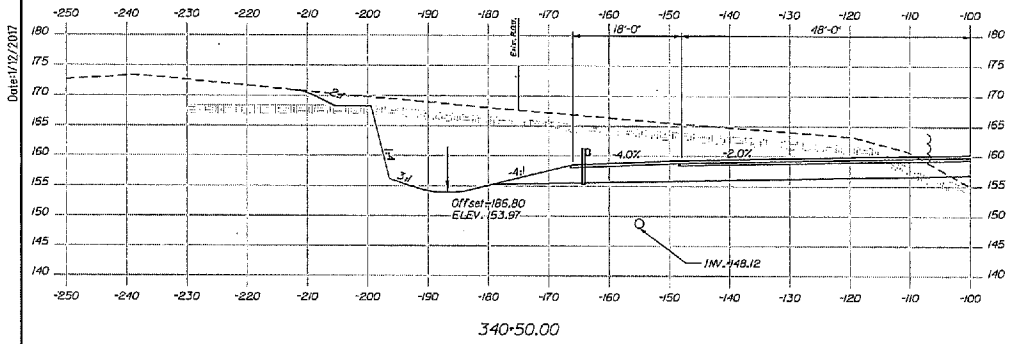
**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

**1-95 CROSS SECTIONS  
STA. 340+00**

SHEET NUMBER: XS-55  
SPSET 5 OF

Date: 11/2/2007



Scale: Scale of Feet

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: \$PROJMANAGERS\$

By	Date	By	Date
Designed	AMS 08/16	Checked	CSM 08/16
Drawn	SMG 08/16	In Charge of	---

JACOBS ENGINEERING GROUP  
 343 CONGRESS STREET  
 BOSTON, MA 02210  
 TEL (617) 242-9222  
 FAX (617) 242-9824

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: R. NORWOOD

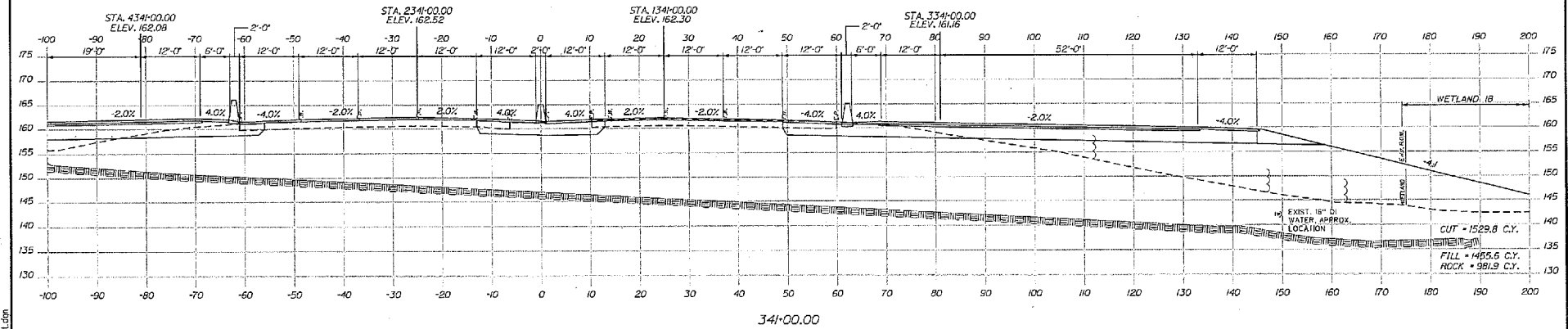
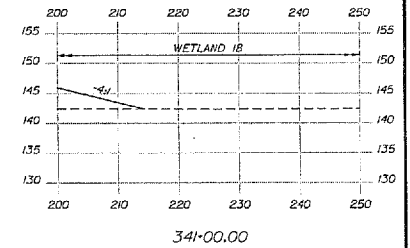
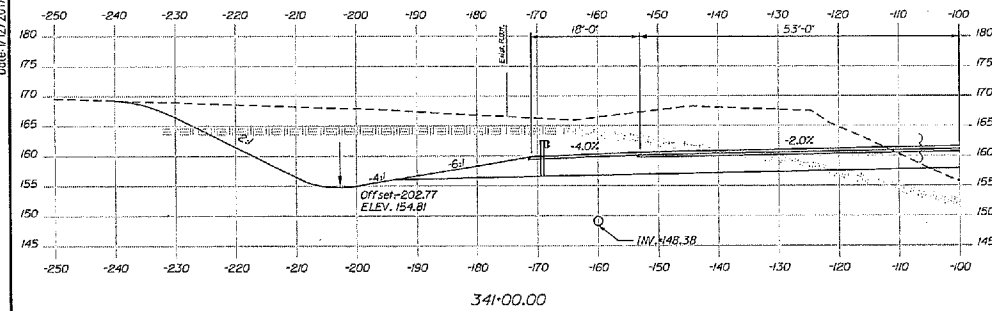
1-95 CROSS SECTIONS  
 STA. 340+50

SHEET NUMBER: XS-56  
 \$PSETS\$ OF

CONTRACT: WIN

Filename: ...MSTA\UR\p\p-r-esset.dgn

Date: 1/12/2017



Scale:

No.	Revision	By	Date

Designed by:

# JACOBS

CONSULTANT PROJECT MANAGER: \*PROJMANAGERS

By	Date	Checked	By	Date
AMS	08/16	CSM	CSM	08/16
Drawn	ISMG	08/16	In Charge of	---

JACOBS ENGINEERING GROUP  
 343 CONGRESS STREET  
 BOSTON, MA 02210  
 TEL (617) 242-9222  
 FAX (617) 242-8824

THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
STA. 341+00

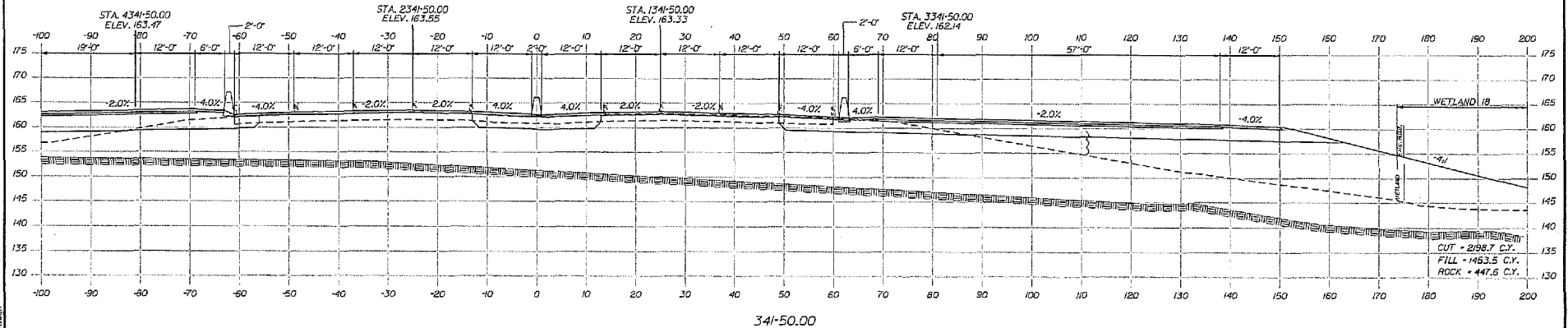
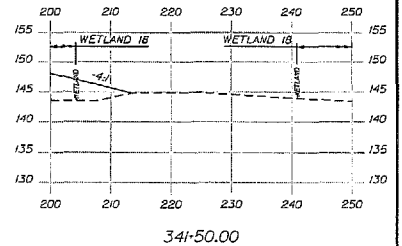
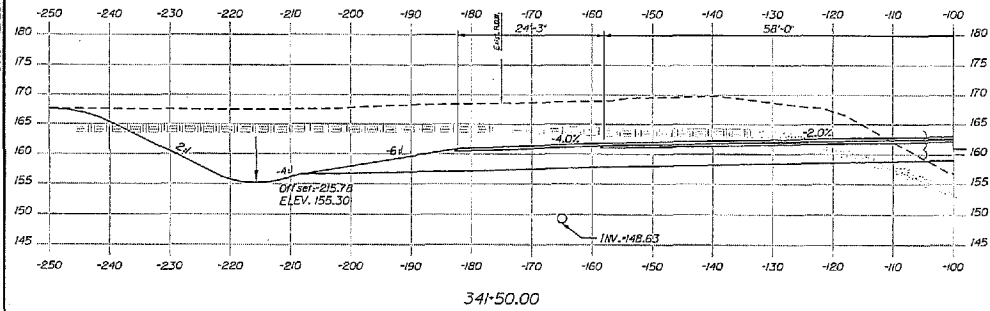
CUT = 1529.8 C.Y.  
FILL = 1455.6 C.Y.  
ROCK = 381.9 C.Y.

CONTRACT: WIN

SHEET NUMBER: XS-57  
SPSETS OF

Filename: ...MSTA\DRW\ign-sscd.dgn

Date: 12/20/17



Filename: \\MSTA\DR\Plan\sect.dwg

Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: \$PROJ.MANAGER\$

By	Date	By	Date
Designed AMS	08/16	Checked CSM	08/16
Drawn SMG	08/16	In charge of	---

JACOBS ENGINEERING GROUP  
 343 CONGRESS STREET  
 BOSTON, MA 02210  
 TEL (617) 242-9222  
 FAX (617) 242-9824

**THE GOLD STAR  
 MEMORIAL HIGHWAY**

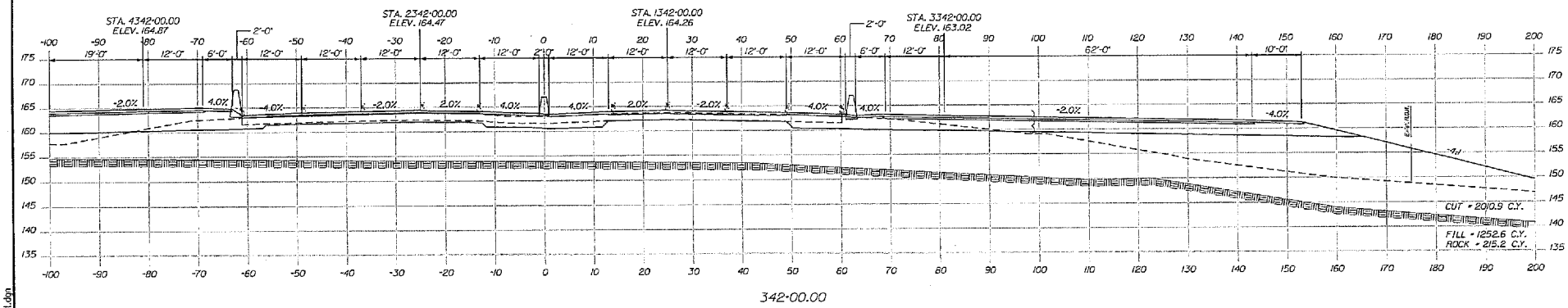
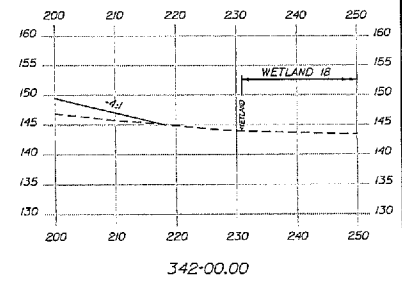
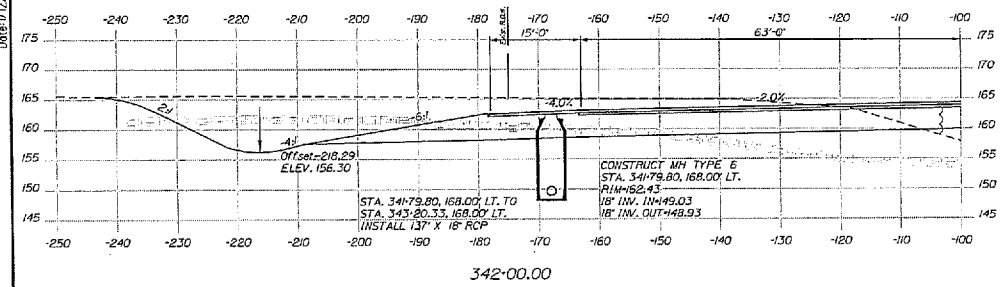
MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
 STA. 341+50

CONTRACT: WJN

SHEET NUMBER: XS-58  
 \$PSET\$ OF

Date: 1/12/2017



Scale: 1" = 20'

No.	Revision	By	Date

Designed by:

# JACOBS

CONSULTANT PROJECT MANAGER: PROJMANAGERS

By	Date	Checked	By	Date
AMS	08/16	CSM	OB	16
Drawn	SMG	OB	16	

In Charge of: --- --/--

JACOBS ENGINEERING GROUP  
 343 CONGRESS STREET  
 BOSTON, MA 02210  
 TEL (617) 242-9222  
 FAX (617) 242-9824

THE GOLD STAR  
 MEMORIAL HIGHWAY

MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
 STA. 342+00

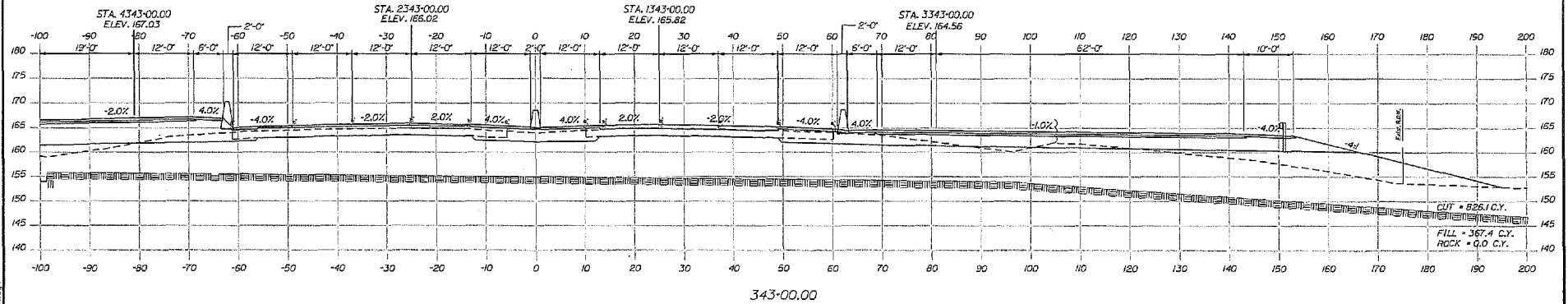
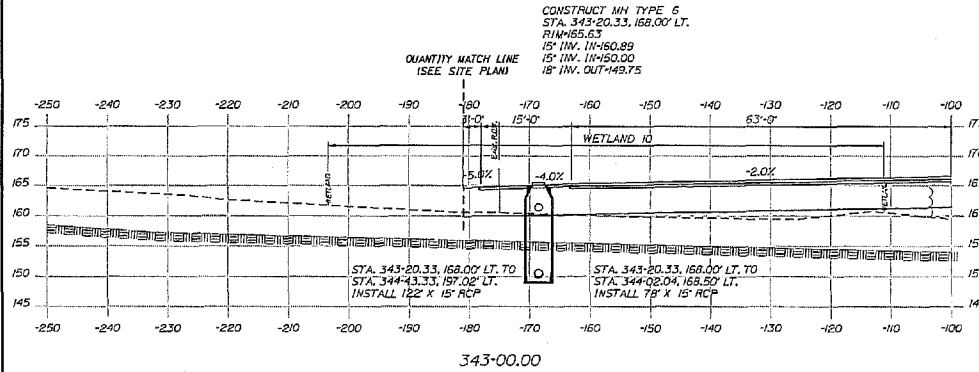
SHEET NUMBER: XS-59  
 SPSET&OF

CONTRACT: WIN

Filename: ...MST\A\DR\Plan-xsec.dwg

Date: 1/12/2017

Filename: MSTA\BRI\Plan\sect.dwg



Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: sPROJMANAGERS

Designed	By	Date	Checked	By	Date
AWS	AMS	08/16	CSM	CSM	08/16
Brown	SMG	08/16	In Charge of	---	---

JACOBS ENGINEERING GROUP  
 343 CONGRESS STREET  
 BOSTON, MA 02210  
 TEL (617) 242-9222  
 FAX (617) 242-9824

**THE GOLD STAR  
 MEMORIAL HIGHWAY**

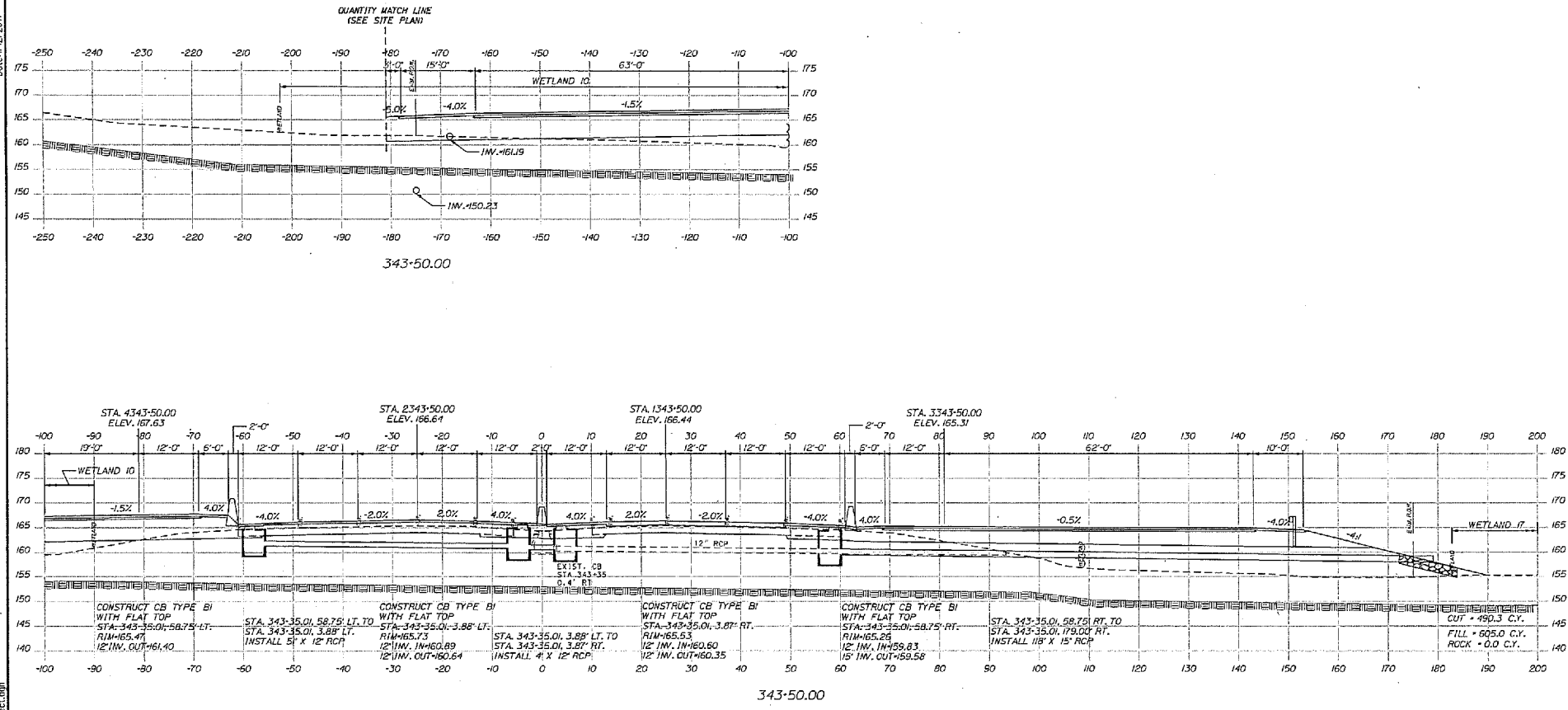
MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
 STA. 343+00

SHEET NUMBER: XS-61  
 SPSETS OF

CONTRACT: WIN

Date: 11/2/2017



Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: APROJMANAGERS

Designed	By	Date	Checked	By	Date
	AKS	08/16		CSM	08/16
	SMG	08/16	In Charge of		

JACOBS ENGINEERING GROUP  
 343 CONGRESS STREET  
 BOSTON, MA 02210  
 TEL (617) 242-9222  
 FAX (617) 242-9824

**THE GOLD STAR MEMORIAL HIGHWAY**

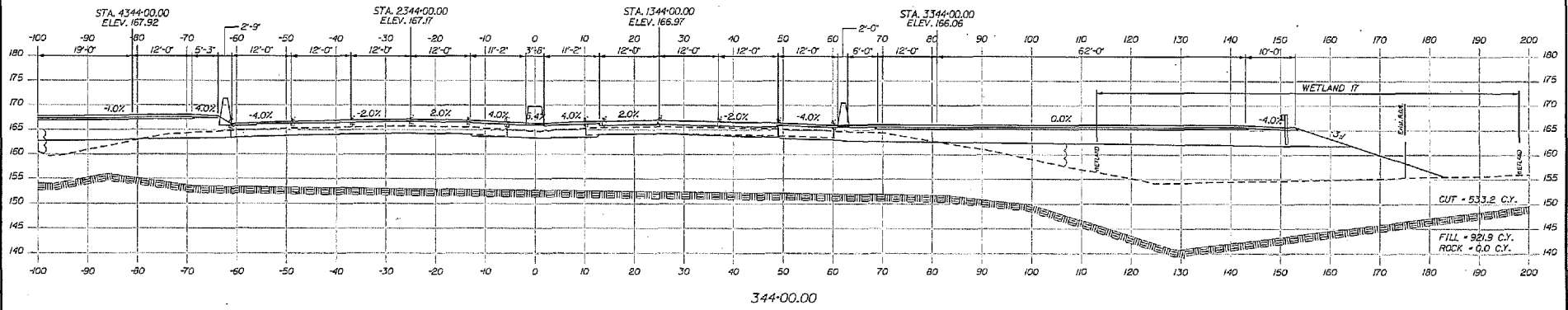
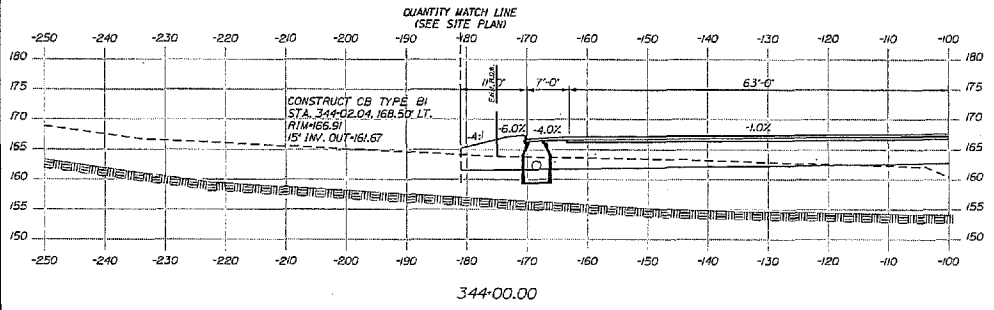
MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
 STA. 343+50

SHEET NUMBER: XS-62  
 SPSETS OF

Filename: ... \MSTA\DR\Plan-xsect.dwg

Date: 1/12/2017



Filename: ... \MTA\ORP\plan-res.ctb

Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: #PROJ.MANAGER#

By	Date	By	Date
Designed: AMS	08/16	Checked: CSM	08/16
Drawn: SMG	08/16	In Charge of: ---	--/--

JACOBS ENGINEERING GROUP  
 343 CONGRESS STREET  
 BOSTON, MA 02210  
 TEL (617) 242-9222  
 FAX (617) 242-9824

**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
 STA. 344+00

SHEET NUMBER: XS-83  
 SPSET# OF

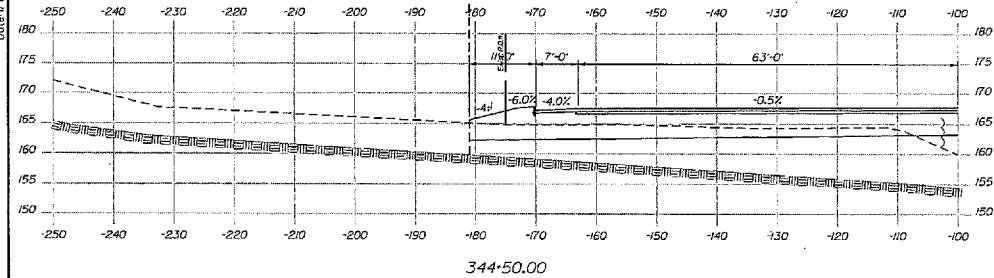
CONTRACT: WIN



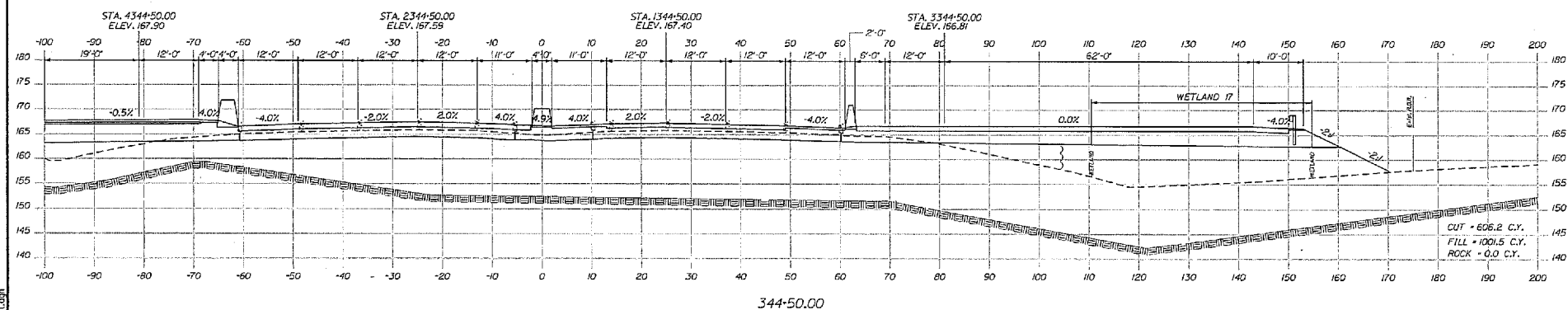
Date: 11/12/2017

Filename: ... \MSTA\DRR\Plan\_xsecL.dgn

QUANTITY MATCH LINE  
(SEE SITE PLAN)



344+50.00



344+50.00

CUT - 606.2 C.Y.  
FILL - 1001.5 C.Y.  
ROCK - 0.0 C.Y.

Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: PROJMANAGERS

By	Date	Checked	By	Date
AMS	08/16	CSM	CSM	08/16
Drawn	SMG	In Charge of	---	---/---

JACOBS ENGINEERING GROUP  
343 CONGRESS STREET  
BOSTON, MA 02210  
TEL (617) 242-9222  
FAX (617) 242-9824

THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: R. NORWOOD

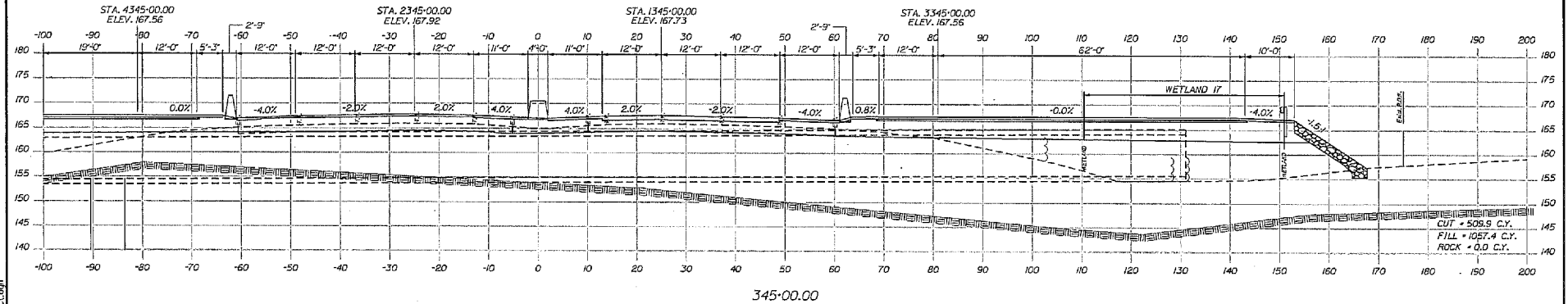
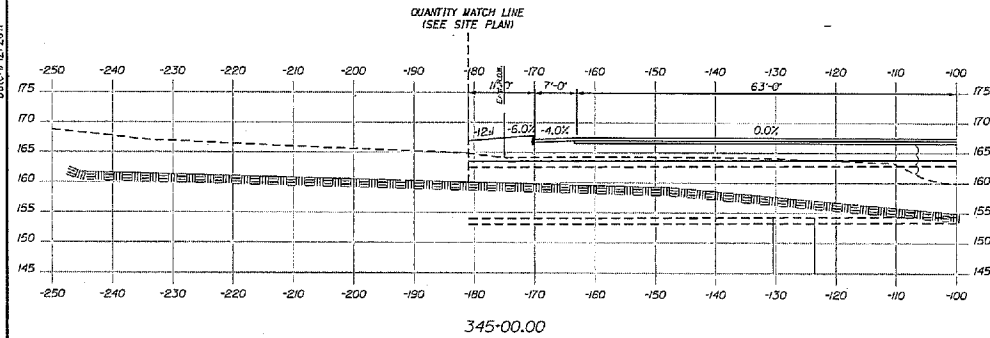
I-95 CROSS SECTIONS  
STA. 344+50

CONTRACT: WIN

SHEET NUMBER: XS-64  
SPSETS OF

Date: 12/12/2017

Filename: ...MSTA\A09\plan-resect.dgn



Scale: Scale of Feet

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: #PROJ.MANAGERS

By	Date	Checked	By	Date
AMS	08/16	CSM	CSM	08/16
SMG	08/16	In Charge of	---	--/--

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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

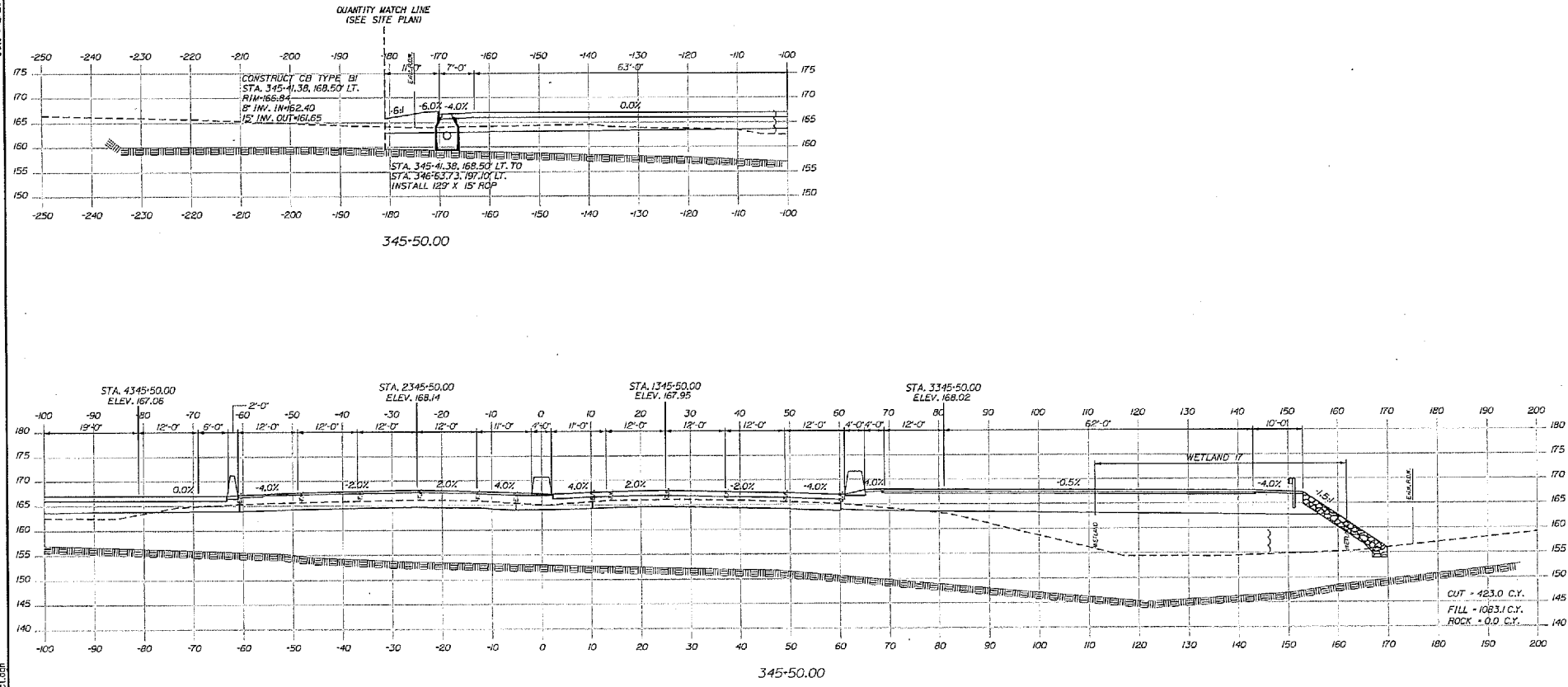
MTA PROJECT MANAGER: R. NORWOOD

95 CROSS SECTIONS  
 STA. 345+00

SHEET NUMBER: XS-65  
 SPSETS OF

CONTRACT: WIN

Date: 7/2/2017



Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: #PROJMANAGER#

By	Date	Checked	By	Date
AMS	05/16	CSM	CSM	08/16
Drawn	SMG	In Charge of	---	---/---/---

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**THE GOLD STAR MEMORIAL HIGHWAY**

UTA PROJECT MANAGER: R. NORWOOD

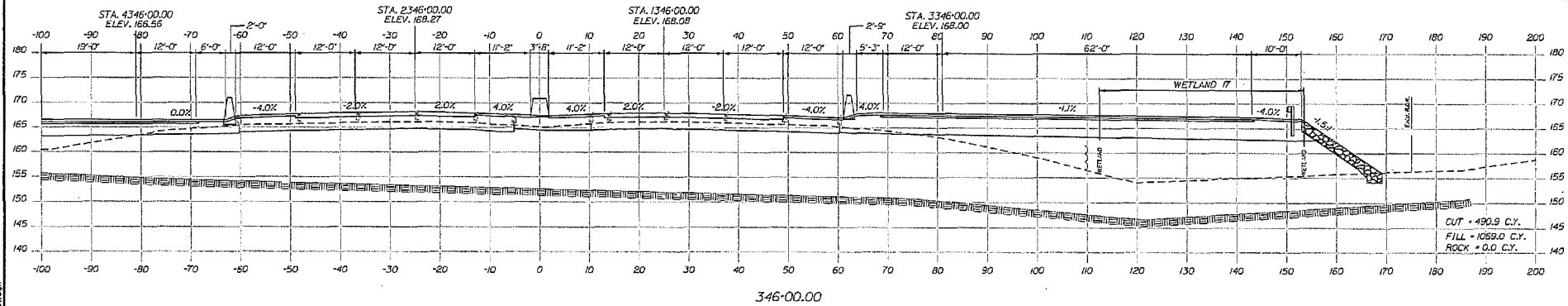
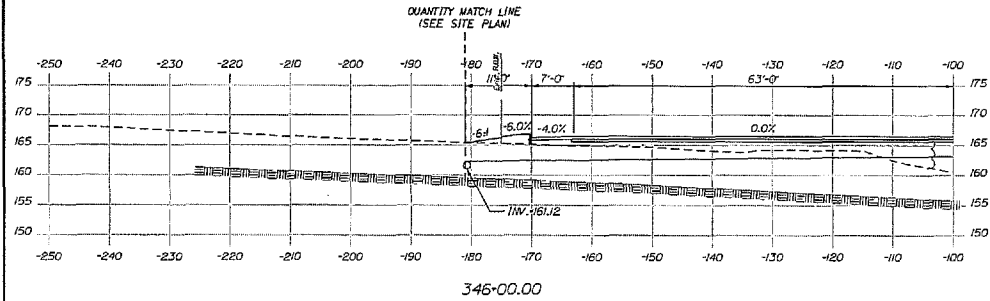
**I-95 CROSS SECTIONS  
 STA. 345+50**

CONTRACT: WIN

SHEET NUMBER: XS-66  
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Date: 12/2017



Filename: \\MUSTAVORP\p101\1011\1011.dwg

Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: SPROJMANAGERS

By	Date	By	Date
Designed	AMS 08/16	Checked	CSM 08/16
Drawn	SMG 08/16	In Charge of	---

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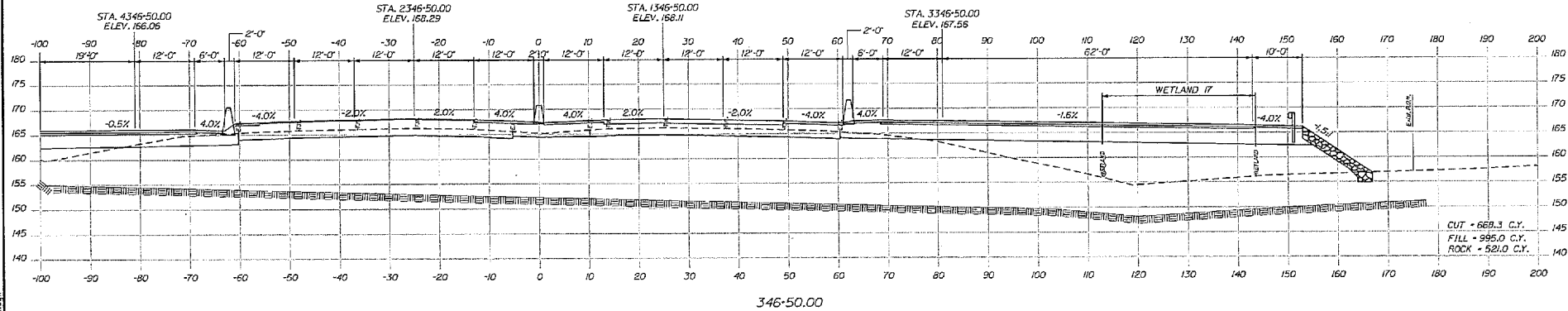
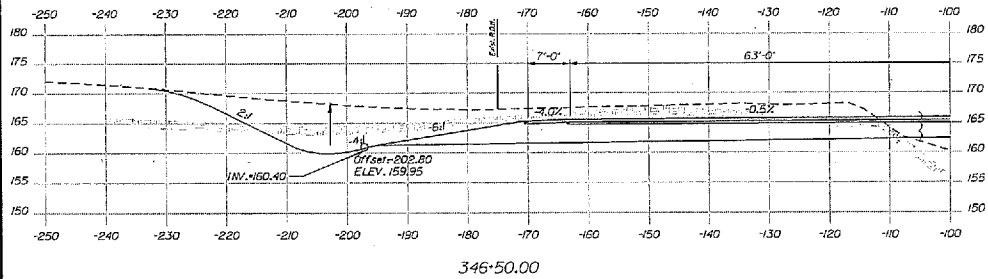
MTA PROJECT MANAGER: R. NORWOOD

1-95 CROSS SECTIONS  
 STA. 346+00

SHEET NUMBER: XS-67  
 10 SETS OF

CONTRACT: WIN

Date: 12/2017



Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: \$PROJMANAGERS

By	Date	By	Date
AMS	08/16	CSM	08/16
Drawn	SMG	08/16	In Charge of

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MTA PROJECT MANAGER: R. NORWOOD

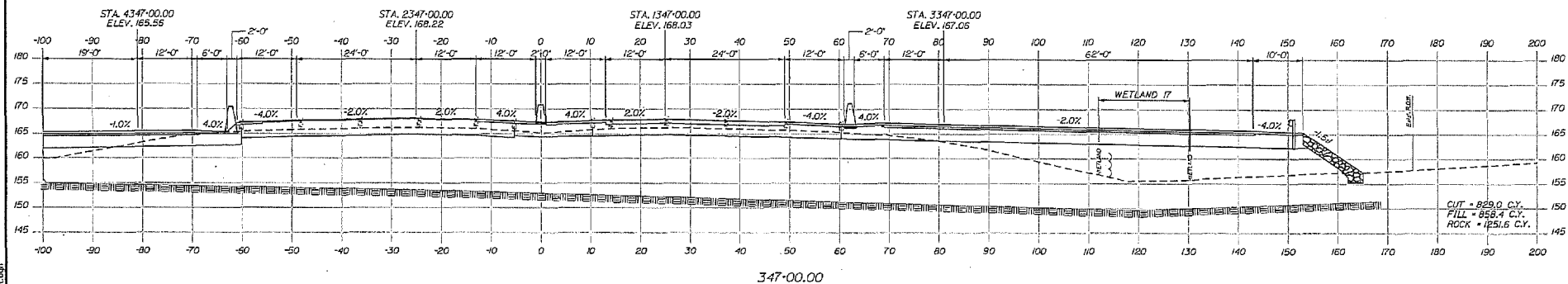
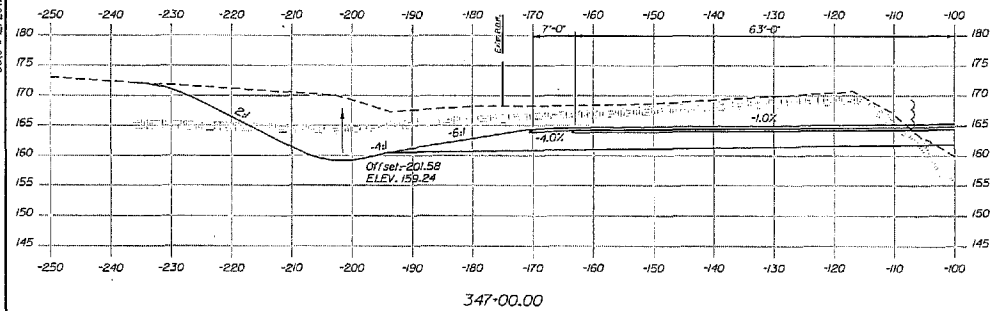
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 STA. 346+50**

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Date: 12/12/2017



Filename: \\MST\AD\B\p16r-ssct.dgn

Scale: Scale of Feet

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: SPROJMANAGERS

By	Date	By	Date
Designed	AMS 08/16	Checked	CSM 08/16
Drawn	SMG 08/16	In Charge of	---

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 MEMORIAL HIGHWAY

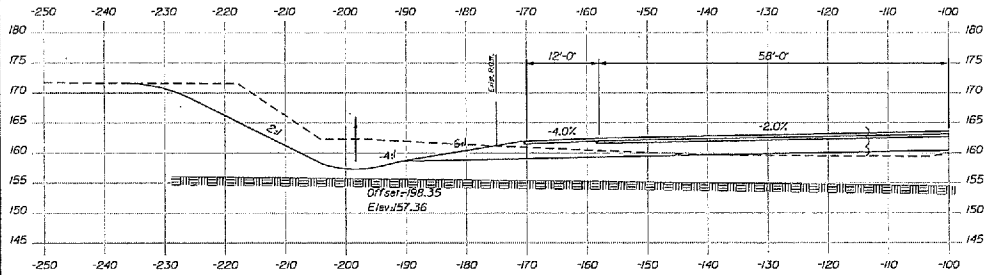
MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
 STA. 347+00

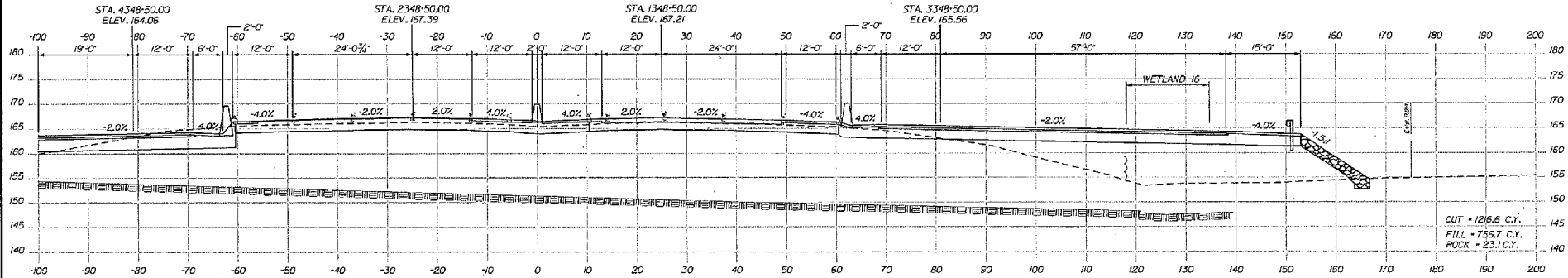
SHEET NUMBER: XS-69  
 SPSET 8 OF

CONTRACT: WIN

Date: 1/2/2017



348+50.00



348+50.00

Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: \*PROJMANAGER\*

By	Date	Checked	By	Date
AMS	08/16	CSM	CSM	08/16
Drawn	SMC	In Charge of	---	---/---/---

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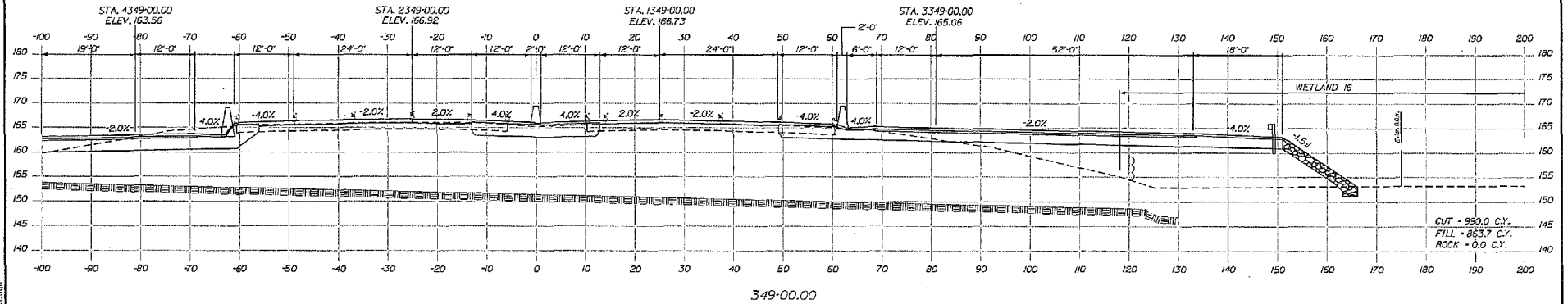
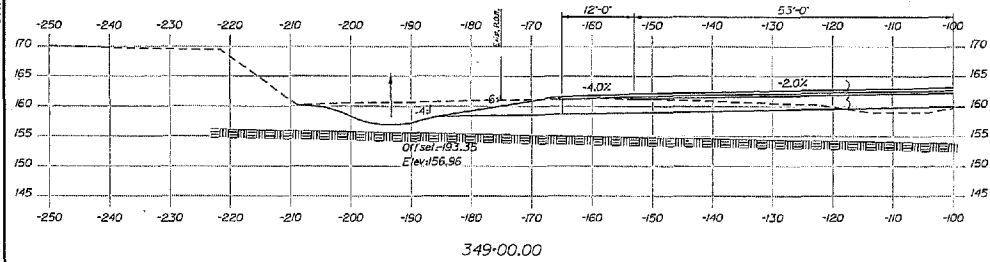
MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
 STA. 348+50

SHEET NUMBER: XS-72  
 SPSETS OF

Filename: ... \MSTA\DRN\P10n-sssect.dgn

Date: 1/12/2017



Filename: \\MSTA\WORK\proj-base1.dgn

Scale:

No.	Revision	By	Date

Designed by:

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CONSULTANT PROJECT MANAGER: SPROJMANAGERS

	Sv.	Date	By	Date	
Designed	AMS	08/16	Checked	CSM	08/16
Drawn	SMG	08/16	In Charge of	---	---

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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

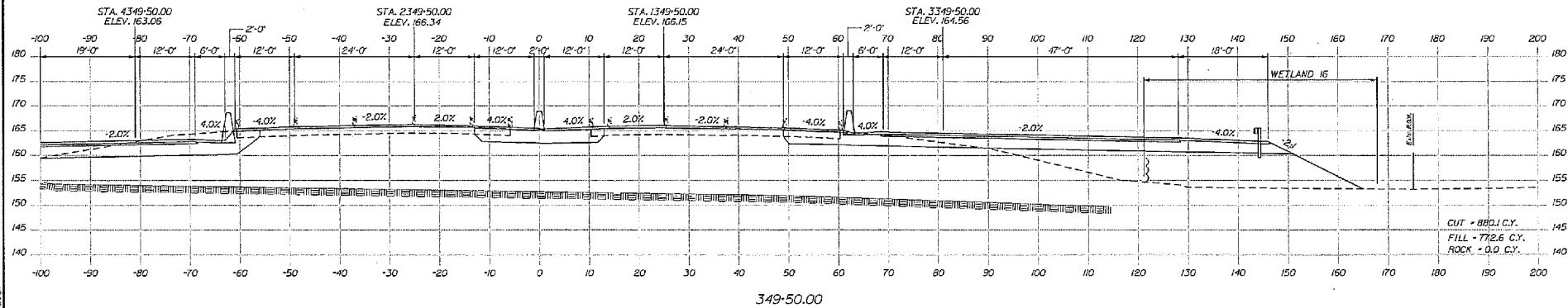
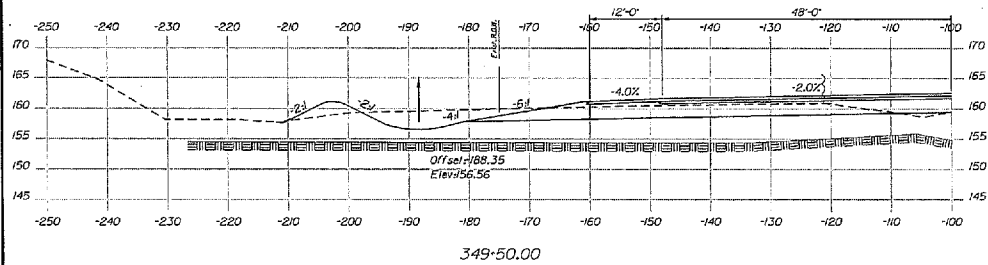
I-95 CROSS SECTIONS  
 STA. 349+00

CONTRACT: WIN

SHEET NUMBER: XS-73  
 #PSETS OF



Date: 11/2/2017



Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: #PROJMANAGERS

By	Date	By	Date
Designed AMS	08/16	Checked CSM	08/16
Drawn SMG	08/16	In Charge of	---

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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

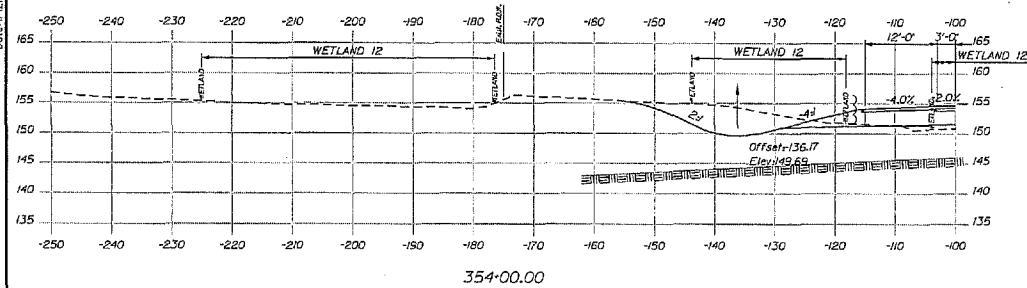
1-95 CROSS SECTIONS  
 STA. 349+50

SHEET NUMBER: XS-74  
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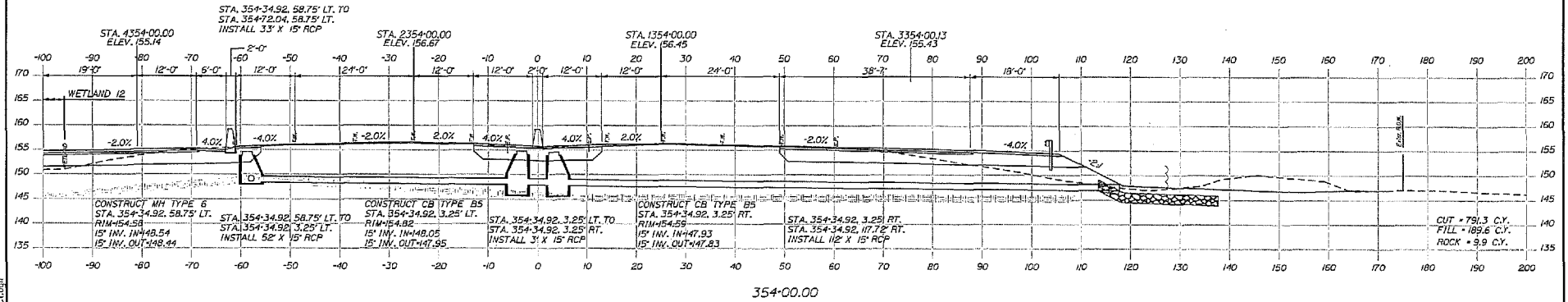
CONTRACT: WIN

Filename: ...MSTANDARDS\plan-sssect.dwg

Date: 1/12/2017



354+00.00



354+00.00

Filename: ... \MSTA\DRP\fig-rsstd.dgn

Scale:

No.	Revision	By	Date

Designed by:

# JACOBS

CONSULTANT PROJECT MANAGER: SPROJMANAGER

By	Date	By	Date
Designed	AMS 08/16	Checked	CSM 08/16
Drawn	SMG 08/16	In Charge of	---

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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

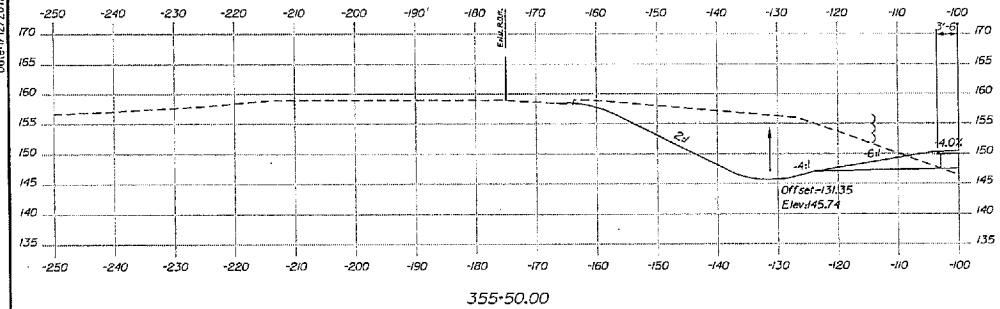
MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
 STA. 354+00

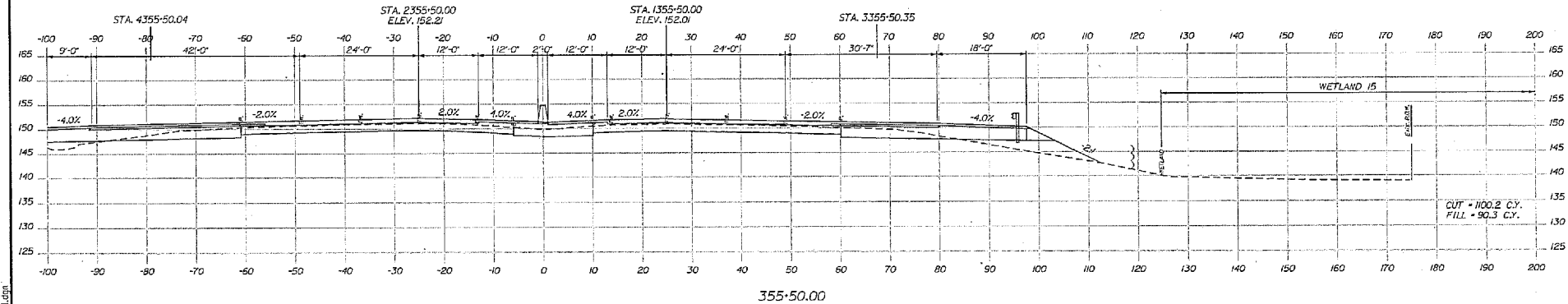
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CONTRACT: WIN

Date: 1/12/2017



355+50.00

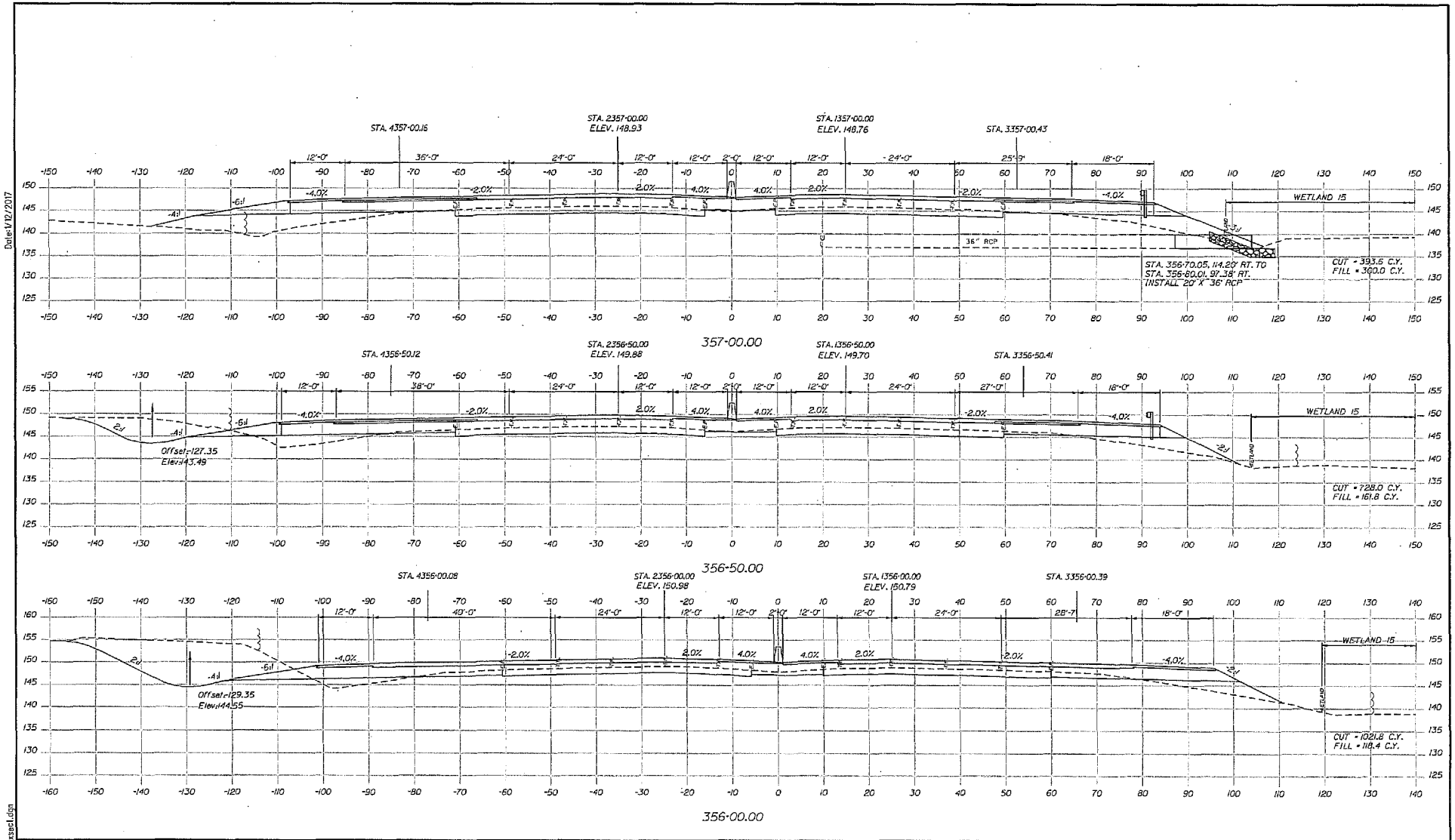


355+50.00

<p>Scale:</p> <p>Scale of Feet</p>	<p>Designed by:</p> <p style="text-align: center;"><b>JACOBS</b></p> <p>JACOBS ENGINEERING GROUP 343 CONGRESS STREET BOSTON, MA 02210 TEL (617) 242-9222 FAX (617) 242-9824</p>	<p><b>THE GOLD STAR MEMORIAL HIGHWAY</b></p>	<p><b>1-95 CROSS SECTIONS STA. 355+50</b></p>																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	No.	Revision	By	Date					<p>CONSULTANT PROJECT MANAGER: \$PROJMANAGER\$</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>By</th> <th>Date</th> <th>Checked</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>AMS</td> <td>08/16</td> <td>CSM</td> <td>CSM</td> <td>08/16</td> </tr> <tr> <td>Drawn</td> <td>SMG</td> <td>In Charge of</td> <td>---</td> <td>---</td> </tr> </tbody> </table>	By	Date	Checked	By	Date	AMS	08/16	CSM	CSM	08/16	Drawn	SMG	In Charge of	---	---	<p>MTA PROJECT MANAGER: R. NORWOOD</p>	<p>CONTRACT: WIN</p> <p style="text-align: right;">SHEET NUMBER: XS-86 \$PSET\$ OF</p>
No.	Revision	By	Date																							
By	Date	Checked	By	Date																						
AMS	08/16	CSM	CSM	08/16																						
Drawn	SMG	In Charge of	---	---																						

Filename: ... \MSTA\URN\Plan-sssect.dgn

Date: 12/2/2017



Scale: 1" = 20'

No.	Revision	By	Date

Designed by: **JACOBS**

CONSULTANT PROJECT MANAGER: **PRC/MANAGER**

By	Date	By	Date
Designed: AMS	08/15	Checked: CSM	08/15
Drawn: SMG	08/15	In Charge of: ---	--/--

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**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

**1-95 CROSS SECTIONS**  
**STA. 356+00 TO STA. 357+00**

SHEET NUMBER: XS-B7

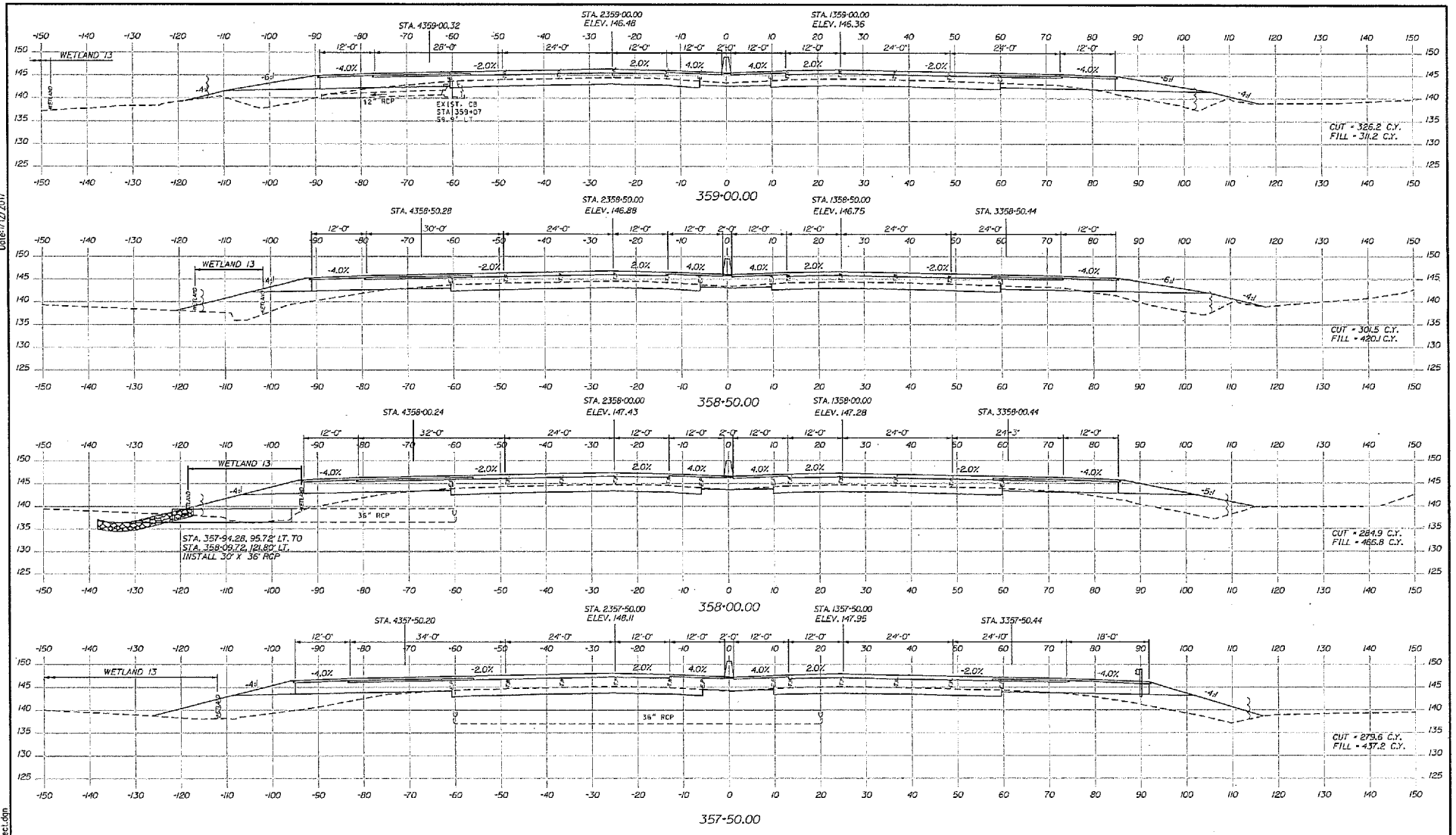
CONTRACT: WIN

#SETS OF

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Date: 11/2/2007

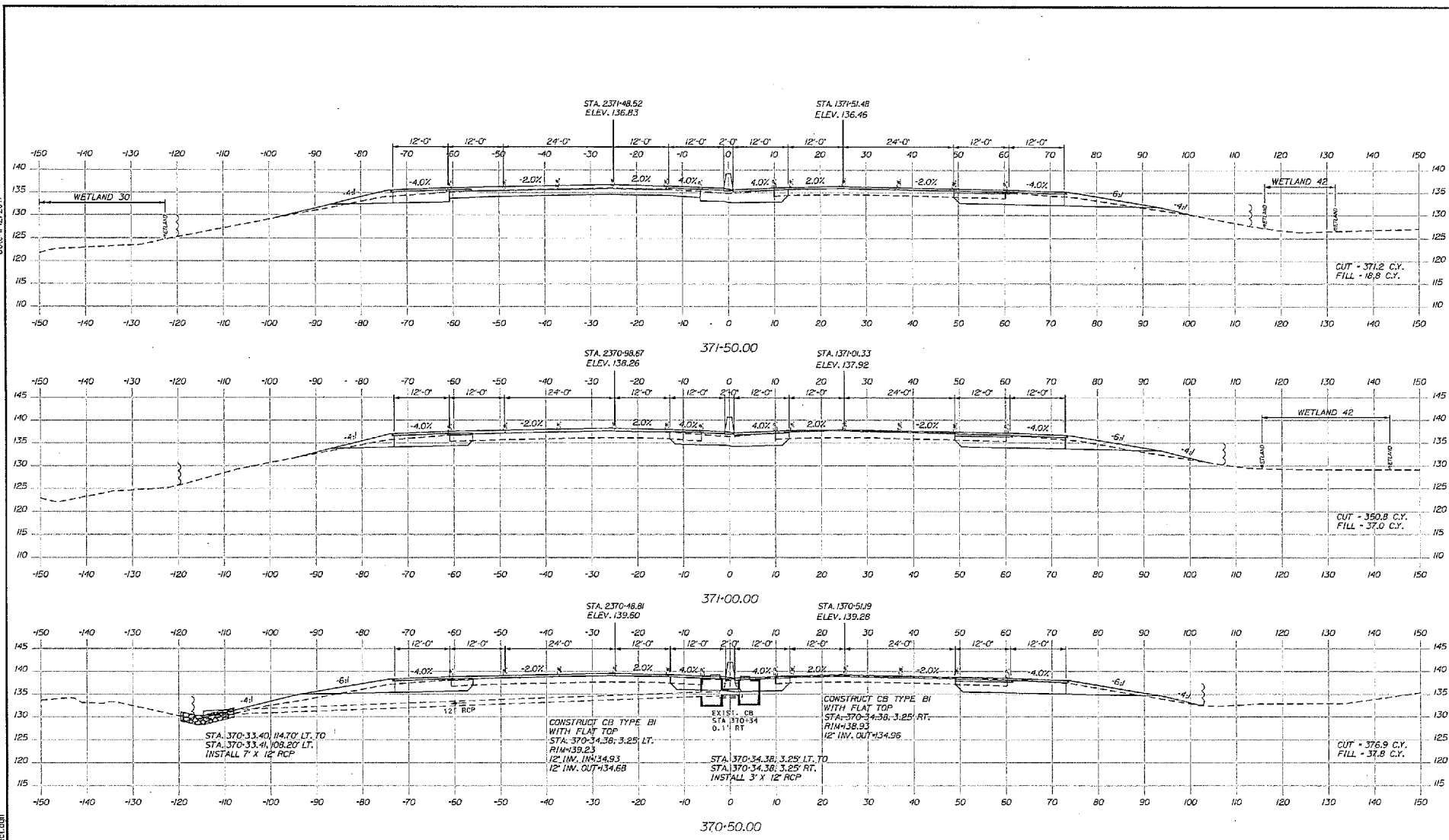
Filename: MUSTA\A\DR\Plan-ssct.dwg



Scale:		Designed by: <b>JACOBS</b>		JACOBS ENGINEERING GROUP 343 CONGRESS STREET BOSTON, MA 02210 TEL (617) 242-9222 FAX (617) 242-9824				<b>THE GOLD STAR MEMORIAL HIGHWAY</b>																														
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		No.	Revision	By	Date													CONSULTANT PROJECT MANAGER: #PROJ.MANAGERS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>By</th> <th>Date</th> <th>Checked</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>AMS</td> <td>08/16</td> <td> </td> <td>CSM</td> <td>08/15</td> </tr> <tr> <td>SMG</td> <td>08/16</td> <td>In Charge of</td> <td>---</td> <td>--/--</td> </tr> </tbody> </table>		By	Date	Checked	By	Date	AMS	08/16		CSM	08/15	SMG	08/16	In Charge of	---	--/--	WTA PROJECT MANAGER: R. NORWOOD		1-95 CROSS SECTIONS STA. 357+50 TO STA. 359+00 SHEET NUMBER: XS-B8 8PSETS OF	
No.	Revision	By	Date																																			
By	Date	Checked	By	Date																																		
AMS	08/16		CSM	08/15																																		
SMG	08/16	In Charge of	---	--/--																																		



Date: 11/2/2017



Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: *APRO/MANAGERS*

Designed	By	Date	Checked	By	Date
AMS	AMS	08/15	GSM	GSM	08/16
Drawn	SMG	08/15	In Charge of	---	---/---

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**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
 STA. 370+50 TO STA. 371+50

SHEET NUMBER: XS-96

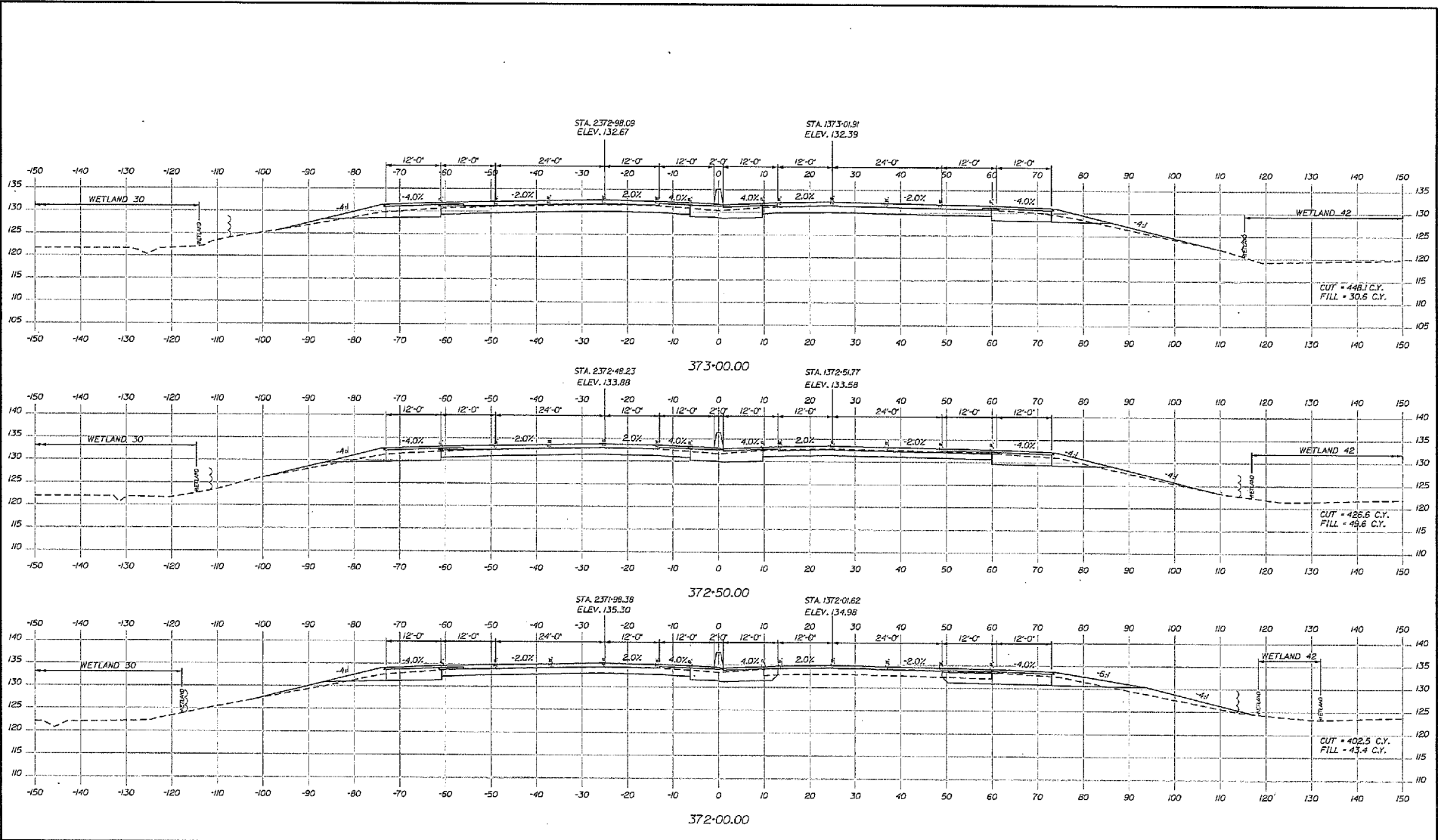
CONTRACT: WIN

SPSETS OF

Filename: ... \MTA\DRN\plan-ssct.dgn

Date: 1/12/2017

Filename: ...MST\A08\Plan-sets.dgn



Scale: 1" = 20'

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: #PROJMANAGERS

By	Date	Checked	By	Date
AMS	08/16	CSM	CSM	08/16
SMS	08/16	In Charge of	---	--/--

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**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

1-95 CROSS SECTIONS  
 STA. 372+00 TO STA. 373+00

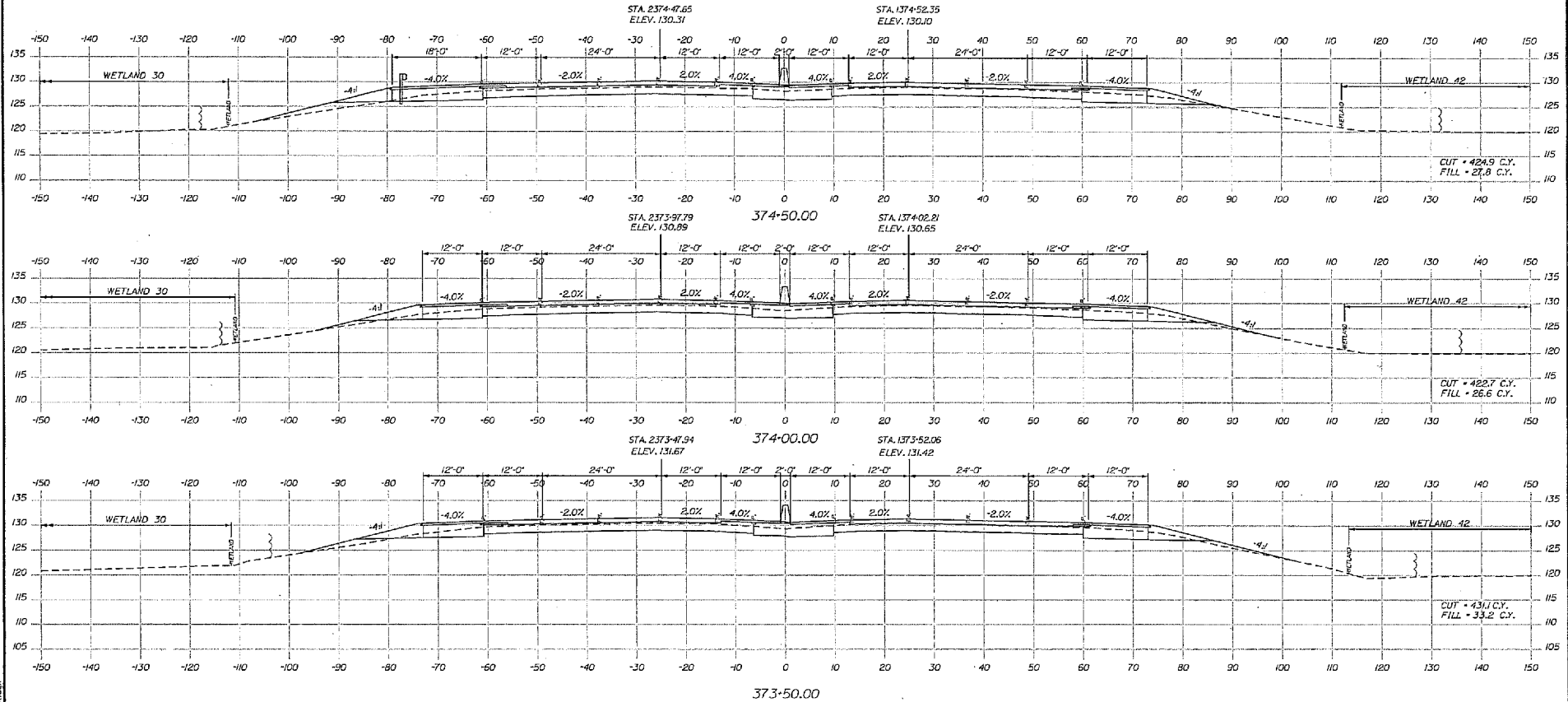
CONTRACT: WIN

SHEET NUMBER: XS-97

6/SETS OF



Date: 7/19/2017



Scale: Scale of Feet

No.	Revision	By	Date

Designed by:

# JACOBS

CONSULTANT PROJECT MANAGER: **PROJMANAGER**

By	Date	Checked	By	Date
AMS	08/16	CSM	CSM	08/16
SMC	08/16	In Charge of	---	--/--

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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

**I-95 CROSS SECTIONS  
 STA. 373+50 TO STA. 374+50**

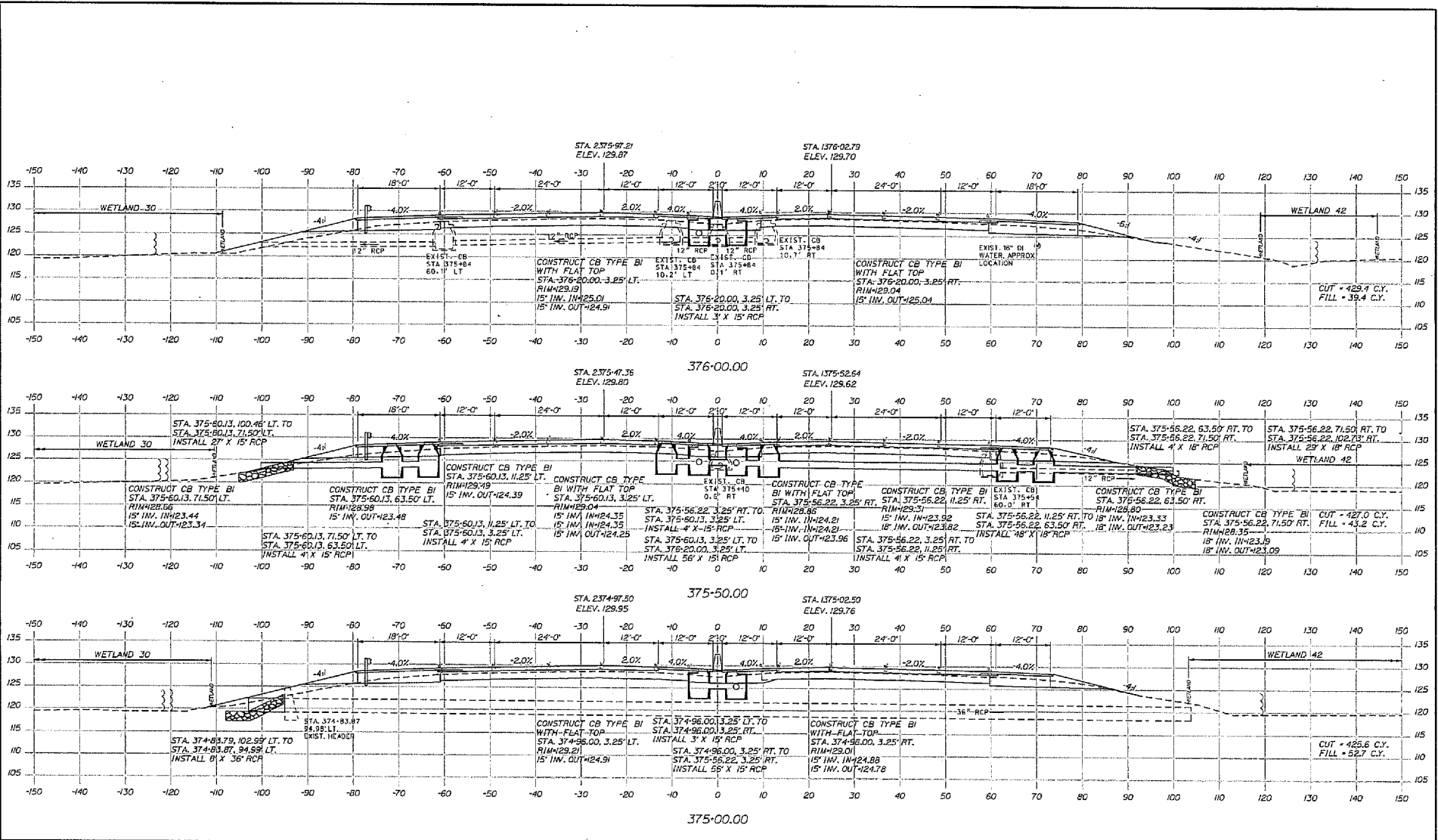
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Date: 12/12/2017

Filename: \\MSTA\DR\Plan-resect.dgn



Scale: 1" = 20'

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: \$PROJMANAGER\$

By	Date	By	Date	
AMS	08/16	Checked	CSM	08/16
Drawn	SMG	08/16	In Charge of	---

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 FAX (617) 242-9824

**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NDRWOOD

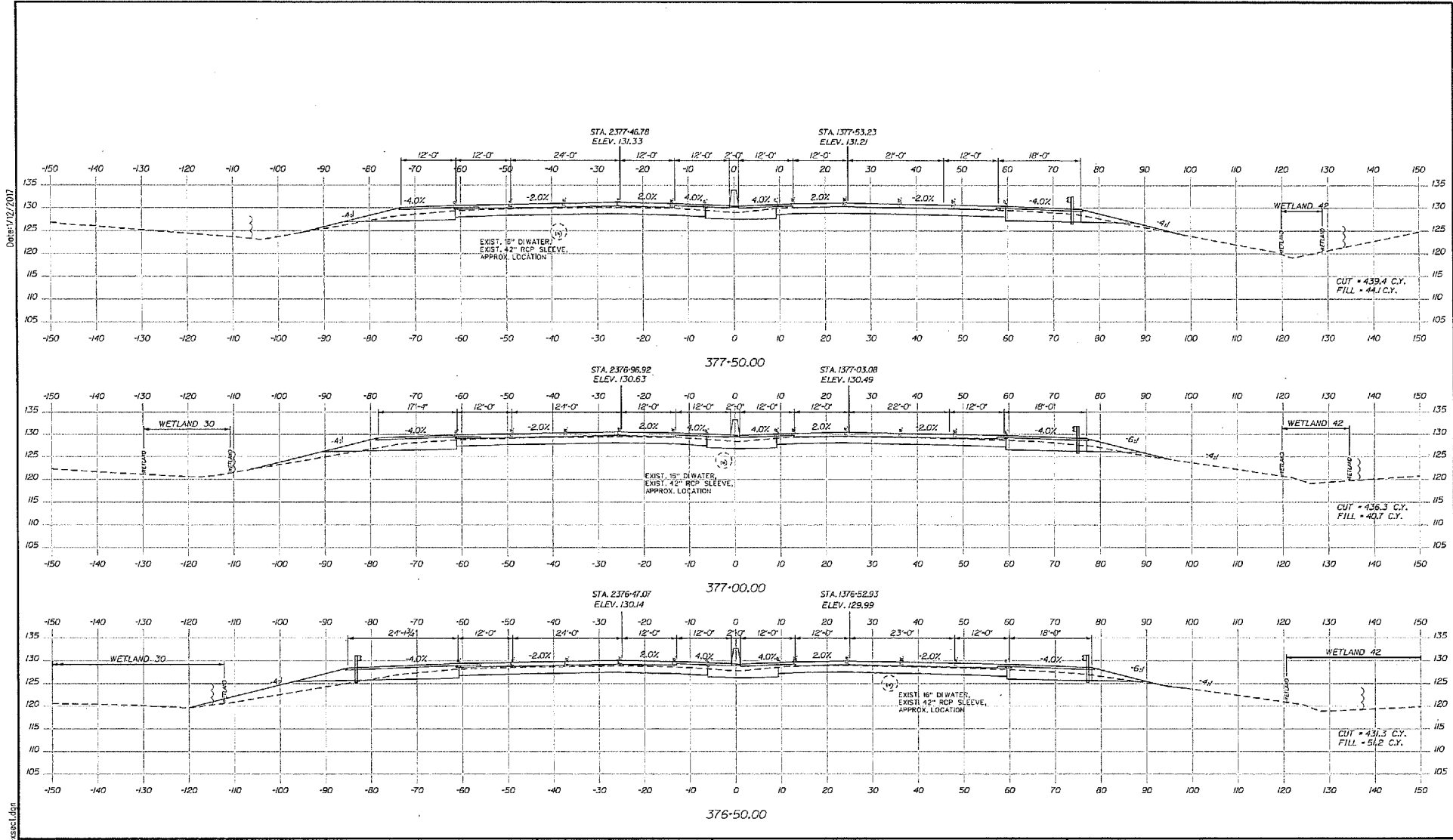
1-95 CROSS SECTIONS  
 STA. 375+00 TO STA. 376+00

CONTRACT: WIN

SHEET NUMBER: XS-89

\$PSETS OF

Date: 11/2/2017



Scale:

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: PROJMANAGERS

By	Date	Checked	By	Date
AMS	08/16	C.S.M.	AMS	08/16

Drawn: SMG 08/16 In Charge of: --- \*\*/--

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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

I-95 CROSS SECTIONS  
 STA. 376+50 TO STA. 377+50

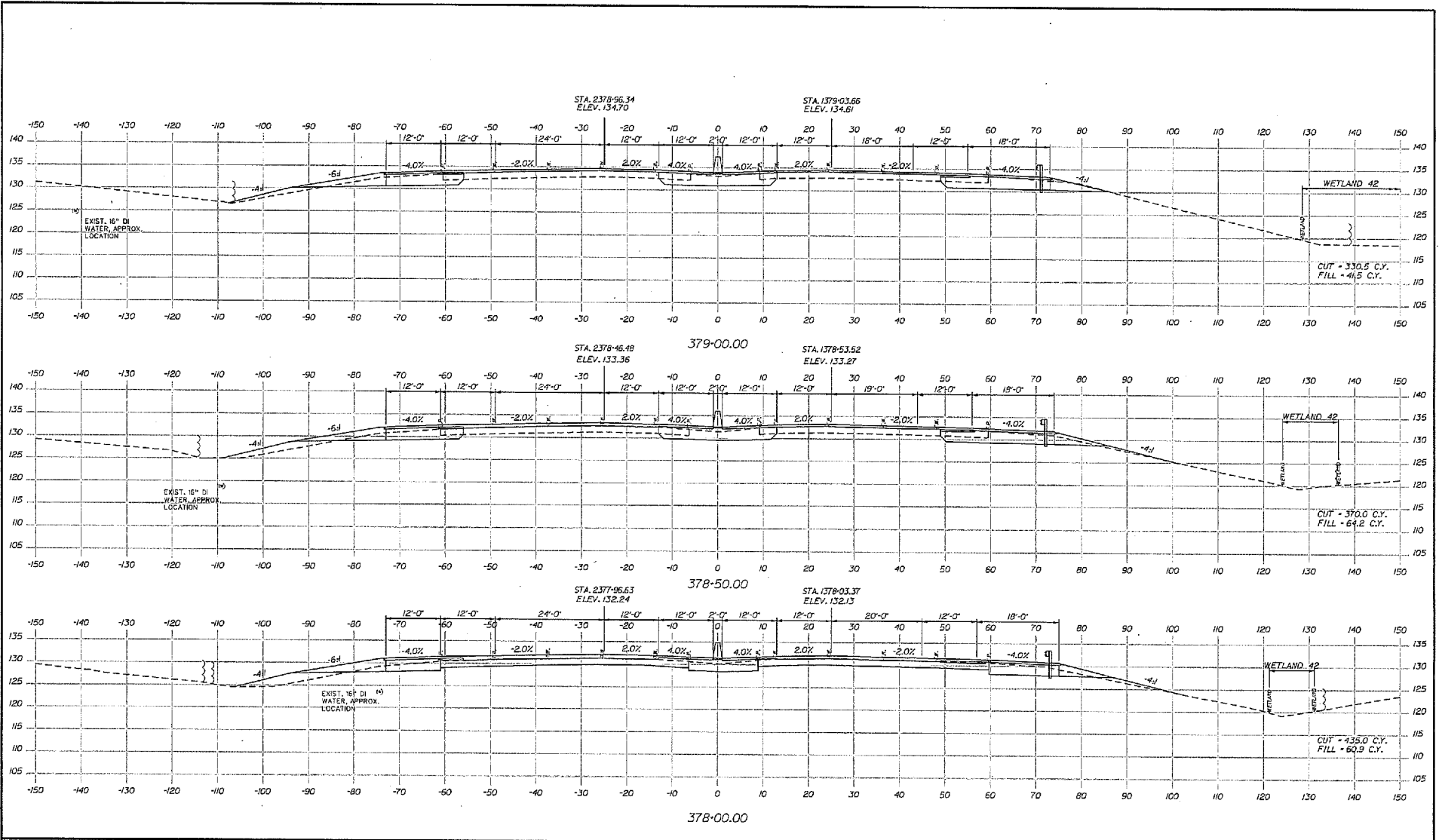
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CONTRACT: WIN

Filename: ...MST-A\DR\Proj\sect.dgn

Date: 1/12/2017

Filename: \\MSTAD\ORP\plan-sssect.dgn



Scale: Scale of Feet

No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: \$PROJMANAGER\$

Designed	By	Date	Checked	By	Date
Green	AMIS	08/16	CSM	CSM	08/16
	SMG	08/16	In Charge of	---	---

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THE GOLD STAR MEMORIAL HIGHWAY

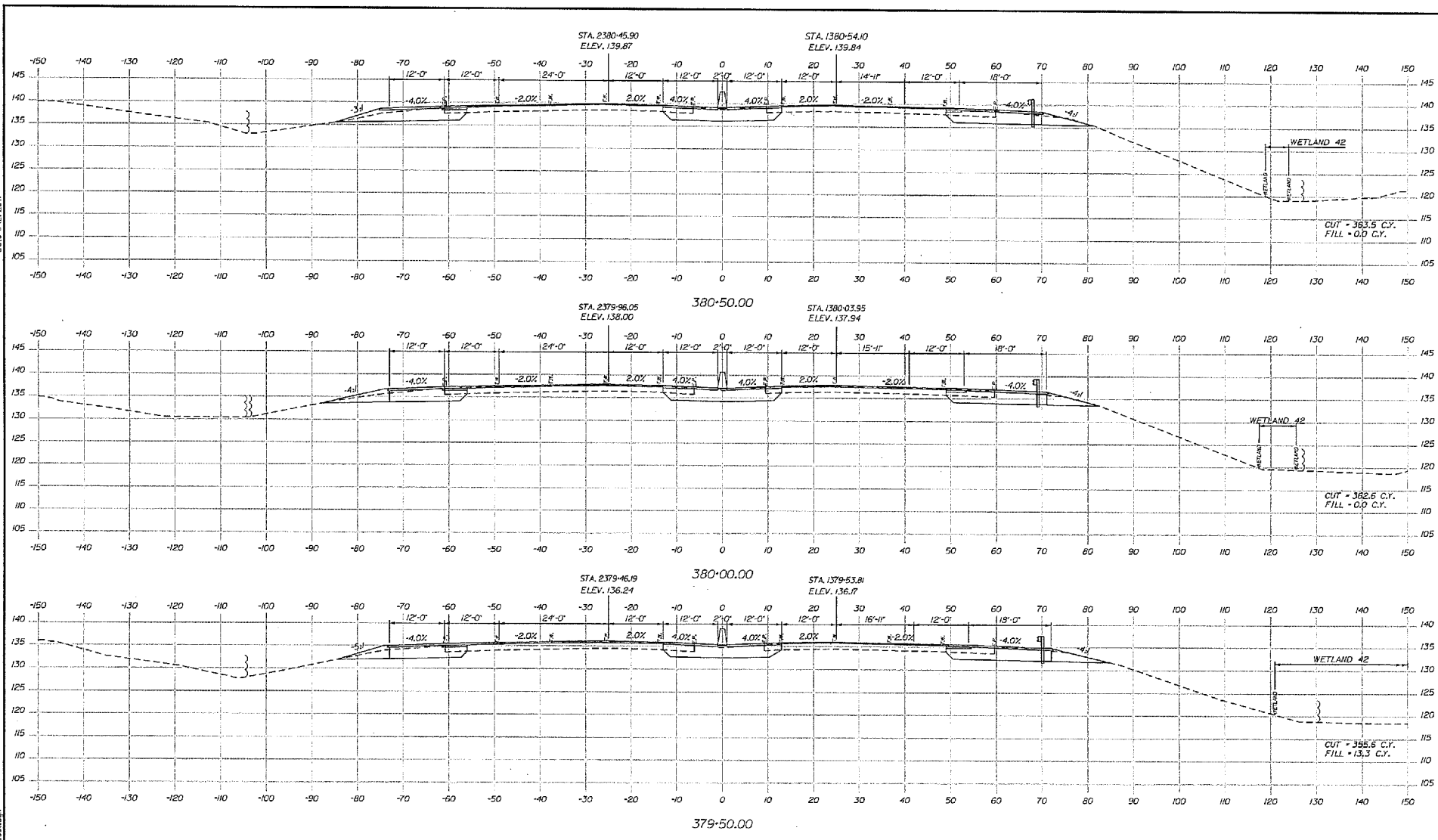
MTA PROJECT MANAGER: R. NORWOOD

1-95 CROSS SECTIONS  
 STA. 378+00 TO STA. 379+00

SHEET NUMBER: XS-101  
 \$PSETS OF

CONTRACT: WIN

Date: 7/12/2017



Scale:

No.	Revision	By	Date

Designed by:

# JACOBS

CONSULTANT PROJECT MANAGER: \$PROJ.MANAGER\$

By	Date	Checked	By	Date
Designed	AMS 08/16		CSM	08/16
Drawn	SMG 08/16	In Charge of	---	--/--

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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

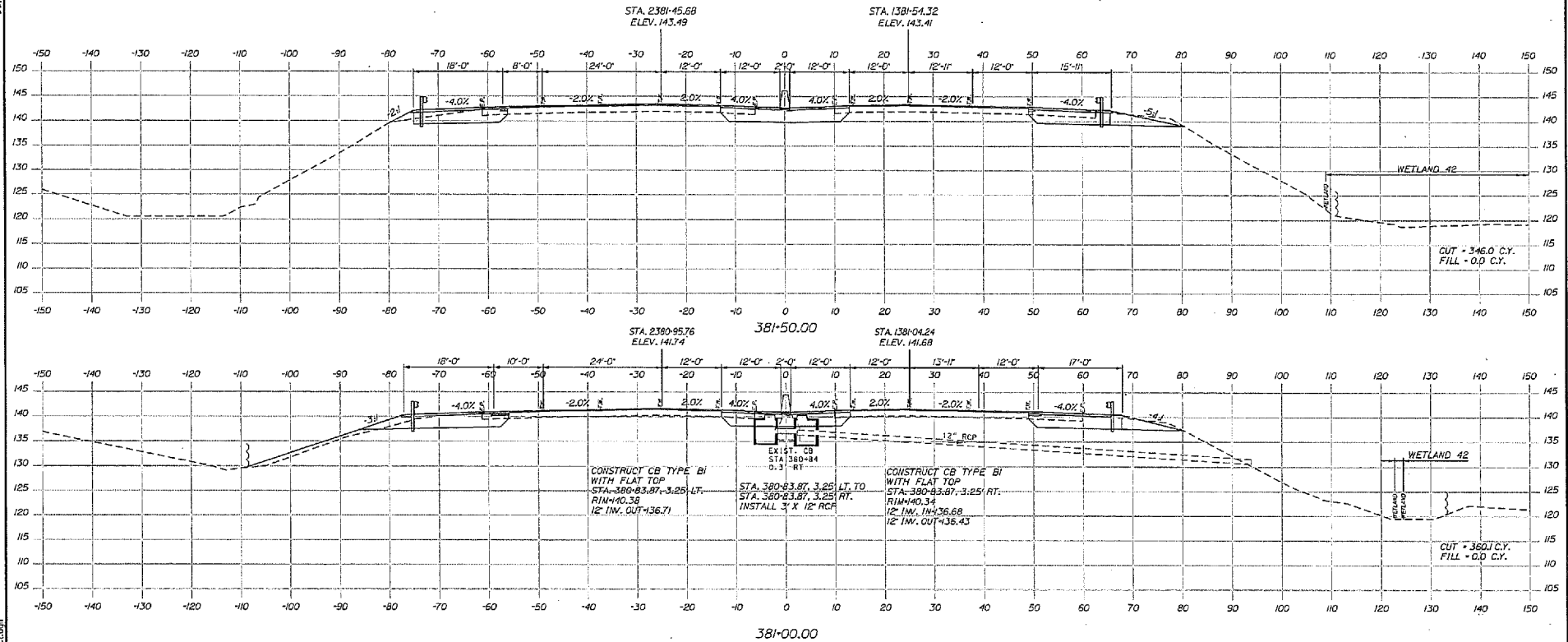
I-95 CROSS SECTIONS  
 STA. 379+50 TO STA. 380+50

CONTRACT: WIN

SHEET NUMBER: XS-102  
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Filename: \\MST\AUR\W\proj\sect1.dwg

Date: 1/12/2017



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No.	Revision	By	Date

Designed by:

**JACOBS**

CONSULTANT PROJECT MANAGER: SPROJMANAGERS

By	Date	By	Date
Designed	AMS 08/16	Checked	CSM 08/16
Drawn	SMG 08/16	In Charge of	----

JACOBS ENGINEERING GROUP  
343 CONGRESS STREET  
BOSTON, MA 02210  
TEL (617) 242-9222  
FAX (617) 242-9824

**MAINE TURNPIKE**

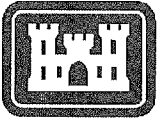
**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: R. NORWOOD

1-95 CROSS SECTIONS  
STA. 381+00 TO STA. 381+50

SHEET NUMBER: XS-103  
SPSET\$ OF

CONTRACT: WIN



**US Army Corps  
of Engineers** ®  
New England District

(Minimum Notice: Permittee must sign and return notification  
within one month of the completion of work.)

### COMPLIANCE CERTIFICATION FORM

**Permit Number:** NAE-2007-01211

**Project Manager** Clement

**Name of Permittee:** Maine Turnpike Authority

**Permit Issuance Date:** \_\_\_\_\_

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

\*\*\*\*\*  
\* MAIL TO: U.S. Army Corps of Engineers, New England District \*  
\* Permits and Enforcement Branch C \*  
\* Regulatory Division \*  
\* 696 Virginia Road \*  
\* Concord, Massachusetts 01742-2751 \*  
\*\*\*\*\*

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

**I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.**

\_\_\_\_\_  
Signature of Permittee

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Date of Work Completion

( ) \_\_\_\_\_  
Telephone Number

( ) \_\_\_\_\_  
Telephone Number



**US Army Corps  
of Engineers** ®  
New England District

**GENERAL PERMIT  
WORK-START NOTIFICATION FORM**  
(Minimum Notice: Two weeks before work begins)

\*\*\*\*\*  
\* MAIL TO: U.S. Army Corps of Engineers, New England District \*  
\* Permits and Enforcement Branch \*  
\* Regulatory Division \*  
\* 696 Virginia Road \*  
\* Concord, Massachusetts 01742-2751 \*  
\*\*\*\*\*

Corps of Engineers Permit No. NAE-2007-01211 was issued to the Maine Turnpike Authority on . This work is located in wetlands adjacent to the Maine Turnpike, in the vicinity of Mile 8.8, at York, Maine. The permit authorized the permittee to fill approximately 58,086 s.f. of freshwater wetlands in order to construct a replacement for the existing deteriorated and deficient York Toll Plaza.

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

**PLEASE PRINT OR TYPE**

**Name of Person/Firm:** \_\_\_\_\_

**Business Address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Telephone Numbers:** ( ) \_\_\_\_\_ ( ) \_\_\_\_\_

**Proposed Work Dates:** **Start:** \_\_\_\_\_ **Finish:** \_\_\_\_\_

**Permittee/Agent Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Printed Name:** \_\_\_\_\_ **Title:** \_\_\_\_\_

**Date Permit Issued:** \_\_\_\_\_ **Date Permit Expires:** \_\_\_\_\_

\*\*\*\*\*

**FOR USE BY THE CORPS OF ENGINEERS**

**PM:** Clement **Submittals Required:** Yes

**Inspection Recommendation:** Inspect as convenient

\_\_\_\_\_  
\_\_\_\_\_



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APPENDIX G

USACE MAINE GENERAL PERMIT

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**DEPARTMENT OF THE ARMY  
GENERAL PERMIT FOR  
THE STATE OF MAINE**

The New England District of the U.S. Army Corps of Engineers (Corps) hereby issues a General Permit (GP) for activities subject to Corps jurisdiction in waters of the U.S. within the boundaries of the State of Maine. This GP is issued in accordance with Corps regulations at 33 CFR 320 - 332 [see 33 CFR 325.2(e)(2)]. This GP authorizes activity-specific categories of work that are similar in nature and cause no more than minimal individual and cumulative adverse environmental impacts. Refer to Page 2 for the list of activities and Appendix A for activity specific conditions of eligibility in inland and tidal waters.

**I. GENERAL CRITERIA**

1. In order for activities to qualify for this GP, they must meet the GP's terms and eligibility criteria (Pages 1–4), General Conditions (GC) (Pages 5 – 20), and Appendix A - Definition of Categories.
2. Under this GP, projects may qualify for the following:
  - Category 1: Category 1 Self -Verification Notification Form is required (SVNF – see Appendix B).
  - Category 2: Application to and written approval from the Corps is required (Pre-Construction Notification (PCN)). No work may proceed until written approval from the Corps is received.

If your project is ineligible for Category 1, it may qualify for Category 2 or an Individual Permit and you must submit an application (see Page 3). The thresholds for activities eligible for Categories 1 and 2 are defined in Appendix A. This GP does not affect the Corps Individual Permit review process or activities exempt from Corps regulation.

3. Prospective permittees need to read:
  - a. Section II to determine if the activity requires Corps authorization.
  - b. Sections III and IV to determine if the activity may be eligible for authorization under this GP, specifically whether it is eligible for Self-Verification (SV) or whether Pre-Construction Notification (PCN) is required.
4. Permittees must ensure compliance with all applicable General Conditions in Section IV. The Corps will consider unauthorized any activity requiring Corps authorization if that activity is under construction or completed and does not comply with all of the terms and conditions.
5. Project proponents are encouraged to contact the Corps with questions at any time. Pre-application meetings (see 33 CFR 325.1(b)), whether arranged by the Corps or requested by permit applicants, are encouraged to facilitate the review of projects. Pre-application meetings and/or site visits can help streamline the permit process by alerting the applicant to potentially time-consuming concerns that are likely to arise during the evaluation of their project (e.g., avoidance, minimization and compensatory mitigation requirements, historic properties, endangered species, essential fish habitat, and dredging contaminated sediments).

## II. CORPS JURISDICTION/ACTIVITIES COVERED

1. Permits are required from the Corps of Engineers for the following work:

a. The construction of any structure in, over or under any navigable water of the United States (U.S.)<sup>1</sup>, the excavating or dredging from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, condition, or capacity of such waters. The Corps regulates these activities under Section 10 of the Rivers and Harbors Act of 1899. See 33 CFR 322;

b. The discharge of dredged or fill material and certain discharges associated with excavation into waters of the U.S. (e.g. sidcasting). The Corps regulates these activities under Section 404 of the Clean Water Act (CWA). See 33 CFR 323; and

c. The transportation of dredged material for the purpose of disposal in the ocean. The Corps regulates these activities under Section 103 of the Marine Protection, Research and Sanctuaries Act. See 33 CFR 324.

2. Related laws:

33 CFR 320.3 includes a list of related laws, including: Section 401 of the CWA, Section 402 of the CWA, Section 307(c) of the Coastal Zone Management (CZM) Act of 1972, The National Historic Preservation Act of 1966, the Endangered Species Act, the Fish and Wildlife Act of 1956, the Marine Mammal Protection Act of 1972, Magnuson-Stevens Act, and Section 7(a) of the Wild and Scenic Rivers Act.

3. An activity listed below may be authorized by this GP only if that activity and the permittee satisfy all of the GP's terms and conditions. Any activity not specifically listed below may still be eligible for the GP; applicants are advised to contact the Corps for a specific eligibility determination. Category 1 and Category 2 eligibility criteria for each activity in both Inland and Tidal waters can be found in Appendix A.

1. Repair, Replacement, Expansion, and Maintenance of Authorized Structures and Fills
2. Moorings
3. Structures, Floats and Lifts
4. Aids to Navigation, and Temporary Recreational Structures
5. Dredging, Disposal of Dredged Material, Beach Nourishment, and Rock Removal and Relocation
6. Discharges of Dredged or Fill Material Incidental to the Construction of Bridges
7. Bank and Shoreline Stabilization
8. Residential, Commercial, Industrial, and Institutional Developments, and Recreational Facilities
9. Utility Line Activities
10. Linear Transportation Projects
11. Mining Activities
12. Boat Ramps and Marine Railways
13. Land and Water-Based Renewable Energy Generation Facilities and Hydropower Projects
14. Reshaping Existing Drainage Ditches and Mosquito Management
15. Oil Spill and Hazardous Material Cleanup
16. Cleanup of Hazardous and Toxic Waste
17. Scientific Measurement Devices
18. Survey Activities
19. Agricultural Activities
20. Fish and Wildlife Harvesting, Enhancement, and Attraction Devices
21. Habitat Restoration, Establishment and Enhancement Activities
22. Previously Authorized Activities
23. Stream & Wetland Crossings
24. Aquaculture

Note: Multiple activities may be authorized in the same GP, e.g. a recreational pier (#3) with an associated mooring (#2) or a windpower facility (#13) with an associated transmission line (#9).

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<sup>1</sup> Defined in Appendix F, Definitions and at 33 CFR 328.  
Section II

### III. PROCEDURES

1. State Approvals. Applicants are responsible for applying for and obtaining any of the required state or local approvals. Federal and state jurisdictions may differ in some instances. State permits may be required for specific projects regardless of the general permit category.

In order for authorizations under this GP to be valid, when any of the following state approvals or statutorily-required reviews is also required, the approvals must be obtained prior to the commencement of work in Corps jurisdiction.

- Maine Department of Environmental Protection (DEP): Natural Resources Protection Act (NRPA) permit, including permit-by-rule (PBR) and general permit authorizations; Site Location of Development Act permit; Maine Waterway Development and Conservation Act permit; and Maine Hazardous Waste, Septage, and Solid Waste Management Act license.
- Maine Department of Conservation, Agriculture & Forestry: Land Use Planning Commission (LUPC) permit.
- Maine Department of Marine Resources: Aquaculture Leases.
- Maine Department of Conservation, Bureau of Parks and Lands, Submerged Lands: Submerged Lands Lease.

**NOTE: This GP may also be used to authorize projects that are not regulated by the State of Maine (e.g., certain seasonal floats or moorings).**

2. How to Obtain/Apply for Authorization.

a. Category 1 (**Self-Verification**): Self-Verification Notification Form (SVNF) required. The SVNF is required for all SV eligible work in Maine unless otherwise stated in Appendix A. Activities that are eligible for SV are authorized under this GP and may commence without written verification from the Corps provided the prospective permittee has:

i. Confirmed that the activity will meet the terms and conditions of Category 1. Consultation with the Corps and/or other relevant federal and state agencies may be necessary to ensure compliance with the applicable general conditions (GCs) and related federal laws such as the National Historic Preservation Act (see GC 6), the Endangered Species Act (GC 8) and the Wild and Scenic Rivers Act (GC 9). Prospective permittees are encouraged to contact the Corps with SV eligibility questions. Activities not meeting the SV criteria must submit a PCN to the Corps.

ii. Submitted the SVNF (see GC 27 and Appendix B) to the Corps. **NOTE: A copy of a state permit application form may be an acceptable surrogate for the SVNF. Whichever form chosen needs to include a location map, plans, and an Official Species List for federally listed threatened or endangered species (Reference Appendix D).**

b. Category 2 (**Pre-Construction Notification (PCN)**): Application to and written verification from the Corps is required before work can proceed. For activities that do not qualify for SV or where otherwise required by the terms of the GP, the permittee must submit a PCN and obtain a written permit before starting work in Corps jurisdiction.

i. The Corps will coordinate review of all activities requiring PCN with federal and state agencies and federally recognized tribes, as appropriate. To be eligible and subsequently authorized, an activity must result in no more than minimal individual and cumulative effects on the aquatic environment as determined by the Corps in accordance with the criteria listed within this GP. This may require project modifications involving avoidance, minimization, or compensatory mitigation for unavoidable impacts to ensure that the net adverse effects of a project are no more than minimal.

ii. The Corps will attempt to issue a written eligibility determination within the state's review period. Regardless, work eligible for Category 2 may not proceed before Corps written approval is received.

c. All applicants for Category 2 projects must:

- i. Apply directly to the Corps using the state application form or the Corps application form (ENG Form 4345<sup>2</sup>), and apply directly to the state (DEP, LUPC, BPL or DMR) as applicable using the appropriate state form, if the work is regulated by the Corps and the state; or
  - ii. Apply directly to the Corps using the Corps application form (ENG Form 4345<sup>2</sup>) if the work is regulated by the Corps but not the state (DEP, LUPC, BPL or DMR).
  - iii. Provide application information (see “Information Typically Required” in Appendix C) to help ensure the application is complete and to speed project review.
  - iv. Obtain an Official Species List of federally threatened or endangered species in the project area (GC 8).
  - v. Submit a copy of their application materials to the Maine Historic Preservation Commission (MHPC) *and all five Indian tribes* listed at Appendix E, at the same time, or before, they apply to the Corps, to be reviewed for the presence of historic, archaeological or tribal resources in the permit area that the proposed work may affect. Submittals to the Corps shall include information to indicate that this has been done (a copy of the applicant’s cover letter to MHPC and tribes or a copy of the MHPC and tribal response letters is acceptable).
- d. Work that is not regulated by the State of Maine, but is subject to Corps jurisdiction, may still be eligible for authorization under this GP.

**e. Emergency Situations:** 33 CFR 325.2(e)4 states that an “emergency” is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures.” Emergency work is subject to the same terms and conditions of this GP as non-emergency work, and similarly, must qualify for authorization under the GP; otherwise an IP is required. The Corps will work with all applicable agencies to expedite verification according to established procedures in emergency situations.

3. Individual Permits. Projects that are not authorized by this GP require an Individual Permit (IP) (33 CFR 325.5) and proponents must submit an application directly to the Corps. This GP does not affect the Corps IP review process or activities exempt from Corps regulation. For general information and application form, see the Corps website or contact the Corps (see Appendix E). The Corps encourages applicants to apply concurrently for a Corps IP and applicable state permits.

The Corps retains discretionary authority on a case-by-case basis to elevate a GP eligible project to an IP based on concerns for the aquatic environment or for any other factor of the public interest [33 CFR 320.4(a)]. Whenever the Corps notifies an applicant that an IP is required, no work in Corps jurisdiction may be conducted until the Corps issues the required authorization in writing indicating that work may proceed.

4. Enforcement/Non-Compliance. Work performed without the required Corps of Engineers permits is subject to administrative, civil, and criminal penalties. The Corps will evaluate unauthorized activities for enforcement action under 33 CFR 326.

The Corps will consider unauthorized any activity requiring Corps authorization if that activity is under construction or completed and does not comply with all of the terms and conditions of a GP or an IP. The Corps may elect to suspend enforcement proceedings if the permittee modifies his project to comply with a GP.

After considering whether a violation was knowing or intentional, and other indications of the need for a penalty, the Corps can elect to terminate an enforcement proceeding with an after-the- fact authorization under a GP, if all terms and conditions of the GP have been satisfied, either before or after the activity has been accomplished.

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<sup>2</sup> Located at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under “Forms & Publications.”  
Section III

#### **IV. GENERAL CONDITIONS**

To qualify for GP authorization, the prospective permittee must comply with the following general conditions, as applicable.

1. Other Permits
2. Federal Jurisdictional Boundaries
3. Minimal Direct, Secondary, and Cumulative Impacts
4. Mitigation (Avoidance, Minimization, and Compensatory Mitigation)
5. Single and Complete Projects
6. Historic Properties
7. Corps Projects and Property
8. Federal Threatened and Endangered Species
9. Wild and Scenic Rivers
10. Navigation
11. Federal Liability
12. Utility Line Installation and Removal
13. Heavy Equipment in Wetlands or Mudflats
14. Temporary Fill
15. Restoration of Special Aquatic Sites (including wetland areas).
16. Soil Erosion, Sediment and Turbidity Controls
17. Time of Year Windows/Restrictions.
18. Aquatic Life Movements & Management of Water Flows
19. Water Quality and Coastal Zone Management
20. Floodplains and Floodways
21. Storage of Seasonal Structures
22. Spawning, Breeding, and Migratory Areas
23. Vernal Pools
24. Invasive and Other Unacceptable Species
25. Programmatic Agreements
26. Permit On-Site
27. Self-Verification Notification Form (SVNF)
28. Inspections
29. Maintenance
30. Property Rights
31. Transfer of GP Verifications
32. Modification, Suspension, and Revocation
33. Special Conditions
34. False or Incomplete Information
35. Abandonment
36. Enforcement Cases
37. Duration of Authorization
38. Previously Authorized Activities
39. Discretionary Authority
40. St. John/St. Croix Rivers.
41. National Lands
42. Essential Fish Habitat (EFH)
43. Work Site Restoration
44. Bank Stabilization
45. Stream Work & Crossings and Wetland Crossings



**1. Other Permits.** Permittees must obtain other federal, state, or local authorizations required by law. Applicants are responsible for applying for and obtaining all required state or local approvals. This includes, but is not limited to, the project proponent obtaining a Flood Hazard Development Permit issued by the town, if necessary. Inquiries may be directed to the municipality or to the Maine Floodplain Management Coordinator at (207) 287-8063. See <http://www.maine.gov/dacf/flood/>

**2. Federal Jurisdictional Boundaries**

a. Applicability of this GP shall be evaluated with reference to federal jurisdictional boundaries. Applicants are responsible for ensuring that the boundaries used satisfy the federal criteria defined at 33 CFR 328 “Waters of the U.S.” and 33 CFR 329 “Navigable Waters of the U.S.”

NOTE: Waters of the U.S. include the subcategories “navigable waters of the U.S.” and “wetlands.”

b. For Category 1 projects, proponents are not required to delineate the waters of the U.S. that they plan to impact, but must approximate the square footage of impacts in order to determine the review category (1 or 2 or Individual Permit). For projects filling <15,000 square feet (SF) of waters of the U.S. that do not qualify for Category 1 (e.g., vernal pool, secondary or endangered species impacts, etc.) and therefore require an application to the Corps (PCN), and for those filling ≥15,000 SF, applicants shall delineate all waters of the U.S. that will be filled (direct impacts) in accordance with the Corps of Engineers Wetlands Delineation Manual and the most recent regional supplement (see Appendix C). In addition, applicants shall approximately identify all waters of the U.S. on the property and *known* waters adjacent to the property in order for the Corps to evaluate secondary impacts. The waters of the U.S. shall be clearly shown on the project plans submitted with the application. This includes all waters of the U.S. in areas under DEP or LUPC jurisdiction regardless of whether they’re shown on LUPC zoning maps.

c. On a case-by-case basis, the Corps may modify/refine the above delineation and identification requirements for waters of the U.S. See [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Jurisdictional Limits and Wetlands for more information on delineating jurisdictional areas.

**3. Minimal Direct, Secondary, and Cumulative Effects<sup>3</sup>**

a. Projects authorized by this GP shall have no more than minimal direct, secondary and cumulative adverse environmental impacts. Category 2 applicants should provide information on secondary and cumulative impacts as stated in Appendix C. Compensatory mitigation may be required to offset unavoidable impacts (see GC 4) and to ensure that they are no more than minimal. Compensatory mitigation requirements will be determined on a case-by-case basis.

b. Secondary impacts to waterway and/or wetland areas, (e.g., areas drained, flooded, cleared, excavated or fragmented) shall be added to the total fill area when determining whether the project qualifies for Category 1 or 2. Direct, secondary and cumulative impacts are defined at Appendix A, Endnote 2 and Appendix F.

c. Site clearing, grading and construction activities in the upland habitat surrounding vernal pools (“Vernal Pool Management Areas”) are secondary impacts. See GC 23 for avoidance and minimization requirements and recommendations.

d. Bank stabilization activities in tidal waters are provided at Appendix A, Page 30. Direct impacts in tidal waters from contiguous bank stabilization projects in excess of 200 linear feet (Applicant or Applicant + Abutters combined) must undergo Category 2 review.

**4. Mitigation (Avoidance, Minimization, and Compensatory Mitigation)**

a. Discharges of dredged or fill material into waters of the U.S., including wetlands, shall be avoided and minimized to the maximum extent practicable through consideration of alternatives. The Corps may require compensatory mitigation of unavoidable direct and secondary impacts associated with Category 2 projects on a case-by-case basis.

b. Applicants proposing work in jurisdictional waters should consider riparian/forested buffers for stormwater management and low impact development (LID) best management practices (BMPs) to reduce

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<sup>3</sup> Direct, secondary and cumulative effects are defined at Appendix F, Definitions and Acronyms.

impervious cover and manage stormwater to minimize secondary impacts to aquatic resources to the maximum extent practicable.<sup>4</sup>

c. Compensatory mitigation<sup>5</sup> for effects to waters of the U.S., including direct, secondary and temporal<sup>6</sup>, may be required for permanent impacts that exceed the SV area limits, and may be required for temporary impacts that exceed the SV area limits, to offset unavoidable impacts which remain after all appropriate and practicable avoidance and minimization has been achieved and to ensure that the adverse effects to the aquatic environment are no more than minimal. Proactive restoration projects or temporary impact work with no lasting secondary effects may generally be excluded from this requirement. Refer to Appendix G.

## **5. Single and Complete Projects<sup>7</sup>**

a. This GP shall not be used to piecemeal work and shall be applied to single and complete projects. When determining the review category in Appendix A (Category 1 or 2) for a single and complete project, proponents must include any permanent historic fill placed since October 1995 that is associated with that project and all currently proposed temporary and permanent impact areas.

b. A single and complete project must have independent utility<sup>7</sup>.

c. Unless the Corps determines the activity has independent utility:

i. This GP shall not be used for any activity that is part of an overall project for which an Individual Permit is required.

ii. All components of a single project and/or all planned phases of a multi-phased project (e.g., subdivisions should include all work such as roads, utilities, and lot development) shall be treated together as constituting one single and complete project.

d. For linear projects, such as power lines or pipelines with multiple crossings, the single and complete project is all crossings of a single water of the U.S. (i.e., single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly-shaped wetland or lake, etc., are not separate waterbodies and crossings of such features cannot be considered separately. If any crossing requires a Category 2 activity, then the entire linear project shall be reviewed as one project under Category 2.

## **6. Historic Properties**

a. No undertaking shall cause effects (defined at 33 CFR 325 Appendix C and 36 CFR 800) on properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places<sup>8</sup>, including previously unknown historic properties within the permit area, unless the Corps or another Federal action agency has satisfied the consultation requirements of Section 106 of the National Historic Preservation Act (NHPA). The State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO) and the National Register of Historic Places can assist with locating information on: i) previously identified historic properties; and ii) areas with potential for the presence of historic resources, which may require identification and evaluation by qualified historic preservation and/or archaeological consultants in consultation with the Corps and the SHPO and/or THPO(s).

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<sup>4</sup> See: [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> State General Permit >> Permit Resources >> Mitigation for this additional information: a) "Wetland BMP Manual - Techniques for Avoidance & Minimization," b) riparian/forested buffer BMPs, and c) LID BMPs. LID BMPs include, but are not limited to: replacing curbs and gutters with swales; using an open space design for subdivisions; using permeable, pervious or porous pavements; constructing bio-retention systems; and/or, adding a green roof or rain garden.

<sup>5</sup> Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR 332. See also the New England District Compensatory Mitigation Guidance at [www.nae.usace.army.mil/regulatory](http://www.nae.usace.army.mil/regulatory) >> Mitigation.

<sup>6</sup> Temporal loss: The time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site(s) (33 CFR 332.2).

<sup>7</sup> Single and Complete Project and Independent Utility are defined in Appendix F - Definitions.

<sup>8</sup> The majority of historic properties are not listed on the National Register of Historic Places and may require identification and evaluation by qualified historic preservation and/or archaeological consultants in consultation with the Corps and the SHPO and/or THPO(s).

b. For activities eligible for SV, proponents must ensure and document that the activity will not cause effects as stated in 6(a). Proponents must submit a PCN if the authorized activity may cause effects as stated in 6(a) as soon as possible to ensure that the Corps is aware of any potential effects of the permitted activity on any historic property to ensure all Section 106 requirements are met.

c. All PCNs shall: i) show notification to the SHPO and applicable THPO(s)<sup>9</sup> for their identification of historic properties, ii) state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties, and iii) include any available documentation from the SHPO or THPO(s) indicating that there are or are not historic properties affected. Starting consultation early in project planning can save proponents time and money.

d. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

## 7. Corps Projects and Property

a. In addition to any authorization under this GP, proponents must contact the Corps Real Estate Division at (978) 318-8585 for work occurring on or potentially affecting Corps properties and/or Corps-controlled easements to initiate reviews and determine what real estate instruments are necessary to perform work. Permittees may not commence work on Corps properties and/or Corps-controlled easements until they have received any required Corps real estate documents evidencing site-specific permission to work.

b. Any proposed temporary or permanent alteration, or modification or use, including occupation, of a federal project (including but not limited to a levee, dike, floodwall, channel, anchorage, breakwater, seawall, bulkhead, jetty, wharf, pier or other work built but not necessarily owned by the United States), which would obstruct or impair the usefulness of the federal project in any manner, and/or would involve changes to the authorized federal project's scope, purpose, and/or functioning that go beyond minor modifications required for normal operations and maintenance, is not eligible for SV and requires review and approval by the Corps pursuant to 33 USC 408. Where Section 408 is applicable, a decision on a Department of the Army general permit application will not be rendered prior to the decision on a Section 408 request.

c. Any structure or work within any Corps Federal Navigation Project (FNP) or its buffer zone<sup>10</sup>, shall be subject to removal at the owner's expense prior to any future Corps dredging or the performance of periodic hydrographic surveys. See GC 10 for more requirements related to FNPs.

## 8. Federal Threatened and Endangered Species

a. No activity is authorized which: i) is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species; ii) "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed; or iii) violates the ESA.

b. **All applicants must request an Official Species List from the US Fish & Wildlife Service and must include the list in the Corps permit application. To request an Official Species List, refer to the instructions in Appendix D.**

c. **For federally listed species in tidal waters, applicants should contact the National Marine Fisheries Service at: <http://www.greateratlantic.fisheries.noaa.gov/protected/section7/>**

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<sup>9</sup> Appendix E, 3(a)&(b). Historic Resources, provides contact information and each tribe's "area of concern."

<sup>10</sup> See Appendix H for a list of FNPs. The buffer zone is equal to three times the authorized depth of the FNP.  
Section IV

d. A PCN is required if a threatened or endangered species, a species proposed for listing as threatened or endangered, or designated or proposed critical habitat (all hereinafter referred to as “listed species or habitat”), as identified under the ESA, is present in the action area<sup>11</sup>.

e. Federal agencies should follow their own procedures for complying with the requirements of the ESA but should coordinate that consultation with the Corps as well.

**9. Wild and Scenic Rivers.**<sup>12</sup> Any activity that occurs in the designated main stem of, within 0.25 mile up or downstream of the designated main stem of, or in tributaries within .25 miles of the designated main stem of a National Wild and Scenic River, or in “bordering and contiguous wetlands” (see Appendix A, Endnote 1) that are adjacent to the designated main stem of a National Wild and Scenic River, or that has the potential to alter flows within a river within the National Wild and Scenic River System, is not eligible for Category 1 regardless of size of the impacts. This condition applies to both designated Wild and Scenic Rivers and rivers officially designated by Congress as study rivers for possible inclusion while such rivers are in an official study status. National Wild and Scenic Rivers System segments for Maine as of October 2015 include: Allagash River beginning at Telos Dam continuing to Allagash checkpoint at Eliza Hole Rapids, approximately 3 miles upstream of the confluence with the St. John River (length = 92 miles); and 11.25 miles of the York River, in the State of Maine, from its headwaters at York Pond to the mouth of the river at York Harbor, plus its tributaries (currently under study).

## **10. Navigation**

a. Any structure or work that extends closer to the horizontal limits of any Corps Federal Navigation Project (see Appendix H) than a distance of three times the project’s authorized depth shall be subject to removal at the owner’s expense prior to any future Corps dredging or the performance of periodic hydrographic surveys. This is applicable to Category 1 and 2. Reference Appendix A, Page 28 (Moorings) and Page 29 (Structures, Floats & Lifts).

b. There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein, and no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein.

c. The permittee understands and agrees that if future U.S. operations require the removal, relocation, or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim shall be made against the U.S. on account of any such removal or alteration.

d. A PCN is required for all work in, over or under an FNP or its buffer zone unless otherwise indicated in Appendix A. (Reference Appendix A, Endnote 13, Page 36)

**11. Federal Liability.** In issuing this permit, the Federal Government does not assume any liability for the following: (a) damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; (b) damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the U.S. in the public interest; (c) damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit; (d) design or construction deficiencies associated with the permitted work; (e) damage claims associated with any future modification, suspension, or revocation of this permit.

## **12. Utility Line Installation and Removal**

a. Subsurface utility lines shall remain subsurface. If it is necessary to discharge dredged or filled material not previously authorized in order to keep such utility lines buried or restore them to their original subsurface condition, a PCN and written verification from the Corps may be required (e.g., in the case of side

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<sup>11</sup> The “Endangered Species Consultation Handbook – Procedures for Conducting Consultation and Conference Activities Under Section 7 of the ESA,” defines action area as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. [50 CFR 402.02].”

<sup>12</sup> Additional information can be found at: <http://www.rivers.gov>.

casting into wetlands from utility trenches). Certain repair, replacement or maintenance activities may be eligible for Category 1 – refer to Appendix A.

b. Subsurface utility lines must be installed at a sufficient depth to avoid damage from anchors, dredging, etc., and to prevent exposure from erosion and stream adjustment. In accordance with Corps New England District Regulation NEDER 1110-1-9 ([www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> [Useful Links and Documents](#)), as an absolute minimum, the bottom cover associated with the initial installation of utility lines under navigable waters and navigation channels shall be 48 inches in soil or 24 inches in rock excavation in competent rock unless specified in a written determination. These minimum bottom cover requirements for pipelines and cables shall be measured from the maximum depth of dredging to the top of the utility. The maximum depth of dredging, in waterways having existing FNPs, is generally considered to be the authorized project depth plus any allowance for advanced maintenance and the allowable overdepth for dredging tolerances. In waterways that do not have existing FNPs, this depth should be taken as two feet below the existing bottom or maximum depth of proposed dredging, as applicable.

c. Aerial utility lines that cross navigable waters must meet minimum clearances. See 33CFR322.5(i).

d. For horizontal directional drilling work, returns of drilling fluids to the surface (i.e., frac-outs) are not authorized and require restoration to the maximum extent practicable in accordance with the terms and conditions of this GP. The permittee and its contractor shall have onsite and shall implement the procedures detailed in a frac-out contingency plan for monitoring drilling operations and for the immediate containment, control and recovery/removal of drilling fluids released into the environment should a discharge of material occur during drilling operations.

e. Within the context of any new installations, any abandoned or inactive utility lines should be removed and faulty lines (e.g., leaking hazardous substances, petroleum products, etc.) should be removed or repaired to the extent practicable. A PCN and written verification from the Corps is required if they are to remain in place, e.g., to protect sensitive areas or ensure safety.

f. No work shall drain a water of the U.S. by providing a conduit for water on or below the surface. Trench plugs installed along pipelines may be effective.

**13. Heavy Equipment in Wetlands or Mudflats.** Operating heavy equipment other than fixed equipment (drill rigs, fixed cranes, etc.) within wetlands shall be minimized, and such equipment shall not be stored, maintained or repaired in wetlands, to the maximum extent practicable. Where construction requires heavy equipment operation in wetlands, the equipment shall either have low ground pressure (typically <3 psi), or it shall be placed on swamp/construction/timber mats (herein referred to as “construction mats” and defined at Appendix A, Endnote 4) that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation. Construction mats are to be placed in the wetland from the upland or from equipment positioned on swamp mats if working within a wetland. Dragging construction mats into position is prohibited. Other support structures that are capable of safely supporting equipment may be used with written Corps authorization (Category 2 authorization or Individual Permit). Similarly, the permittee may request written authorization from the Corps to waive use of mats during frozen, dry or other conditions. An adequate supply of spill containment equipment shall be maintained on site. Construction mats should be managed in accordance with the Construction Mat BMPs at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> State General Permits >> Permit Resources.

**14. Temporary Fill.** Temporary fill that qualifies for Category 1 (e.g., <15,000 SF of combined temporary and permanent fill associated with the single and complete project) or is authorized in writing under Category 2, shall adhere to the following:

a. All temporary fill and disturbed soils shall be stabilized to prevent its eroding into waters of the U.S. where it is not authorized. Work shall include phased or staged development to ensure only areas under active development are exposed and to allow for stabilization practices as soon as practicable, typically within three calendar days after disturbance. Accelerated stabilization (the providing of temporary or permanent cover by the end of the work day to prevent erosion) shall be employed as necessary. Temporary fill must be placed in a manner that will prevent it from being eroded by expected high flows.

b. Unconfined temporary fill authorized for discharge into waters of the U.S. (e.g., temporary stream crossings) shall consist of material that minimizes impacts to water quality (e.g. washed stone, stone, etc.).

c. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Place materials in a location and manner that does not adversely impact surface or subsurface water flow into or out of the wetland. Temporary fill authorized for discharge into wetlands shall be placed on geotextile fabric or other appropriate material laid on the pre-construction wetland grade where practicable to minimize impacts and to facilitate restoration to the original grade. Construction mats are excluded from this requirement.

d. Temporary fill, construction mats and corduroy roads shall be entirely removed as soon as they are no longer needed to construct the authorized work. Temporary fill shall be placed in its original location or disposed of at an upland site and suitably contained to prevent its subsequent erosion into waters of the U.S. To qualify for Category 1, temporary fill placed during the: i.) growing season must be removed before the beginning of the next growing season; and ii.) non-growing season may remain throughout the following growing season, but must be removed before the beginning of the next growing season.

e. Temporary fill, construction mats and corduroy roads are considered temporary only if they are removed as soon as they are no longer needed to construct the authorized work.

f. Construction debris and/or deteriorated materials shall not be located in waters of the U.S.

#### **15. Restoration of Special Aquatic Sites (Including Wetland Areas)**

a. Temporary fills must be removed in their entirety and the affected areas restored to their pre-construction condition, function and elevation. Restoration shall typically commence no later than the completion of construction.

b. For excavated areas, “restored to pre-construction condition, function and elevation” means careful removal of existing soil and vegetation, separate topsoil and subsoil stockpiling, soil protection, and replacement back to the original location such that the original soil layering and vegetation schemes are approximately the same, unless otherwise authorized. Plan for natural settling that will occur (the initial post-restoration elevation of the backfilled areas should be above the desired final grade as topsoil may settle by 33% to 50%), minimize compaction, and ensure that topsoil is void of gravel and subsoil. A minimum of 4 inches of topsoil should be at the surface after the soil has settled. Wetland areas temporarily disturbed shall be stabilized (e.g., seeded or planted). Seed mixes and vegetation shall include only plant species native to New England and shall not include any species listed as “Invasive and Other Unacceptable Plant Species” in the “New England District Compensatory Mitigation Guidance” (see GC 24 and refer to Appendix G). This list may be updated periodically.

c. Limit compaction to the minimum needed to promote a successful seedbed; avoid a ‘fluffy’ seedbed, which is susceptible to erosion until the plants get established, and a compacted topsoil layer, which is counter-productive and will lead to greater erosion susceptibility down the road. Test soils for compaction. A soil probe, auger, or shovel should be able to retrieve samples of post-restoration profile. Equipment refusal shall be considered a failure of restoration, in which case the soil should be restored through deep-ripping and/or de-compaction, or other appropriate methods, and wetland hydrology must be maintained. See the BMPs at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> State General Permits >> Permit Resources >> Restoration.

d. In areas of authorized temporary disturbance, cut woody vegetation (trees, shrubs, etc.) shall be cut at or above ground level and not uprooted in order to prevent disruption to the wetland soil structure and to allow stump sprouts to revegetate the work area, unless otherwise authorized.

e. Trenches shall be constructed or backfilled so that the trench does not drain waters of the U.S. (e.g., materials or methods that create a French drain effect).

#### **16. Soil Erosion, Sediment and Turbidity Controls**

a. Adequate sedimentation and erosion control management measures, practices and devices, such as phased construction, installation of sediment control barriers (i.e. silt fence, vegetated filter strips, geotextile silt fences, erosion control mixes, hay bales or other devices) downhill of all exposed areas, retention of existing vegetated buffers, application of temporary mulching during construction, and permanent seeding and stabilization shall be installed and properly maintained to reduce erosion and retain sediment on-site during and after construction. They shall be capable of preventing erosion; of collecting sediment, suspended and floating materials; and of filtering fine sediment.



- b. Temporary sediment control barriers shall be removed upon completion of work, but not until all disturbed areas are permanently stabilized. The sediment collected by these sediment barriers shall be removed and placed at an upland location and stabilized to prevent its later erosion into a waterway or wetland.
- c. All exposed soil and other fills shall be permanently stabilized at the earliest practicable date .

**17. Time of Year Work Windows/Restrictions.** For activities where work is authorized in streams and tidal waters that causes turbidity or sediment re-suspension or other construction related disturbances, work must be conducted during the following TOY work windows (not during the TOY restrictions) unless otherwise authorized by the Corps under Category 2 review:

	<u>TOY Restriction</u> (no work)	<u>TOY Work Window</u> (work allowed)
Non-tidal waters	Oct. 01 through Jul. 14	Jul. 15 through Sep. 30
Tidal waters	Apr. 10 through Nov. 07	Nov. 08 through Apr. 09

Alternate windows authorized under Category 2 may include species specific windows recommended by the Maine Dept. of Marine Resources and/or Maine Dept. of Inland Fisheries & Wildlife.

**18. Aquatic Life Movements & Management of Water Flows**

a. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity’s primary purpose is to impound water. Unless otherwise stated, activities impounding water in a stream require a PCN to ensure impacts to aquatic life species are avoided and minimized. All permanent and temporary crossings of waterbodies (e.g., streams, wetlands) shall be:

- i. Suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species; and
- ii. Properly aligned and constructed to prevent bank erosion or streambed scour both adjacent to and inside the culvert. Permanent and temporary crossings of wetlands shall be suitably culverted, spanned or bridged in such a manner as to preserve hydraulic and ecological connectivity between the wetlands on either side of the road.

b. To avoid adverse impacts on aquatic organisms, the low flow channel/thalweg shall remain unobstructed during periods of low flow, except when it is necessary to perform the authorized work.

c. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the preconstruction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

**19. Water Quality and Coastal Zone Management**

a. Applicants must satisfy any conditions imposed by the state and EPA, where applicable, in their CWA § 401 Water Quality Certifications (WQC) for this GP, or in any Individual § 401 WQC. See Appendix E for state-specific contact information and to determine if any action is required to obtain a 401 WQC. The Corps may require additional water quality management measures to ensure that the authorized activity does not cause or contribute to a violation of water quality standards. All projects authorized by this GP shall be designed, constructed and operated to minimize or eliminate the discharge of pollutants.

b. Applicants must satisfy any additional conditions imposed by the state in their Coastal Zone Management (CZM) Act consistency concurrences for this GP, or in any Individual CZM consistency concurrences. The Corps may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

**20. Floodplains and Floodways**

a. Appropriate measures must be taken to minimize flooding to the maximum extent practicable.

b. Activities within 100-Year Floodplains must comply with applicable Federal Emergency Management Agency (FEMA)-approved state and/or local floodplain management permitting requirements. Proponents may need to coordinate with FEMA and apply for a formal change to the flood insurance study products or forward a set of project plans and relevant technical documentation in a digital format to the Risk

Analysis Branch Chief, Mitigation Division, FEMA, Region 1, 99 High Street, Boston, Massachusetts 02110. Applicants should provide a copy of any documentation to the Corps along with the PCN.

c. Proponents may have to obtain a Flood Hazard Development Permit issued by the town. Inquiries may be directed to the municipality or to the Maine Floodplain Management Coordinator at (207) 287-8063. See <http://www.maine.gov/dacf/flood/>

**21. Storage of Seasonal Structures.** Seasonal or recreational structures such as pier sections, floats, aquaculture structures, etc. that are removed from the waterway for a portion of the year (often referred to as seasonal structures) shall be stored in an upland location landward of mean high water (MHW) or ordinary high water (OHW) and not in wetlands, tidal wetlands, their substrate or on mudflats. These seasonal structures may be stored on the fixed, pile-supported portion of the structure that is waterward of MHW or OHW. Seasonal storage of structures in navigable waters, e.g., in a protected cove on a mooring, requires Corps approval and local harbormaster approval.

## **22. Spawning, Breeding, and Migratory Areas**

a. Jurisdictional activities and impacts such as excavations, discharges of dredged or fill material, and/or suspended sediment producing activities in jurisdictional waters that provide value as fish migratory areas, fish and shellfish spawning or nursery areas, or amphibian and migratory bird breeding areas, during spawning or breeding seasons shall be avoided and minimized to the maximum extent practicable.

b. Jurisdictional activities in waters of the United States that provide value as breeding areas for migratory birds must be avoided to the maximum extent practicable. The permittee is responsible for obtaining any “take” permits required under the USFWS’s regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the USFWS to determine if such “take” permits are required for a particular activity (See Appendix E).

## **23. Vernal Pools**

a. Only vernal pools that meet the current definition of waters of the U.S. are regulated by the Corps.

b. Direct and indirect adverse effects to all vernal pools (VPs), including their envelopes and critical terrestrial habitats (VP Management Areas<sup>13</sup>), shall be avoided and minimized to the maximum extent practicable. Site clearing, grading, and construction activities associated with a regulated activity in the VP Management Area may cause these adverse effects to the VP.

c. The State of Maine has specific protections for vernal pools.<sup>14</sup>

d. When any regulated activities occur within 750 feet of a vernal pool, the following management practices must be followed for all work within any VP Management Area (750’ of a VP’s edge) *in order to qualify for Category I*:

- i. No disturbance within the VP Depression or VP Envelope (area within 100 feet of the VP Depression’s edge)<sup>15</sup>;
- ii. Maintain a minimum of 75% of the Critical Terrestrial Habitat (area within 100-750 feet of the VP Depression’s edge) as unfragmented forest with at least a partly-closed canopy of overstory trees to provide shade, deep litter and woody debris;
- iii. Maintain or restore forest corridors connecting wetlands and significant vernal pools;
- iv. Minimize forest floor disturbance; and
- v. Maintain native understory vegetation and downed woody debris.

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<sup>13</sup> The Corps VP Management Area, which includes the VP and a 750’ radius from the VP’s edge, is defined at Appendix A, Endnote 5.

<sup>14</sup> Appendix G, 10(a)-(d) provides links to the state’s Significant Wildlife Habitat regulations and references that provide impact minimization measures to reference when designing projects.

<sup>15</sup> The no disturbance requirement in the VP envelope [see (b)(i)(1)], and (b)(i)(2), do not apply to temporary impacts associated with construction mats in previously disturbed areas of existing utility project (e.g., transmission lines, gas pipelines) or linear transportation project (e.g., roads, highways, railways, trails, airport runways and taxiways) right-of-ways provided there is a Vegetation Management Plan that avoids, minimizes and mitigates impacts to aquatic resources.



vi. Cape Cod style-curbings or no curbings options shall be used on new roads to facilitate amphibian passage. (Reference Appendix G)

e. A PCN is required for any regulated activity within 750' of a vernal pool when all work within the VP Management Area does not comply with the Category 1 requirements in (d) above. Information on directional buffers in accordance with the VP Directional Buffer Guidance document may be provided in order to demonstrate minimal impact and avoid compensation requirements (Reference Appendix G). Conservation of the un-impacted area within the VP Management Area will often be required.

f. GC 2 requires applicants to delineate or approximately identify on the project plans all waters of the U.S., which contain vernal pools.

g. GC 23(b-d) do not apply to projects that are within a municipality and meet the provisions of a Corps-approved VP Special Area Management Plan (VP SAMP) and are otherwise eligible for self-verification.

#### **24. Invasive and Other Unacceptable Species<sup>16</sup>**

a. The introduction or spread of invasive or other unacceptable plant or animal species on the project site or areas adjacent to the project site caused by the site work shall be avoided to the maximum extent practicable. For example, construction mats and equipment shall be thoroughly cleaned and free of vegetation and soil before and after use. The introduction or spread of invasive plant or animal species on the project site caused by the site work shall be controlled.

b. No cultivars, invasive or other unacceptable plant species may be used for any mitigation, bioengineering, vegetative bank stabilization or any other work authorized by this GP. However, non-native species and cultivars may be used when it is appropriate and specified in a written verification, such as using *Secale cereale* (Annual Rye) to quickly stabilize a site. All PCNs should explain the reason for using non-native species or cultivars.

**25. Programmatic Consultations or Agreements.** The Corps requirements to comply with Section 106 of the NHPA, Section 7 of the Endangered Species Act or Essential Fish Habitat conservation under the Magnuson-Stevens Act may be satisfied by a Programmatic Agreement with the Corps, New England District or another federal action agency. Any Corps, New England District Programmatic Agreements will be available on our website.

**26. Permit On Site.** The permittee shall ensure that a copy of this GP and any accompanying authorization letter with attached plans are at the site of the work authorized by this GP whenever work is being performed and that all construction personnel performing work which may affect waters of the U.S. are aware of its terms and conditions. The entire permit authorization shall be made a part of any and all contracts and subcontracts for work that affects areas of Corps jurisdiction at the site of the work authorized by this GP. This shall be achieved by including the entire permit authorization in the specifications for work. The term "entire permit authorization" means this entire GP and the authorization letter (including its drawings, plans, appendices and other attachments) and also includes permit modifications. If the authorization letter is issued after the construction specifications, but before receipt of bids or quotes, the entire permit authorization shall be included as an addendum to the specifications. If the authorization letter is issued after receipt of bids or quotes, the entire permit authorization shall be included in the contract or subcontract. Although the permittee may assign various aspects of the work to different contractors or subcontractors, all contractors and subcontractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire GP authorization, and no contract or subcontract shall require or allow unauthorized work in areas of Corps jurisdiction.

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<sup>16</sup> For the purposes of this GP, plant species that are considered invasive and unacceptable are provided in Appendix G "Invasive and other Unacceptable Plant Species" of our document "Compensatory Mitigation Guidance" at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Mitigation. Chapter 4(e) Planting is also particularly relevant. The June 2009 "Corps of Engineers Invasive Species Policy" provides policy, goals and objectives and is located at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Invasive Species. Additional information can be found at: [www.eddmaps.org/ipane](http://www.eddmaps.org/ipane).

**27. Self-Verification Notification Form (SVNF).** Permittees must complete and submit the SVNF provided at Appendix B to the Corps for work authorized by this GP unless otherwise noted in Appendix A. **NOTE: A copy of a state permit application form may be an acceptable surrogate for the SVNF provided either form used also include plans and an Official Species List of federally listed threatened or endangered species.**

**28. Inspections.** The permittee shall allow the Corps to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of this GP and any written verification. The Corps may also require post-construction engineering drawings for completed work, post-dredging survey drawings for any dredging work, or other post-construction reports. To facilitate these inspections, the permittee shall complete and return to the Corps the following forms:

- For Category 1/Self-Verification: The SVNF (see Appendix B).
- For Category 2/PCN: The a) Work-Start Notification Form and b) Compliance Certification Form, when either is provided with the authorization letter.

**29. Maintenance**

a. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable general conditions and activity-specific conditions to a written verification.

b. The requirement in (a) above does not include maintenance of dredging projects. Each maintenance dredging event exceeding the self-verification limits requires a new PCN unless an unexpired, written PCN or other Corps authorization specifies that the permittee may “dredge and maintain” an area for a particular time period. Self-verification or PCN maintenance dredging includes only those areas and depths previously authorized and actually dredged. Maintenance dredging with ocean or open water disposal will always require a PCN and at least Category 2 review.

c. Some maintenance activities may not be subject to regulation under Section 404 in accordance with 33 CFR 323.4(a)(2). Refer to Appendix A, Endnote 7.

**30. Property Rights.** This GP does not convey any property rights, either in real estate or material, or any exclusive privileges, nor does it authorize any injury to property or invasion of rights or any infringement of federal, state, or local laws or regulations.

**31. Transfer of GP Verifications.** When the structures or work authorized by this GP are still in existence at the time the property is transferred, the terms and conditions of this GP, including any special conditions, will continue to be binding on the entity or individual who received the GP authorizations, as well as the new owner(s) of the property. If the permittee sells the property associated with a GP verification, the permittee may transfer the GP verification to the new owner by submitting a letter to the Corps (see Appendix E for address) to validate the transfer. A copy of the GP verification must be attached to the letter, and *the letter must contain the new owner’s contact information and the following statement and signature:*

“When the structures or work authorized by this GP are still in existence at the time the property is transferred, the terms and conditions of this GP, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this GP and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

\_\_\_\_\_  
(Transferee)

\_\_\_\_\_  
(Date)

**32. Modification, Suspension, and Revocation.** Any work authorized under this GP by self-verification or PCN may be either modified, suspended, or revoked, in whole or in part, pursuant to the policies and procedures of 33 CFR 325.7. Any such action shall not be the basis for any claim for damages against the U.S.

**33. Special Conditions.** The Corps may independently, or at the request of the federal resource agencies, impose other special conditions on a project authorized pursuant to this GP that are determined necessary to minimize adverse navigational and/or environmental effects or based on any other factor of the public interest. Failure to comply with all terms and conditions of the authorization, including special conditions, constitutes a permit violation and may subject the permittee to criminal, civil or administrative penalties and/or an ordered restoration.

**34. False or Incomplete Information.** If the Corps makes a determination regarding the eligibility of a project under this GP and subsequently discovers that it has relied on false, incomplete or inaccurate information provided by the permittee, the Corps may determine that the GP authorization is not valid; modify, suspend or revoke the authorization; and the U.S. Government may institute legal proceedings.

**35. Abandonment.** If the permittee decides to abandon the activity authorized under this GP, unless such abandonment is merely the transfer of property to a third party, he/she may be required to restore the area to the satisfaction of the Corps.

**36. Enforcement cases.** This GP does not apply to any existing or proposed activity in Corps jurisdiction associated with an ongoing Corps or EPA enforcement action, until such time as the enforcement action is resolved or the Corps or EPA, as appropriate, determines that the activity may proceed independently without compromising the enforcement action.

**37. Duration of Authorization.** This GP expires on October 12, 2020. Activities authorized under this GP that have commenced (i.e., are under construction) or are under contract to commence before this GP expires will have until October 12, 2021 to complete the activity under the terms and conditions of the current GP.

**38. Previously Authorized Activities.**

a. Projects that have received authorization (Category 1 or 2) from the Corps and that were completed under the previous PGPs, nationwide permits, regional general permits or letters of permission, shall remain authorized.

b. Activities authorized pursuant to 33 CFR Part 330.3 (“Activities occurring before certain dates”) are not affected by this GP.

c. Any work not commenced nor completed that was authorized in a written letter from the Corps under the GP in effect between October 12, 2010 and October 12, 2015 remains authorized subject to the terms and general conditions of this GP along with any special conditions in the authorizing written letter. Exception – if previously authorized work is not commenced and a new federally listed threatened or endangered species could be affected, the Corps must consult with the Service(s) prior to re-authorizing the work under this GP. Requests for re-authorization must include an updated Official Species list. To request an Official Species List, refer to the instructions in Appendix D.

**39. Discretionary Authority.** Notwithstanding compliance with the terms and conditions of this permit, the Corps retains discretionary authority to require Category 2 or Individual Permit review based on concerns for the aquatic environment or for any other factor of the public interest [33 CFR 320.4(a)]. This authority is invoked on a case-by-case basis whenever the Corps determines that the potential consequences of the proposal warrant a higher level of review based on the concerns stated above. This authority may be invoked for projects that may contribute to cumulative environmental impacts that are more than minimal or if there is a special resource or concern associated with a particular project that is not already covered by the remaining conditions of the GP and that warrants greater review. Whenever the Corps notifies an applicant that an Individual Permit may be required, the project is not authorized under this GP and no work may be conducted until an Individual Permit is obtained or until the Corps notifies the applicant that further review has demonstrated that the work may proceed under this GP.

**40. St. John/St. Croix Rivers.** Work within the Saint John and Saint Croix River basins that requires approval of the International Joint Commission is not eligible for Category 1 and a PCN to the Corps is required if any temporary or permanent use, obstruction or diversion of international boundary waters could affect the natural

flow or levels of waters on the Canadian side of the line; or if any construction or maintenance of remedial works, protective works, dams, or other obstructions in waters downstream from boundary waters could raise the natural level of water on the Canadian side of the boundary.

**41. National Lands.** Activities that impinge upon the value of any National Wildlife Refuge, National Forest, National Marine Sanctuary, National Park or any other area administered by the National Park Service, U.S. Fish and Wildlife Service (USFWS) or U.S. Forest Service are not eligible for Category 1 and require a PCN.

**42. Essential Fish Habitat (EFH).** Any work in the following rivers and streams, including all tributaries to the extent that they are currently or were historically accessible for salmon migration, shall not be authorized under Category 1 of the GP and must be screened for potential impacts to EFH (see Appendix G for more information).

Androscoggin River	Aroostook River	Boyden River	Dennys River
Ducktrap River	East Machias River	Hobart Stream	Kennebec River
Machias River	Narraguagus River	Orland River	Passagassawaukeag River
Patten Stream	Penobscot River	Pleasant River	Presumpscot River
Saco River	Sheepscot River	St. Croix River	Tunk Stream
			Union River

The above does not apply to the following activities which may qualify for Category 1 work:

- Exploratory drilling and borings for bridges.
- Moorings (see Appendix A, Page 28 for Category 1 thresholds and requirements)
- Structures, floats & lifts (see Appendix A, Page 29 for Category 1 thresholds and requirements)
- Other activities specified in a programmatic agreement with NMFS.

#### **43. Work Site Restoration**

a. Wetland areas where permanent disturbance is not authorized shall be restored to their original condition and elevation, which under no circumstances shall be higher than the pre-construction elevation. Original condition means careful protection and/or removal of existing soil and vegetation, and replacement back to the original location such that the original soil layering and vegetation schemes are approximately the same, unless otherwise authorized.

b. Upon completion of construction, all disturbed wetland areas (the disturbance of these areas must be authorized) shall be properly stabilized. Any seed mix shall contain only plant species native to New England and shall not contain any species listed in the “Invasive and Other Unacceptable Plant Species” Appendix in the “New England District Compensatory Mitigation Guidance” (see GC 24 and refer to Appendix G). This list may be updated periodically.

c. In areas of authorized temporary disturbance, if trees are cut they shall be cut at ground level and not uprooted in order to prevent disruption to the wetland soil structure and to allow stump sprouts to revegetate the work area, unless otherwise authorized.

#### **44. Bank Stabilization**

a. Projects involving construction or reconstruction/maintenance of bank stabilization structures within Corps jurisdiction shall be designed to minimize environmental effects, effects to neighboring properties, scour, etc. to the maximum extent practicable.

b. Project proponents must design and construct bank stabilization projects using this sequential minimization process: avoidance of aquatic resource impacts, diversion of overland flow, vegetative stabilization, stone-sloped surfaces, and walls/bulkheads. Vertical walls/bulkheads shall only be used in situations where reflected wave energy can be tolerated.

c. Inland Water bank stabilization activities necessary for erosion prevention must meet all of the following criteria: i) No material is placed in excess of the minimum needed for erosion protection; ii) The activity is no more than 500 feet in total length along the bank(s); iii) The activity will not exceed an average of one cubic yard per running foot placed along the bank below the plane of the ordinary high water mark; iv) Structures angled steeper than 1H:1V and any material other than angular or sub-angular stone or fiber roll revetments require at least a Category 2 review; v) The activity does not involve discharges of dredged or fill

material into special aquatic sites; vi) No material is of the type, or is placed in any location, or in any manner, to impair surface water flow into or out of any water of the U.S.; vii) No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored trees and treetops may be used in low energy areas); and viii) The activity is not a stream channelization activity.

d. Bank stabilization activities in tidal waters are provided at Appendix A, Page 30 & 31. Direct impacts in tidal waters from contiguous bank stabilization projects in excess of 200 linear feet (Applicant or Applicant + Abutters combined) must undergo Category 2 review.

#### **45. Stream Work and Crossings & Wetland Crossings**

##### **Notes:**

a. For *Stream Work and Crossings* below, conditions (a) and (b) apply to Inland Waters and Wetlands (see Appendix A, Page 1 for definition) and Navigable Waters (see Appendix A, Page 27 for definition). Conditions (c)-(l) below only apply to Inland Waters and Wetlands that are streams. All new and replacement crossings in Navigable Waters require an application to the Corps and at least a Category 2 review.

b. In-stream work in a watershed occupied by listed Atlantic salmon, Atlantic sturgeon, or shortnose sturgeon [see GC 8(b)] and some stream work such as crossings on EFH waters (see GC 42) is not eligible for Category 1.

c. “High-Quality Stream Segments” are shown at [www.maine.gov/dep/gis/datamaps](http://www.maine.gov/dep/gis/datamaps) and may be useful in evaluating impacts to fisheries. GIS shape files are under “Other Google Earth Interactive Maps” and PDFs by county are under “DEP GIS Maps.” See Appendix E for more state contact information.

##### **Conditions for Stream Work and Crossings:**

a. All permanent crossings of rivers, streams, brooks, etc. (hereon referred to as “streams”) shall be suitably culverted, bridged, or otherwise designed to i) withstand and to prevent the restriction of high flows to qualify for Category 1, and ii) not obstruct the movement of or not substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, beyond the actual duration of construction unless the activity’s primary purpose is to impound water to qualify for Category 1 or 2. (*NOTE: Areas of fill and/or cofferdams must be included in total waterway/wetlands impacts to determine applicability of this GP.*)

b. Any work that temporarily or permanently impacts upstream or downstream flood conditions, or permanently impacts wetlands in excess of Category 1 thresholds, must be reviewed at least under Category 2. See the documents referenced in Appendix G, 8(c) and (d) for guidance.

c. New Stream Crossings. For new stream crossings to qualify for Category 1:

i. Must ensure compliance with GC 45(a) and GC 45(b) above.

ii. Shall be designed and constructed in accordance with the Corps General Stream Crossing

Standards provided on Page 19 and the stream simulation document listed at Appendix G, 8(a).

d. Replacement Stream Crossings. For replacement stream crossings to qualify for Category 1:

i. Must ensure compliance with GC 45(a) and GC 45(b) above.

ii. Shall be designed and constructed in accordance with the Corps General Stream Crossing

Standards provided on Page 19 and the stream simulation document listed at Appendix G, 8(a).

e. Culvert Extensions. Culvert extensions on culverts that do not meet the Corps General Stream Crossing Standards do not qualify for Category 1 and require an application to the Corps and at least Category 2 review.

f. Temporary Stream Crossings.

Note: The General Stream Crossing Standards don’t apply to temporary stream crossings.

i. Temporary stream crossings or cofferdams shall be used for equipment access across streams [see Appendix G, 8(e)]. Note: Areas of fill and/or cofferdams must be included in total waterway/wetlands impacts to determine the review category in Appendix A.

ii. Temporary stream crossings shall be removed within 180 days to qualify for Category 1.

iii. Temporary stream crossings that are not spans<sup>17</sup> (typically culverts) must be designed in accordance with 1-6 below to qualify for Category 1. Category 2 applications should include information demonstrating 2-6 below:

1. Installed and removed during the low flow period specified in GC 45(l) below.
2. Placed on geotextile fabric or other material where practicable to ensure restoration to the original grade. Soil may not be used to construct or stabilize these structures and rock must be large enough to allow for easy removal without disrupting the streambed.
3. Designed and maintained to withstand and pass high flows. Water height should be no higher than the top of the culvert's inlet. A minimum culvert diameter of two feet is required to pass debris. Culverts must be aligned to prevent bank erosion or streambed scour.
4. Equipped with energy dissipating devices installed downstream if necessary to prevent scour.
5. Designed and maintained to prevent soil from entering the waterbody.
6. Removed upon the completion of work. Impacts to the streambed or banks requires restoration to their original condition using stream simulation methods<sup>18</sup>.

g. Slip Lining. Work using slip lining (retrofitting an existing culvert by inserting a smaller diameter pipe), invert lining, or resulting in decreased diameter, does not qualify for Category 1, either as new work or maintenance activities.

h. Work in Flowing Waters. To qualify for Category 1, no unconfined fill [see GC 14(b)] or excavation in flowing waters is allowed. To accomplish this:

i. Bank stabilization work below ordinary high water (OHW) shall utilize erosion controls such as inflatable cofferdams, jersey barrier, silt screen, turbidity curtain, etc. where practicable to prevent sediment input to the stream and to minimize turbidity and sedimentation impacts for sensitive life stages. Bank stabilization above OHW must utilize erosion controls.

ii. Management techniques such as temporary flume pipes, culverts, cofferdams, etc. must be used to maintain normal flows within the stream boundary's confines, or water diversions may be used immediately up and downstream of the work footprint (see Appendix A, Endnote 6) or work must be performed in the dry under no flow conditions, or under very low flow conditions following the practices in GC 45(a).

i. Minimization. In order to make the Category 2 review process more efficient and result in a faster decision, new and replacement stream crossings should be designed using the least intrusive and environmentally damaging method following this sequential minimization process: 1) spans with no stream impacts, 2) spans with stream impacts, and 3) embedded culverts with stream simulation or low-slope design.

j. Maintenance Requirements. The permittee shall maintain the work authorized herein in good condition and in conformance with the terms and general conditions of this permit to facilitate aquatic life passage as stated in GC 45(a). Culverts that develop "hanging" inlets or outlets, result in bed washout, or a stream that doesn't match the characteristics of the substrate in the natural stream channel such as mobility, slope, stability confinement will require maintenance or repair to comply with this GC. This does not apply to GC 45(f) above.

k. Maintenance and Replacement Information. An existing stream crossing must be authorized and in compliance with all conditions of its authorization(s) to qualify for maintenance not subject to regulation. See Appendix A, Endnote 7. A non-serviceable crossing is not eligible for maintenance and is therefore considered as a replacement crossing [see GC 45(d)].

l. Work Window. For projects that otherwise meet the terms of Category 1, in-stream construction work shall be conducted during the low flow period July 15 – September 30 in any year. Projects that are not to be conducted during that time period are ineligible for Category 1 and shall be screened pursuant to Category 2, regardless of the waterway and wetland fill and/or impact area.

**Corps General Stream Crossing Standards (required for Category 1; recommended for Category 2):**

- a. Culverts must be embedded:

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<sup>17</sup> For the purposes of this GP, spans are bridges, three-sided box culverts, open-bottom culverts or arches that span the stream with footings landward of bankfull width.

<sup>18</sup> Design and construction shall be in accordance with the stream simulation document listed at Appendix G, 8(a).

- $\geq 2$  feet for box culverts and other culverts with smooth internal walls,
- $\geq 1$  foot for corrugated pipe arches
- $\geq 1$  foot and at least 25 percent for corrugated round pipe culverts

b. **For new crossings**, spans<sup>17</sup> are required to avoid or cause minimal disruption to the streambed and to meet the requirements of General Condition 45(a) and 45(b). Footings and abutments must be landward of 1.2 times bankfull width. To the greatest extent practicable, work in the stream shall be minimized, and design and construction shall allow the streambed's natural structure and integrity to remain intact. Any fill or excavation of the streambed below bankfull width other than footings, support pilings, or work specified in 45(h)ii requires Category 2 review and, unless demonstrated otherwise, stream simulation<sup>18</sup> to establish substrate and banks in the span structure and work area as specified in (d) and (e) below.

c. **For replacement crossings**, spans<sup>17</sup> are required to meet the requirements of General Condition 45(a) and 45(b). Footings and abutments shall be landward of 1.2 times bankfull width. Unless demonstrated otherwise, stream simulation<sup>18</sup> is required to establish substrate and banks in the span structure and work area as specified in (d) and (e) below.

d. Crossings must have a natural bottom substrate within the structure matching the characteristics of the substrate in the natural stream channel and the banks (mobility, slope, stability, confinement, grain and rock size) at the time of construction and over time as the structure has had the opportunity to pass significant flood events. To allow terrestrial passage for wildlife and prevent undermining the footings, crossings shall have a bank on both sides of the stream matching the horizontal profile of the existing stream and banks<sup>18</sup>. Note: Installation of substrate material within smaller culverts may not be safe or practicable. In these cases, it may be necessary to allow for natural deposition and bed development unless alternative methods are identified.

e. Crossings must be designed and constructed<sup>18</sup> with appropriate bed forms and streambed characteristics so that water depths and velocities are comparable to those found in the natural channel at a variety of flows. In order to provide appropriate water depths and velocities at a variety of flows and especially low flows, it is usually necessary to reconstruct the streambed or preserve the natural channel within the structure. Otherwise, the width of the structure needed to accommodate higher flows will create conditions that are too shallow at low flows. The grain and rock size, and arrangement of streambed materials within the structure should be in accordance with (d) above. Flows could go subsurface within the structure if only large material is used without smaller material filling the voids.

#### **Conditions for Wetland Crossings:**

a. All temporary and permanent crossings of wetlands shall be suitably culverted, bridged, or otherwise designed to: i) Withstand and prevent the restriction of high flows, ii) Not obstruct the movement of or not substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the wetland, including those species that normally migrate through the area, beyond the actual duration of construction unless the activity's primary purpose is to impound water. See Appendix E for the Maine DEP's crossing standards.

b. To qualify for Category 1, new and replacement wetland crossings that are permanent shall be culverted, spanned or bridged in such a manner as to preserve hydraulic and ecological connectivity, at its present level, between the wetlands on either side of the road. To meet this requirement, we recommend that culverts, spans or bridges be placed at least every 50 feet with an opening at least 2 feet high and 3 feet wide at ground level where practicable. Closed bottom culverts shall be embedded at least 6 inches with a natural bottom.

c. In the case of non-compliance, the permittee shall take necessary measures to correct wetland damage due to lack of hydraulic and ecological connectivity.

d. Any work that results in flooding, results in impacts to wetlands on either side of the wetland crossing in excess of Category 1 thresholds, or impacts wetland drainage from the upgradient side of the wetland crossing does not qualify for Category 1.



Robert J. Desista  
Deputy Chief, Regulatory Division  
For DISTRICT ENGINEER

DATE

10/13/15

## APPENDIX A: DEFINITION OF CATEGORIES

<b>A. INLAND WATERS AND WETLANDS</b>	<p><b>Inland Waters and Wetlands:</b> Waters that are regulated under Section 404 of the Clean Water Act, including rivers, streams, lakes, ponds and wetlands, and <i>excluding Section 10 Navigable Waters of the U.S. (tidal and freshwater)</i>. The jurisdictional limits are the ordinary high water (OHW) mark in the absence of adjacent wetlands, beyond the OHW mark to the limit of adjacent wetlands when adjacent wetlands are present, and the wetland limit when only wetlands are present. For the purposes of this GP and designated activities, fill placed in the area between the mean high water (MHW) and the high tide line (HTL), and in the bordering and contiguous wetlands<sup>1</sup> to tidal waters are reviewed in the Navigable Waters section. (See B. Navigable Waters on page 27 below.)</p> <p>Projects not meeting Category 1 require an application for review as a Category 2 or Individual Permit project. All Category 1 and 2 projects must comply with all of this GP’s applicable terms (Pages 1 – 4) and General Conditions (Pages 5–20).</p>	
<b>ACTIVITY</b>	<b>CATEGORY 1 Self-Verification Eligible (SVNF Required)</b>	<b>CATEGORY 2 (PCN Required)</b>
<b>1. Repair, Replacement, Expansion, and Maintenance of Authorized Structures and Fills</b>	<p>Repair or maintenance of existing, currently serviceable, authorized fills with no expansion or change in use:</p> <ul style="list-style-type: none"> <li>• Conditions of the original authorization apply.</li> <li>• Minor deviations in fill design allowed.<sup>7</sup></li> <li>• The repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events is authorized, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage.</li> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> </ul>	<p>Replacement of non-serviceable fills, or repair/maintenance of serviceable fill, with expansion &lt;3 acres, or with a change in use.</p>
<b>2. Moorings</b>	<p>NA – moorings in non-navigable inland waters are not subject to Corps jurisdiction. Note: Moorings placed in freshwater navigable waters are reviewed in the Navigable Waters section. (See B. Navigable Waters on Page 28 below.)</p>	<p>NA</p>
<b>3. Structures, Floats &amp; Lifts</b>	<p>For solid fill or crib supported structures on inland waters, &lt;15,000 square feet (SF) of waterway and/or wetland fill, associated secondary impacts<sup>2</sup>, and temporary fills.</p> <ul style="list-style-type: none"> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> <li>• Note: Temporary or permanent structures placed in freshwater navigable waters are reviewed in the Navigable Waters section. (See B. Navigable Waters on page 29 below.)</li> </ul>	<p>1. Work not eligible for Category 1 2. ≥15,000 SF to &lt;3 acres of inland waterway and/or wetland fill and associated secondary impacts (e.g., areas drained, flooded, fragmented, or excavated).</p>
<b>4. Aids to Navigation and Temporary Recreational Structures</b>	<p>NA - this activity in non-navigable inland waters is not subject to Corps jurisdiction. Note: Aids to Navigation and other structures placed in freshwater navigable waters are reviewed in the Navigable Waters section. (See B. Navigable Waters on page 30 below.)</p>	<p>NA</p>



<b>5. Dredging, Disposal of Dredged Material, Beach Nourishment, and Rock Removal and Relocation</b>	<p>1. For regulated discharges associated with excavation, and disposal &lt;15,000 SF inland waterway and/or wetland impacts.</p> <p>2. The activity does not occur in navigable waters of the U.S.</p> <p>3. Stream channelization, relocation or loss of streambed including impoundments or discharge of tailings into streams does not occur.</p> <p>4. No effect on federally listed endangered or threatened species or critical habitat.</p>	<p>1. Work not eligible for Category 1</p> <p>2. <math>\geq 15,000</math> SF to &lt;3 acres of inland waters.</p>
<b>6. Discharges of Dredged or Fill Material Incidental to the Construction of Bridges</b>	<p>NA - For discharges incidental to the construction of bridges in inland waters of the U.S. refer to Activity 23 (Stream and Wetland Crossings) and GC 45.</p> <p>Note: Discharges of Dredged or Fill Material Incidental to the Construction of Bridges in freshwater navigable waters are reviewed in the Navigable Waters section. (See B. Navigable Waters on page 30 below.)</p>	<p>NA</p>
<b>7. Bank and Shoreline Stabilization</b>	<p>Inland bank stabilization &lt;500 FT long and <math>\leq 1</math> CY of fill per linear foot below OHW, provided:</p> <ul style="list-style-type: none"> <li>• <math>\leq 1</math> cubic yard of fill per linear foot placed along the bank waterward of ordinary high water.</li> <li>• Work complies with the GCs (GC 44 in particular), including: <ul style="list-style-type: none"> <li>◦ No structures angled steeper than 1H:1V allowed. Only rough-faced stone or fiber roll revetments allowed.</li> <li>◦ No in-stream work involving fill or excavation in flowing waters (see GC 45(h)).</li> </ul> </li> <li>• In-water work limited to Jul 15 – Sep 30.</li> <li>• No work in vernal pools<sup>5</sup> or SAS<sup>3</sup>.</li> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> </ul>	<p>Work not eligible for Category 1</p>
<b>8. Residential, Commercial, Industrial, and Institutional Developments, and Recreational Facilities</b>	<p>1. &lt;15,000 SF of inland waterway and/or wetland fill and associated secondary impacts<sup>2</sup> (e.g., areas drained, flooded, fragmented, mechanically cleared or excavated). Fill area includes all temporary and permanent fill, and regulated discharges associated with excavation. Construction mats are considered as fill. [See GC 14]</p> <p><u>Provided:</u></p> <ul style="list-style-type: none"> <li>• Historic fill + proposed impact area &lt;15,000 SF complies with GC 5, Single and Complete Projects.</li> <li>• No work in special aquatic sites (SAS)<sup>4</sup> other than wetlands.</li> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> </ul> <p>2. For work in Vernal Pool (VP) Management Areas (includes VPs)<sup>5</sup>:</p>	<p>1. Work not eligible for Category 1.</p> <p>2. <math>\geq 15,000</math> SF to &lt;3 acres of inland waterway and/or wetland fill and associated secondary impacts (e.g., areas drained, flooded, fragmented, or excavated). Fill area includes all temporary and permanent fill (including mats), and regulated discharges associated with excavation.</p> <p>3. <i>Mechanical clearing without grubbing or other soil disturbance &gt;3 acres as a secondary impact may still be eligible for Category 2 at the discretion of the Corps.</i></p> <p>See GC 2 and Appendix C for wetland delineation</p>

	<ul style="list-style-type: none"> <li>• See GC 23 and Appendix C for VP delineation requirements.</li> <li>• See GC 23 to determine if work qualifies for Category 1 or 2.</li> <li>• See Appendix G for VP documents providing mitigation guidance.</li> </ul>	requirements.
<p><b>9. Utility Line Activities</b></p>	<ol style="list-style-type: none"> <li>1. &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts<sup>2</sup>, and temporary fills.</li> <li>2. The activity does not occur in, over, or under navigable waters of the U.S.</li> <li>3. Intake structures that are dry hydrants used exclusively for firefighting activities with no stream impoundments.</li> <li>4. There is no permanent change in pre-construction contours in waters of the U.S.</li> <li>5. Material resulting from trench excavation is temporarily side cast into waters of the U.S. for <math>\leq 3</math> months and is placed in such a manner that it is not dispersed by currents or other forces.</li> <li>6. The utility line is placed within and does not run a) parallel to, or b) along a streambed.</li> <li>7. Stream channelization, relocation or loss of streambed including impoundments does not occur.</li> <li>8. No effect on federally listed endangered or threatened species or critical habitat.</li> <li>9. There is no discharge in SAS other than non-tidal wetlands.</li> <li>10. Construction mats<sup>4</sup> of any area necessary to conduct activities that were previously authorized, authorized under Category 1, or not subject to regulation (see Endnote 7). Authorized construction mats must be in place for &lt;3 months, removed immediately upon work completion, and the wetlands must be restored (see GC 43).</li> <li>11. Stream crossings must comply with GC 17.</li> </ol>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. <math>\geq 15,000</math> SF to &lt;3 acres of inland waterway and/or wetland fill and associated secondary impacts (e.g., areas drained, flooded, fragmented, or excavated). Fill area includes all temporary and permanent fill (including mats), and regulated discharges associated with excavation.</li> <li>3. <i>Mechanical clearing without grubbing or other soil disturbance &gt;3 acres as a secondary impact may still be eligible for Category 2 at the discretion of the Corps.</i></li> </ol>
<p><b>10. Linear Transportation Projects (not including stream crossings)</b></p> <p><b>For stream crossings, refer to Activity 23</b></p>	<ol style="list-style-type: none"> <li>1. &lt;15,000 SF of inland waterway and/or wetland fill associated secondary impacts (e.g., areas drained, flooded, fragmented, mechanically cleared or excavated). Fill area includes all temporary and permanent fill, and regulated discharges associated with excavation. Construction mats are considered fill. (See GC 14.) Provided: <ul style="list-style-type: none"> <li>• Historic fill + proposed impact area &lt;15,000 SF and complies with GC 5 single and complete projects.</li> <li>• No work in special aquatic sites (SAS) other than wetlands.</li> </ul> </li> <li>2. Construction mats<sup>4</sup> of any area necessary to conduct activities that were previously authorized, authorized under Category 1, or not subject to regulation (see Endnote 7). Authorized construction mats must be in place for &lt;3 months, removed immediately upon work completion, and the wetlands must be restored (see GC 43).</li> <li>3. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<ol style="list-style-type: none"> <li>1. <math>\geq 15,000</math> SF to &lt;3 acres of inland waterway and/or wetland fill and associated secondary impacts (e.g., areas drained, flooded, fragmented, or excavated). Fill area includes all temporary and permanent fill (including mats), and regulated discharges associated with excavation.</li> <li>2. <i>Mechanical clearing without grubbing or other soil disturbance &gt;3 acres as a secondary impact may still be eligible for Category 2 at the discretion of the Corps.</i></li> </ol>

<b>11. Mining Activities</b>	<ol style="list-style-type: none"> <li>1. &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> <li>2. The activity does not occur in navigable waters of the U.S.</li> <li>3. Stream channelization, relocation or loss of streambed including impoundments or discharge of tailings into streams does not occur.</li> <li>4. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1.</li> <li>2. ≥15,000 SF to &lt;3 acres of inland waterway and/or wetland fill and associated secondary impacts (e.g., areas drained, flooded, fragmented, or excavated). Fill area includes all temporary and permanent fill (including mats), and regulated discharges associated with excavation.</li> </ol>
<b>12. Boat Ramps</b>	<ol style="list-style-type: none"> <li>1. &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> <li>2. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. &gt;15,000 SF and &lt; 3 acres of impact.</li> </ol>
<b>13. Land and Water-Based Renewable Energy Generation Facilities and Hydropower Projects</b>	<p><i>For land-based facilities:</i></p> <ol style="list-style-type: none"> <li>1. &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> <li>2. Stream channelization, relocation or loss of streambed including impoundments does not occur.</li> <li>3. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol> <p><i>For water-based facilities and hydropower projects:</i> No new facilities are eligible.</p>	<p><i>For land-based activities:</i></p> <ol style="list-style-type: none"> <li>1. Work not eligible for Category 1.</li> <li>2. &gt;15,000 SF and &lt; 3 acres impact.</li> <li>3. <i>Mechanical clearing without grubbing or other soil disturbance &gt;3 acres as a secondary impact may still be eligible for Category 2 at the discretion of the Corps.</i></li> </ol> <p><i>For water-based facilities and hydropower projects:</i> &gt; 3 acres of impact will require an IP.</p>
<b>14. Reshaping Existing Drainage Ditches &amp; Mosquito Management</b>	Not Applicable	Not Applicable
<b>15. Oil Spill and Hazardous Material Cleanup</b>	<p>Jurisdictional activities required for the containment and cleanup of oil and hazardous substances that are subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300) provided that the work is done in accordance with the Spill Control and Countermeasure Plan required by 40 CFR 112.3 or any existing state contingency plan and provided that the Regional Response Team (if one exists in the area) concurs with the proposed containment and cleanup action. SAS<sup>3</sup> must typically be restored in place at the same elevation.</p> <p><i>Note: SVN<sup>F</sup> or a surrogate state reporting form may be submitted after the fact.</i></p>	Work not eligible for Category 1

<b>16. Cleanup of Hazardous and toxic waste</b>	<p>Specific jurisdictional activities to effect the containment, stabilization, or removal of hazardous or toxic waste materials, including court ordered remedial action plans or related settlements, which are performed, ordered or sponsored by a government agency with established legal or regulatory authority. SAS should be restored in place at the same elevation.</p> <ul style="list-style-type: none"> <li>• &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> <li>• No stream channelization, relocation or loss of streambed occurs.</li> <li>• The project does not involve establishing new disposal sites or expanding existing sites used for the disposal of hazardous or toxic waste.</li> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> </ul>	<p>Work not eligible for Category 1</p>
<b>17. Scientific Measurements Devices</b>	<ol style="list-style-type: none"> <li>1. Scientific measurement devices whose purpose is to measure and record scientific data, such as staff gages, water recording devices, water quality testing and improvement devices, and similar structures. This excludes any biological sampling devices. Structures may not restrict or concentrate movement of aquatic organisms.</li> <li>2. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<p>Work not eligible for Category 1</p>
<b>18. Survey Activities</b>	<ol style="list-style-type: none"> <li>1. Jurisdictional survey activities, such as core sampling, seismic exploratory operations, plugging of seismic shot holes and other exploratory-type bore holes, exploratory trenching, soil surveys, sampling, and historic resources surveys (but not recovery). Exploratory trenches must be restored in accordance with GC 43. The construction of temporary pads is authorized provided the discharge doesn't exceed 25 CY. This doesn't authorize permanent structures or the drilling and the discharge of excavated material from test wells for oil and gas exploration (the plugging of such wells is authorized).</li> <li>2. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<p>Work not eligible for Category 1</p>
<b>19. Agricultural Activities</b>	<ol style="list-style-type: none"> <li>1. For those activities subject to Corps jurisdiction<sup>16</sup>, &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> <li>2. No stream channelization, relocation, loss of streambed, or farm ponds in streams.</li> <li>3. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<ol style="list-style-type: none"> <li>1. ≥15,000 SF to &lt;3 acres of inland waterway and/or wetland fill and associated secondary impacts (e.g., areas drained, flooded, fragmented, or excavated). Fill area includes all temporary and permanent fill (including mats), and regulated discharges associated with excavation.</li> <li>2. &gt; 3 acres of impact will require an IP.</li> </ol>

<b>20. Fish and Wildlife Harvesting, Enhancement and Attraction Devices and Activities</b>	NA - this activity in non-navigable inland waters, if not involving a discharge of dredged or fill material, is not subject to Corps jurisdiction. Note: Related structures placed in freshwater navigable waters (e.g. the upper Penobscot or Kennebec Rivers) are reviewed in the Navigable Waters section. (See B. Navigable Waters on Page 33 below.)	Not Applicable
<b>21. Habitat Restoration, Establishment and Enhancement Activities</b>	<ol style="list-style-type: none"> <li>1. &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> <li>2. The activity is supported in writing by a local, state, or non-Corps Federal environmental agency. Water impoundments require PCN.</li> <li>3. No conversion of i) a stream to wetland or vice versa, wetland to a pond or uplands, and ii) one wetland type to another.</li> <li>4. No dam removal.</li> <li>5. No effect on federally listed endangered or threatened species or critical habitat.</li> </ol>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. Aquatic habitat restoration, establishment, and enhancement of wetlands and riparian areas and the restoration and enhancement of streams and other open waters with impacts of any area <math>\geq 15,000</math> SF, provided those activities result in net increase in overall aquatic resource functions and services.<sup>8</sup></li> </ol>
<b>22. Previously Authorized Activities</b>	Any work not commenced nor completed that was authorized in a written letter from the Corps under the GP in effect between October 12, 2010 and October 12, 2015. The terms and general conditions of this GP apply along with any special conditions in the written authorization.	
<b>23. Stream &amp; Wetland Crossings</b>	<ol style="list-style-type: none"> <li>1. River, stream and brook work and crossings: <ul style="list-style-type: none"> <li>• Must comply with GC 45 in particular, including: <ul style="list-style-type: none"> <li>o No slip lining [see GC 45 (g)].</li> <li>o No in-stream work involving fill or excavation in flowing waters [see GC 45(h)].</li> <li>o In-stream work limited to Jul 15 – Sep 30 [see GC 45 (l)].</li> </ul> </li> <li>• No work in riffles and pools<sup>3</sup>.</li> <li>• No stream relocations.</li> <li>• No dams or dikes<sup>6</sup>.</li> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> <li>• &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</li> </ul> </li> <li>2. Wetland crossings must comply with the particularly relevant GC 45.</li> </ol>	Work not eligible for Category 1
<b>24. Aquaculture (freshwater)</b>	<p>For land based installations, &lt;15,000 SF of inland waterway and/or wetland fill, associated secondary impacts, and temporary impacts.</p> <ul style="list-style-type: none"> <li>• In-stream/in-water work limited to Jul 15 – Sep 30.</li> <li>• No effect on federally listed endangered or threatened species or critical habitat.</li> </ul> <p>Note: Related structures placed in freshwater navigable waters are reviewed in the Navigable Waters section. (See B. Navigable Waters, below.)</p>	Work not eligible for Category 1

<b>B. NAVIGABLE WATERS</b>	<p><b>Navigable Waters of the United States:</b> Waters that are subject to the ebb and flow of the tide and/or the tidal and non-tidal portions of the Federally designated navigable waters (the Penobscot River, Kennebec River, and Lake Umbagog) (Section 10 Rivers and Harbors Act of 1899). The jurisdictional limits are the mean high water (MHW) line in tidal waters and the ordinary high water (OHW) mark in non-tidal portions of the federally designated navigable rivers. For the purposes of this GP, fill placed in the area between the mean high water (MHW) and the high tide line (HTL), and in the bordering and contiguous wetlands<sup>1</sup> to tidal waters are also reviewed in this Navigable Waters section.</p> <p>Projects not meeting Category 1 require an application for review as a Category 2 or Individual Permit project. All Category 1 and 2 projects must comply with all of this GP's applicable terms (Pages 1 - 4) and General Conditions (Pages 5 - 20).</p>	
<b>ACTIVITY</b>	<b>CATEGORY 1</b> Self-Verification Eligible ( <i>SVNF Required</i> )	<b>CATEGORY 2</b> ( <i>PCN Required</i> )
<b>1. Repair, Replacement, Expansion, and Maintenance of Authorized (or grandfathered) Structures and Fills</b>	<p>1. Repair, replacement in-kind, or maintenance<sup>7</sup> of existing, currently serviceable<sup>7</sup>, authorized structures or fills:</p> <ul style="list-style-type: none"> <li>• All work is to be conducted in-the-dry, during low water.</li> <li>• Conditions of the original authorization apply.</li> <li>• No substantial expansion or change in use.</li> <li>• No new fill in SAS<sup>3</sup>.</li> <li>• Must be rebuilt in same footprint, however minor deviations in structure design allowed<sup>7</sup>.</li> <li>• The repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events is authorized, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage.</li> </ul>	<ol style="list-style-type: none"> <li>1. Replacement of non-serviceable structures and fills or repair/maintenance of serviceable structures or fills, with fill, replacement or expansion &lt;1 acre, or with a change in use.</li> <li>2. &lt;1 acre temporary or permanent fill, excavation and/or secondary impacts. Fill area includes all temporary and permanent waterway fills, provided: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> </li> <li>3. Standard Pile Driving Conditions. Work involving piles shall adhere to one of the four methods below: <ul style="list-style-type: none"> <li>• Piles installed in-the-dry during low water or in-water between Nov. 8<sup>th</sup> - Apr. 9<sup>th</sup>, or</li> <li>• Must be drilled and pinned to ledge, or</li> <li>• Vibratory hammers used to install any size and quantity of wood, concrete or steel piles, or</li> <li>• Impact hammers limited to one hammer and &lt;50 piles installed/day with the following: wood piles of any size, concrete piles ≤18-inches diameter, steel piles &lt;12-inches diameter if the hammer is ≤3000 lbs and a wood cushion is used between the hammer and steel pile, and</li> <li>• For the methods above: <ul style="list-style-type: none"> <li>○ In-water noise levels shall not exceed &gt;187dB cSEL re 1μPa or 206dB peak re 1μPa at a distance &gt;10m from the pile being installed, and</li> <li>○ In-water noise levels &gt;150dB peak re 1μPa shall not exceed 12 consecutive hours on any given day and a 12 hour recovery period (i.e., in-water noise below 150dB peak re 1μPa) must be provided between work days.</li> </ul> </li> <li>• Existing derelict, degraded or abandoned piles in the project area that are affected by project activities should be removed and properly disposed of in an upland location landward of MHW or OHW and not in wetlands, tidal wetlands, their substrate or mudflats.</li> </ul> </li> </ol>

<p><b>2. Moorings</b></p>	<p>1. Private, non-commercial, non-rental, single-boat moorings, provided:</p> <ul style="list-style-type: none"> <li>• Authorized by the local harbormaster/town.</li> <li>• Not associated with any boating facility.<sup>11</sup></li> <li>• Boat or mooring not located in a Federal Navigation Project or buffer zone<sup>12</sup> other than in a Federal Anchorage<sup>12</sup>. Moorings in a Federal Anchorage not associated with a boating facility<sup>11</sup> and are not for rent.</li> <li>• No interference with navigation.</li> <li>• No new moorings located in SAS<sup>3</sup>. Prior to installation of moorings, a site-specific eelgrass survey should be conducted to document that eelgrass is not present.</li> <li>• When existing, authorized moorings in SAS<sup>3</sup> are going to be replaced, they should be replaced with low impact mooring technology that prevents mooring chains from resting or dragging on the bottom substrate at all tides and helical anchors, or equivalent SAS protection systems where practicable.</li> </ul> <p>2. Minor relocation of previously authorized moorings, provided:</p> <ul style="list-style-type: none"> <li>• Authorized by the local harbormaster/town.</li> <li>• Not located in SAS<sup>3</sup></li> <li>• No interference with navigation.</li> <li>• Cannot be relocated into a Federal Navigation Project<sup>12</sup> other than a Federal Anchorage<sup>12</sup></li> </ul> <p><b>Note: Cat 1 eligible moorings do not require SVNF.</b></p>	<p>1. Moorings associated with an existing boating facility<sup>11</sup>. An eelgrass<sup>14</sup> survey may be required.</p> <p>2. Moorings that don't meet the terms in Category 1 and don't require an Individual Permit. This includes private moorings with no harbormaster or means of local approval.</p> <p>3. Moorings located such that they, and/or vessels docked or moored at them, are within the buffer zone of the horizontal limits<sup>13</sup> of a Federal Channel<sup>12</sup>. (See Appendix H.) The buffer zone is equal to 3 times the authorized depth of that channel.</p> <p>4. An IP is required for moorings within the horizontal limits<sup>11</sup>, or with moored vessels that extend, into the horizontal limits of a Federal Navigation Project<sup>12</sup>, except those in Federal Anchorages<sup>12</sup>.</p> <p><i>For 1-4 above, siting of new individual moorings in SAS<sup>3</sup>, including eelgrass<sup>14</sup>, should be avoided to the maximum extent practicable. If SAS<sup>3</sup> cannot be avoided, plans should show elastic mooring systems that prevent mooring chains from resting or dragging on the bottom substrate at all tides and helical anchors, or equivalent SAS protection systems, where practicable. For moorings that appear to impact SAS, the Corps may require an eelgrass survey.</i></p>
<p><b>3. Structures, Floats and Lifts</b></p>	<p>1. Reconfiguration of existing authorized structures shall occur in-the-dry during low water.</p> <p>2. Minor relocation of <u>previously authorized</u> floats or moored floats/lobster cars, provided:</p> <ul style="list-style-type: none"> <li>• Authorized by the local harbormaster/town.</li> <li>• Not located in SAS<sup>3</sup>.</li> <li>• No interference with navigation.</li> <li>• Cannot be relocated into a Federal Navigation Project<sup>12</sup> other than a Federal Anchorage<sup>12</sup>.</li> </ul>	<p>1. New structures or floats, including floatways/skidways, built to access waterway (seasonal and permanent). Includes both pile supported and crib supported structures.</p> <p>2. Expansions to existing boating facilities<sup>11</sup></p> <ul style="list-style-type: none"> <li>• Pile-supported structures &lt;400 SF, with attached floats totaling ≤200 SF.</li> <li>• Structures are ≤4' wide and have at least a 1:1 height:width ratio<sup>11</sup>.</li> <li>• Floats supported a minimum of 18" above the substrate during all tides.</li> <li>• Structures &amp; floats not located within 25' of any eelgrass<sup>8</sup>.</li> <li>• Moored vessels not positioned over SAS<sup>3</sup>.</li> </ul>

		<ul style="list-style-type: none"> <li>• <i>The Corps may require a letter of no objection from the abutter if structure is to be within 25 feet of the property line.</i></li> <li>• <i>No structure extends across &gt;25% of the waterway width at mean low water.</i></li> <li>• <i>Not located within the buffer zone of the horizontal limits<sup>13</sup> of a Corps Federal Navigation Project (FNP) (Appendix F). The buffer zone is equal to three times the authorized depth of that FNP.</i></li> </ul> <p>3. An Individual Permit is required for structures or floats, including floatways/skidways, located such that they and/or vessels docked or moored at them are within the horizontal limits<sup>13</sup> of a Corps Federal Navigation Project<sup>12</sup> (see Appendix H).</p> <p>4. An Individual Permit is required for structures &amp; floats associated with a new or previously unauthorized boating facility<sup>11</sup>.</p> <p>5. Standard Pile Driving Conditions. Work involving piles shall adhere to one of the four methods below:</p> <ul style="list-style-type: none"> <li>• Piles installed in-the-dry during low water or in-water between Nov. 8<sup>th</sup> - Apr. 9<sup>th</sup>, or</li> <li>• Must be drilled and pinned to ledge, or</li> <li>• Vibratory hammers used to install any size and quantity of wood, concrete or steel piles, or</li> <li>• Impact hammers limited to one hammer and &lt;50 piles installed/day with the following: wood piles of any size, concrete piles ≤18-inches diameter, steel piles &lt;12-inches diameter if the hammer is ≤3000 lbs and a wood cushion is used between the hammer and steel pile, and</li> <li>• For the methods above: <ul style="list-style-type: none"> <li>○ In-water noise levels shall not exceed &gt;187dB cSEL re 1μPa or 206dB peak re 1μPa at a distance &gt;10m from the pile being installed, and</li> <li>○ In-water noise levels &gt;150dB peak re 1μPa shall not exceed 12 consecutive hours on any given day and a 12 hour recovery period (i.e., in-water noise below 150dB peak re 1μPa) must be provided between work days.</li> </ul> </li> <li>• Existing derelict, degraded or abandoned piles in the project area that are affected by project activities should be removed and properly disposed of in an upland location landward of MHW or OHW and not in wetlands, tidal wetlands, their substrate or mudflats.</li> </ul>
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<p><b>4. Aids to Navigation and Temporary Recreational Structures</b></p>	<p>1. Temporary buoys, markers, floats, etc. for recreational use during specific events, provided they are removed within 30 days after use is discontinued.</p> <p>2. The placement of aids to navigation and regulatory markers which are approved by and installed in accordance with the requirements of the U.S. Coast Guard. (See 33 CFR 66, Chapter I, subchapter C).”</p> <p><i>Note: Cat 1 eligible aids to navigation and regulatory markers do not require SVNF.</i></p>	<p>Work not eligible for Category 1</p>
<p><b>5. Dredging, Disposal of Dredged Material, Beach Nourishment, and Rock Removal and Relocation</b></p>	<p>1. Maintenance dredging<sup>10</sup> for navigational purposes &lt;1,000 CY with upland disposal. Includes return water from upland contained disposal area, provided:</p> <ul style="list-style-type: none"> <li>• Proper siltation controls are used.</li> <li>• Dredging &amp; disposal operation limited to Nov. 8 – Apr. 9.</li> <li>• No impact to SAS<sup>3</sup>.</li> <li>• No dredging in intertidal areas.</li> <li>• No dredging within 100’ of shellfish beds.</li> <li>• No dredging in areas designated as Critical Habitat for Atlantic salmon [see GC 8(b) &amp; (c)].</li> <li>• For dredging in tidal waters outside of Atlantic salmon critical habitat, applicants must contact NMFS (see GC 8) to ensure no impacts to listed species such as shortnose sturgeon, Atlantic surgeon, and listed sturgeon critical habitat.</li> <li>• Project proponents must contact the USFWS for work on coastal beaches to ensure no impacts to piping plovers, roseate terns, rufa red knot, or their habitat [see GC 8(c)].</li> <li>• No underwater blasting.</li> </ul> <p>2. Maintenance dredging is not eligible for Category 1 if conducted in tidal portions of the Penobscot river upstream of a line extending from Turner Point in Castine to Moose Point (formerly Squaw Point) on Cape Jellison in Stockton Springs or in tidal portions of the Kennebec or Androscoggin Rivers upstream of a line extending from Doubling Point in Arrowsic to Hospital Point in West Bath.</p>	<p>1. Maintenance dredging<sup>10</sup> ≥1,000 CY, new dredging &lt;25,000 CY, or projects not meeting Category 1. Includes return water from upland contained disposal areas. Disposal includes:</p> <ul style="list-style-type: none"> <li>• Upland.</li> <li>• Beach nourishment (above mean high water) of any area provided the dredging’s primary purpose is navigation or the sand is from an upland source.</li> <li>• Open water &amp; confined aquatic disposal, if Corps finds the material suitable.</li> </ul> <p>2. Beach nourishment associated with dredging when the primary purpose is not navigation requires at least a Category 2 review.</p> <p>3. Maintenance or new dredging<sup>10</sup> and/or disposal in or affecting a SAS<sup>3</sup> requires an Individual Permit.</p>

<b>6. Discharges of Dredged or Fill Material Incidental to the Construction of Bridges</b>	<p>1. Discharges of dredged or fill material incidental to the construction of bridges across navigable waters of the U.S., including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills provided the U.S. Coast Guard authorizes such discharges as part of the bridge permit or appropriate approval.</p> <p>2. Causeways and approach fills are not included in this category and require Category 2 or Individual Permit authorization.</p>	<p>&lt;1 acre temporary or permanent fill, excavation and/or secondary impacts (e.g., areas drained, flooded, fragmented or mechanically cleared). Fill area includes all temporary and permanent waterway fills, provided:</p> <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul>
<b>7. Bank and Shoreline Stabilization</b>	<p>1. Bank stabilization projects &lt;200 linear feet provided:</p> <ul style="list-style-type: none"> <li>• ≤1 cubic yard of fill per linear foot placed along the bank waterward of high tide line. No fill or equipment will occur in SAS<sup>3</sup>.</li> <li>• Work conducted in the intertidal zone must be conducted in-the-dry during low water.</li> <li>• No structures angled steeper than 1H:1V and only rough-faced stone or fiber roll revetments allowed.</li> <li>• No driving of piles or sheeting.</li> </ul> <p>2. Bank stabilization projects in excess of 200 linear feet (Applicant or Applicant + Abutters combined) must undergo Category 2 review.</p>	<p>1. Work not eligible for Category 1.</p> <p>2. &lt;1 acre temporary or permanent fill, excavation and/or secondary impacts (e.g., areas drained, flooded, fragmented or mechanically cleared). Fill area includes all temporary and permanent waterway fills, provided:</p> <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul>
<b>8. Residential, Commercial, Industrial, and Institutional Developments, and Recreational Facilities</b>	<p>Not Eligible</p>	<p>1. &lt;1 acre temporary or permanent fill, excavation and/or secondary impacts (e.g., areas drained, flooded, fragmented or mechanically cleared). Fill area includes all temporary and permanent waterway fills, provided:</p> <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> <p>2. Conversions of previously authorized pile supported buildings over navigable waters to residences, offices, or other non-water dependent uses require at least a Category 2 review.</p> <p>3. Floating house boats or businesses on floats require Category 2 review.</p>
<b>9. Utility Line Activities</b>	<p>1. Repair or maintenance of existing, currently serviceable, authorized utilities with no expansion or change in use:</p> <ul style="list-style-type: none"> <li>• Conditions of the original authorization apply.</li> <li>• Trenching or filling is confined to the existing footprint.</li> <li>• In water work conducted between Nov 8 and Apr 9.</li> <li>• No new impact to SAS.</li> </ul> <p>2. Particularly relevant is GC12.</p> <p>3. <u>New work</u> in, over, or under navigable waters requires a PCN and Category 2 review.</p> <p>4. Except for aerial utility lines, work is not eligible for Category 1 if conducted in tidal portions of the Penobscot River upstream of a line extending from Turner Point in Castine to Moose Point (formerly</p>	<p>1. New or replacement installations or work not otherwise eligible for Category 1.</p> <p>2. &lt;1 acre temporary or permanent fill, excavation and/or secondary impacts (e.g., areas drained, flooded, fragmented or mechanically cleared). Fill area includes all temporary and permanent waterway fills, provided:</p> <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> <p>3. Particularly relevant is GC12</p>

	Squaw Point) on Cape Jellison in Stockton Springs or in tidal	
<b>10. Linear Transportation Projects</b>  (Not Including Stream Crossings)	Not eligible	<1 acre temporary or permanent fill, excavation and/or secondary impacts (e.g., areas drained, flooded, fragmented or mechanically cleared). Fill area includes all temporary and permanent waterway fills, provided: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul>
<b>11. Mining Activities</b>	Not Eligible	Not Eligible
<b>12. Boat Ramps and Marine Railways</b>	<ol style="list-style-type: none"> <li>1. No new impact to SAS</li> <li>2. Marine railway and boat ramp work not eligible for maintenance<sup>7</sup> (i.e. not currently serviceable<sup>7</sup>) may be replaced “in-kind” with minor deviations<sup>7</sup> provided: <ul style="list-style-type: none"> <li>• Work is in the intertidal zone.</li> <li>• No fill expansion below high tide line.</li> <li>• Work conducted in-the-dry during low water.</li> </ul> </li> <li>3. No new boat ramps or marine railways.</li> </ol>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. &lt;1 acre temporary or permanent fill, excavation and/or secondary impacts (e.g., areas drained, flooded, fragmented or mechanically cleared). Fill area includes all temporary and permanent waterway fills, provided: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> </li> </ol>
<b>13. Land and Water-Based Renewable Energy Generation Facilities and Hydropower Projects</b>	Not Eligible	<ol style="list-style-type: none"> <li>1. &lt;1 acre temporary or permanent fill, excavation and/or secondary impacts (e.g., areas drained, flooded, fragmented or mechanically cleared). Fill area includes all temporary and permanent waterway fills, provided: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> </li> <li>2. No new impoundments.</li> </ol>
<b>14. Reshaping Existing Drainage Ditches and Mosquito Management</b>	<ol style="list-style-type: none"> <li>1. ≤500 linear feet of drainage ditch will be modified. The reshaping of the ditch cannot increase drainage capacity beyond the original as-built capacity nor can it expand the area drained by the ditch as originally constructed (i.e., the capacity of the ditch must be the same as originally constructed and it cannot drain additional wetlands or other waters of the U.S.).</li> <li>2. No new ditches or relocation of drainage ditches constructed in waters of the U.S.; the location of the centerline of the reshaped drainage ditch must be approximately the same as the location of the centerline of the original drainage ditch.</li> <li>3. No effect on federally listed endangered or threatened species or critical habitat</li> </ol>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. &lt;1 acre temporary or permanent fill, excavation and/or secondary impacts (e.g., areas drained, flooded, fragmented or mechanically cleared). Fill area includes all temporary and permanent waterway fills, provided: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> </li> </ol>

<b>15. Oil Spill and Hazardous Material Cleanup</b>	<p>Jurisdictional activities required for the containment and cleanup of oil and hazardous substances that are subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300) provided that the work is done in accordance with the Spill Control and Countermeasure Plan required by 40 CFR 112.3 and any existing state contingency plan and provided that the Regional Response Team (if one exists in the area) concurs with the proposed containment and cleanup action. SAS<sup>3</sup> must typically be restored in place at the same elevation.</p> <p><i>Note: SVNF or a surrogate state reporting form may be submitted after the fact. No SVNF is required for Category 1 eligible containment booms.</i></p>	<p>Work not eligible for Category 1</p>
<b>16. Cleanup of Hazardous and Toxic Waste</b>	<p>Not eligible - except for booms placed for hazardous and toxic waste containment and absorption and prevention which are eligible for SV.</p> <p><i>Note: No SVNF is required for Category 1 eligible containment booms.</i></p>	<p>Specific jurisdictional activities with impacts of any area required to affect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Wetlands and other SAS must typically be restored in place at the same elevation to qualify.</p>
<b>17. Scientific Measurement Devices</b>	<p>Scientific measurement devices whose purpose is to measure and record scientific data, such as staff gages, water recording devices, water quality testing and improvement devices, and similar structures. Structures may not restrict or concentrate movement of aquatic organisms; no activity results in a hazard to navigation; and no activity requiring underwater blasting.</p>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. &lt;1 acre temporary or permanent fill, excavation and/or secondary impacts (e.g., areas drained, flooded, fragmented or mechanically cleared). Fill area includes all temporary and permanent waterway fills, provided: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> </li> </ol>
<b>18. Survey Activities</b>	<p>Jurisdictional survey activities such as exploratory drilling, surveying and sampling activities, excluding any biological sampling devices. Does not include any activity requiring underwater blasting, seismic exploratory operations, or oil and gas exploration and fill for roads or construction pads. No activity may result in a hazard to navigation.</p>	<ol style="list-style-type: none"> <li>1. Work not eligible for Category 1</li> <li>2. &lt;1 acre temporary or permanent fill, excavation and/or secondary impacts (e.g., areas drained, flooded, fragmented or mechanically cleared). Fill area includes all temporary and permanent waterway fills, provided: <ul style="list-style-type: none"> <li>• Temporary or permanent fill in eelgrass<sup>14</sup> &lt;1000 SF.</li> <li>• Permanent fill in SAS (excluding eelgrass<sup>14</sup>) &lt;4300 SF.</li> </ul> </li> </ol>
<b>19. Agricultural Activities</b>	<p>Not Eligible</p>	<p>Not Eligible</p>

<b>20. Fish &amp; Wildlife Harvesting, Enhancement and Attraction Devices and Activities (Not Aquaculture)</b>	<p>Fish and wildlife harvesting, enhancement, and attraction devices and activities such as pound nets, crab traps, crab dredging, eel pots, lobster traps, and clam and oyster digging, and small fish attraction devices such as open water fish concentrators (sea kites, etc.). This does not authorize artificial reefs or impoundments and semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster, or the use of covered oyster trays or clam racks. No activity that may result in a hazard to navigation.</p> <p><i>Note: A SVNF is not required for these Category 1 eligible devices and activities.</i></p>	<p>1. Work not eligible for Category 1. 2. Impoundments or semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster and new fish weirs with an impounded area <math>\leq</math> ½ acre.</p> <p>For Aquaculture operations, refer to Activity 24.</p>
<b>21. Habitat Restoration, Establishment and Enhancement Activities</b>	<p>1. Cultch placement in tidal waters is eligible for SV provided there are no salt marsh or vegetated shallow impacts. 2. SAS planting and transplanting <math>\leq</math> 100 SF in tidal waters; 3. No artificial or living reefs. 4. The activity is authorized in writing by a local, state, or non-Corps federal environmental agency. Water impoundments require PCN. 5. No conversion of i) a stream to wetland or vice versa, wetland to a pond or uplands, and ii) one wetland type to another. 6. No dam removal. 7. Shellfish habitat enhancement such as brushing the flats is eligible for Category 1, <i>but not the use of netting which requires Category 2 review.</i></p>	<p>1. Work not eligible for Category 1. 2. Aquatic habitat restoration, establishment and enhancement provided those activities are proactive and result in net increases in aquatic resource functions and services.<sup>8</sup></p>
<b>22. Previously Authorized Activities</b>	<p>Any work not commenced nor completed that was authorized in a written letter from the Corps under the GP in effect between October 12, 2010 and October 12, 2015. The terms and general conditions of this GP apply along with any special conditions in the written authorization.</p>	
<b>23. Stream &amp; Wetland Crossings</b>	<p>Not Eligible</p>	<p>All temporary or permanent crossings of tidal navigable waters or adjacent tidal wetlands not eligible as maintenance require a PCN. GC 45 applies</p>
<b>24. Aquaculture</b>	<p>Not Eligible</p>	<p>Shellfish &amp; finfish aquaculture (with the exception of Atlantic salmon and any other salmonid, or other federally listed endangered or threatened species), or other aquaculture facilities with no more than minimal individual and cumulative impacts to environmental resources or navigation. This is inclusive but not limited to cages, nets, bags, racks, long lines, fences, posts, poles, predator screening, etc. Aquaculture guidelines are provided at: <a href="http://www.maine.gov/dmr/aquaculture/index.htm">www.maine.gov/dmr/aquaculture/index.htm</a>.</p>

## Endnotes/Definitions

<sup>1</sup> **Bordering and Contiguous Wetlands:** A bordering wetland is immediately next to its adjacent waterbody and may lie at, or below, the ordinary high water mark (mean high water in navigable waters) of that waterbody and is directly influenced by its hydrologic regime. Contiguous wetlands extend landward from their adjacent waterbody to a point where a natural or manmade discontinuity exists. Contiguous wetlands include bordering wetlands as well as wetlands that are situated immediately above the ordinary high water mark and above the normal hydrologic influence of their adjacent waterbody. Note, with respect to the federally designated navigable rivers, the wetlands bordering and contiguous to the tidally influenced portions of those rivers are reviewed under “II. Navigable Waters.”

### <sup>2</sup> **Direct, Secondary, and Cumulative Impacts/Effects:**

Direct Impacts: The immediate loss of aquatic ecosystem within the footprint of the fill.

Secondary Impacts: These are effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material. Information about secondary effects on aquatic ecosystems shall be considered prior to the time final section 404 action is taken by permitting authorities. Some examples of secondary effects on an aquatic ecosystem are a) fluctuating water levels in all impoundment and downstream associated with the operation of a dam, b) septic tank leaching and surface runoff from residential or commercial developments on fill, and c) leachate and runoff from a sanitary landfill located in waters of the U.S. Put another way, secondary effects are those impacts outside the footprint of the fill that arise from and are associated with the discharge of dredged or fill material, including the operation of an activity or facility associated with the discharge. Examples may include habitat fragmentation; interruption of travel corridors for wildlife (for example, for amphibians that migrate to and from seasonal or vernal pools used as breeding habitat); hydrologic regime changes; and impacts from operation and maintenance activities for constructed facilities; such as noise/lighting, storm water runoff, and road kill of wetland dependent wildlife. Using the directions contained in the guidelines, we consider the circumstances of a proposed discharge and the project of which it is a part to evaluate the scope, extent, severity, and permanence of direct, secondary, and cumulative adverse effects upon the aquatic ecosystem.

Cumulative Impacts: The extent of past, present, and foreseeable developments in the area may be an important consideration in evaluating the significance of a particular project's impacts. Although the impacts associated with a particular discharge may be minor, the cumulative effect of numerous similar discharges can result in a large impact. Cumulative impacts should be estimated only to the extent that they are reasonable and practical.

<sup>3</sup> **Special Aquatic Sites:** Includes wetlands and saltmarsh, mudflats, riffles and pools, and vegetated shallows (predominantly comprised of eelgrass in Maine).

<sup>4</sup> **Construction Mats:** Constructions, swamp and timber mats (herein referred to as “construction mats”) are generic terms used to describe structures that distribute equipment weight to prevent wetland damage while facilitating passage and providing work platforms for workers and equipment. They are comprised of sheets or mats made from a variety of materials in various sizes. A timber mat consists of large timbers bolted or cabled together. Corduroy roads, which are not considered to be construction mats, are cut trees and/or saplings with the crowns and branches removed, and the trunks lined up next to one another. Corduroy roads are typically installed as permanent structures. Like construction mats, they are considered as fill whether they're installed temporarily or permanently.

<sup>5</sup> **Vernal Pools:** A vernal pool, also referred to as a seasonal forest pool, is a temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer. Vernal pools have no permanent inlet or outlet and no viable populations of predatory fish. A vernal pool may provide the primary breeding habitat for wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculatum*), blue-spotted salamanders (*Ambystoma laterale*), and fairy shrimp (*Eubranchipus* sp.), as well as valuable habitat for other plants and wildlife, including several rare, threatened, and endangered species. A vernal pool intentionally created for the purposes of compensatory mitigation is included in this definition. For the purposes of this GP, the presence of any of the following species in any life stage in any abundance level/quantity would designate the waterbody as a vernal pool: fairy shrimp, blue spotted salamanders, spotted salamanders or wood frogs. The Corps may determine during a Category 2 review that a waterbody should not be regulated as a VP based on available evidence. For the purposes of this GP, the VP Management Areas are the: Vernal Pool Depression (includes the vernal pool depression up to the spring or fall high water mark, and includes any vegetation growing within the depression), Vernal Pool Envelope (area within 100 FT of the VP Depression's edge) and Critical Terrestrial Habitat (area within 100-750 FT of the Vernal Pool Depression's edge). [\*Note: Critical Terrestrial Habitat is defined as 100 -750 FT on page 243 of the document “Science and Conservation of Vernal Pools in Northeastern North America,” Calhoun and deMaynadier, 2008, which is referenced in Appendix G, page 3, Paragraph 10(b).

<sup>6</sup> **Water Diversions:** Water diversions are activities such as bypass pumping or water withdrawals. Temporary flume pipes, culverts or cofferdams where normal flows are maintained within the stream boundary's confines aren't water diversions. "Normal flows" are defined as no change in flow from pre-project conditions.

<sup>7</sup> **Maintenance:** a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3 – "Activities occurring before certain dates," provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification.

- Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make repair, rehabilitation, or replacement are authorized.
- Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.
- No seaward expansion for bulkheads or any other fill activity is considered Category 1 maintenance.
- Only structures or fills that were previously authorized and are in compliance with the terms and condition of the original authorization can be maintained as a non-regulated activity under 33 CFR 323.4(a)(2), or in accordance with the Category 1 or 2 thresholds in Appendix A.

b) The state's maintenance provisions may differ from the Corps and may require reporting and written authorization from the state.

c) Contact the Corps to determine whether stream crossing replacements require a written application to the Corps for at least a Category 2 review.

d) Exempted Maintenance. In accordance with 33 CFR 323.4(a)(2), any discharge of dredged or fill material that may result from any of the following activities is not prohibited by or otherwise subject to regulation under Section 404 of the CWA: "Maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Maintenance does not include any modification that changes the character, scope, or size of the original fill design."

<sup>8</sup> **Aquatic Habitat Restoration, Establishment and Enhancement:** The Corps will decide if a project qualifies and must determine in consultation with federal and state agencies that the net effects are beneficial. The Corps may refer to Nationwide Permit 27 published in the 3/12/07 Federal Register. Activities authorized here may include, but are not limited to: the removal of accumulated sediments; the installation, removal, and maintenance of small water control structures, dikes, and berms; the installation of current deflectors; the enhancement, restoration, or establishment of riffle and pool stream structure; the placement of in-stream habitat structures; modifications of the stream bed and/or banks to restore or establish stream meanders; the backfilling of artificial channels and drainage ditches; the removal of existing drainage structures; the construction of small nesting islands in inland waters; the construction of open water areas; the construction of native shellfish species habitat over unvegetated bottom for the purpose of habitat protection or restoration in tidal waters; shellfish seeding; activities needed to reestablish vegetation, including plowing or discing for seed bed preparation and the planting of appropriate wetland species; mechanized land clearing to remove non-native invasive, exotic, or nuisance vegetation; and other related activities. Only native plant species should be planted at the site.

<sup>9</sup> **Brushing the Flats:** The placement of tree boughs, wooden lath structure, or small-mesh fencing on mudflats to enhance recruitment of soft-shell clams (*Mya arenaria*).

<sup>10</sup> **Maintenance Dredging:** This includes only those areas and depths previously authorized by the Corps and dredged. The Corps may require proof of authorization. Maintenance dredging typically refers to the routine removal of sediment to maintain the design depths of serviceable navigation channels, harbors, basins, marinas, boat launches, and port facilities. Maintenance dredging is conducted for navigational purposes and does not include any expansion of the previously dredged area or depth. The Corps may review a maintenance dredging activity as new dredging if sufficient time has elapsed to allow for the colonization of SAS, shellfish, etc.

<sup>11</sup> **Boating Facilities:** Facilities that provide for a fee, rent, or sell mooring space, such as marinas, yacht clubs, boat clubs, boat yards, town facilities, dockminiums, etc.

<sup>12</sup> **Federal Navigation Projects (FNPs):** FNPs are comprised of Federal Channels and Federal Anchorages. See Appendix F for their location and contact the Corps for more information. "Horizontal Limits" is the outer edge of an FNP. "Buffer Zone" is equal to three times the authorized depth of that channel.

<sup>13</sup> **Horizontal Limits:** The outer edge of a Federal Navigation Project (FNP). See Appendix F and contact the Corps for information on FNP's.

<sup>14</sup> **Eelgrass (*Zostera marina*):** A type of rooted aquatic vegetation that exists in intertidal and shallow subtidal areas known as vegetated shallows. See [www.nero.noaa.gov/hcd/](http://www.nero.noaa.gov/hcd/) for eelgrass survey guidance. Note: Eelgrass surveys should be conducted between May and October unless otherwise directed.

<sup>15</sup> **Structures:** The height of structures shall at all points be equal to or exceed the width of the deck. For the purpose of this definition, height shall be measured from the marsh substrate to the bottom of the longitudinal support beam.

<sup>16</sup> **Agricultural Activities:** The Clean Water Act exempts certain discharges associated with normal farming, ranching, and forestry activities such as plowing, cultivating, minor drainage, and harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices (Section 404(f)(1)(A)). Applicants are strongly advised to contact the Corps for a determination of whether their activity is exempt or requires a permit.





**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](http://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](mailto: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: \_\_\_\_\_  
Date of State Permit: \_\_\_\_\_  
State Project Manager: \_\_\_\_\_

Permittee: \_\_\_\_\_  
Address, City, State & Zip: \_\_\_\_\_  
Phone(s) and Email: \_\_\_\_\_

Contractor: \_\_\_\_\_  
Address, City, State & Zip: \_\_\_\_\_  
Phone(s) and Email: \_\_\_\_\_

Consultant/Engineer/Designer: \_\_\_\_\_  
Address, City, State & Zip: \_\_\_\_\_  
Phone(s) and Email: \_\_\_\_\_

Wetland/Vernal Pool Consultant: \_\_\_\_\_  
Address, City, State & Zip: \_\_\_\_\_  
Phone(s) and Email: \_\_\_\_\_

Project Location/Description: \_\_\_\_\_  
Address, City, State & Zip: \_\_\_\_\_  
Latitude/Longitude Coordinates: \_\_\_\_\_ Tax Map/Lot: \_\_\_\_\_  
Waterway Name: \_\_\_\_\_  
Work Description: \_\_\_\_\_

Provide any prior Corps permit numbers: \_\_\_\_\_  
Proposed Work Dates: Start: \_\_\_\_\_ Finish: \_\_\_\_\_

Area of wetland impact: \_\_\_\_\_ SF (leave blank if work involves structures & no fill in Navigable Waters)  
Area of waterway impact: \_\_\_\_\_ 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: \_\_\_\_\_

Permittee Signature: \_\_\_\_\_ Date: \_\_\_\_\_



**US Army Corps  
of Engineers®**  
New England District

## **Appendix C: Content of Pre-Construction Notification**

In addition to the following required information, the applicant must provide additional information as the Corps deems essential to make a public interest determination including, where applicable, a determination of compliance with the Section 404(b)(1) guidelines or ocean dumping criteria. Such additional information may include environmental data and information on alternate methods and sites as may be necessary for the preparation of the required environmental documentation. For a more comprehensive checklist, go to [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Forms >> Application and Plan Guideline Checklist. Please check with the Corps for project-specific requirements.

### **Information required for all projects:**

- Corps application form ([ENG Form 4345](#)) or appropriate state application form (see Appendix E). Forms may need to be supplemented to include the information noted below.
- Proof of notification to the SHPO and the appropriate THPOs (see Appendix E).
- Official Species List for any federally listed endangered or threatened species (Instructions at Appendix D)
- Drawings, sketches, or plans (detailed engineering plans and specifications are not required) that are legible, reproducible (color is encouraged, but features must be distinguishable in black and white), no larger than 11"x17", with bar scale. Wetland area impact sheets should have the highest resolution possible to show work within Corps jurisdiction (do not just reduce project overview or cut large-scale plan into quadrant sheets). Provide locus map and a plan overview of the entire property with a key index to the individual impact sheets. A locus map be on a section of color USGS topographic map is encouraged. Digital submissions are encouraged.
- Include:
  - All direct, secondary, permanent and temporary effects the project would cause, including the anticipated amount of impacts to waters of the U.S. expected to result from the activity, in acres, linear feet, or other appropriate unit of measure.
  - Any historic permanent fill associated with each single and complete project.
  - Cross-section views of all wetland and waterway fill areas and wetland replication areas.
  - Delineation of all wetlands, other special aquatic sites (vegetated shallows, saltmarsh, mudflats, riffles and pools, coral reefs, and sanctuaries and refuges), and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Use Federal delineation methods and include Corps wetland delineation data sheets (see GC 2).
  - MLW and MHW elevations in tidal waters. Show the HTL elevations when fill is involved. Show OHW elevation in lakes and non-tidal streams.
  - Existing and proposed conditions.
  - For vegetated shallow and eelgrass survey guidance, see [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Jurisdictional Limits and Wetlands >> Submerged Aquatic Vegetation Survey Guidance for the New England Region.
  - Show all known VPs on the project site. See GC 23 for vernal pool identification requirements.
- Volume, type, and source of fill material to be discharged into waters and wetlands, including the area(s) (in square feet or acres) of fill in wetlands, below OHW in inland waters and below the HTL in coastal waters.

- An Official Species List of federally “listed species or critical habitat” present in the action area (see GC 8).
- A restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions (see GC 43).

**Information that may be required:**

- Photographs of wetland/waterway to be impacted. Photos at low tide are preferred for work in tidal waters.
- For drawings, sketches, or plans:
  - The vertical datum for all coastal projects must be in U.S. survey feet and referenced to MLLW and current tidal epochs, with a reference chart showing conversion factor to NAVD88; do not use local datum. See [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Forms and Publications >>Vertical Datum - FEMA (Jul 2007);
  - The horizontal state plane coordinates shall be in U.S. survey feet and based on the appropriate state plane coordinate system.
- For the construction of a filled area or pile or float-supported platform, the use of, and specific structures to be erected on, the fill or platform.
- For the discharge of dredged or fill material into waters of the U.S. or the transportation of dredged material for the purpose of disposing of it in ocean waters, the source of the material; the purpose of the discharge, a description of the type, composition and quantity of the material; the method of transportation and disposal of the material; and the location of the disposal site.
- For the discharge of dredged or fill material into waters of the U.S., include a statement describing how impacts to waters of the U.S. are to be avoided and minimized. Include either a statement describing how impacts to waters of the U.S. are to be compensated for or a statement explaining why compensatory mitigation should not be required for the proposed impacts.
- Purpose and need for the proposed activity;
- Limits and coordinates of any Federal Navigation Project in the vicinity of the project area.
- Limits and coordinates of any proposed mooring field, reconfiguration zone or aquaculture activity. Provide coordinates for all corners;
- Schedule of construction/activity;
- Names and addresses of adjoining property owners;
- Location and dimensions of adjacent structures;
- List of authorizations required by other Federal, interstate, state, or local agencies for the work, including all approvals received or denials already made.
- Identification and description of potential impacts to Essential Fish Habitat (defined at VI. Definitions and Acronyms).
- Identification of potential discharges of pollutants to waters, including potential impacts to impaired waters, in the project area (see GC 19).
- Invasive Species Control Plan (see GC 24). For sample control plans, see [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) >> Invasive Species.
- Wildlife Action Plan (WAP) maps. Contact Maine Inland Fisheries & Wildlife (Appendix E) or on line at [http://www.maine.gov/ifw/wildlife/conservation/action\\_plan.html](http://www.maine.gov/ifw/wildlife/conservation/action_plan.html)

**Information for dredging projects that may be required:**

- Sediment testing, including physical (e.g., grain-size analysis), chemical and biological testing. For projects proposing open water disposal, applicants are encouraged to contact the Corps as early as possible regarding sampling and testing protocols. Sampling and testing of sediments without such contact should not occur and if done, would be at the applicant’s risk.
- The area in square feet and volume of material to be dredged below mean high water.

- Existing and proposed water depths.
- Type of dredging equipment to be used.
- Nature of material (e.g., silty sand).
- Any existing sediment grain size and bulk sediment chemistry data for the proposed or any nearby projects.
- Information on the location and nature of municipal or industrial discharges and occurrence of any contaminant spills in or near the project area.
- Shellfish survey.
- Location of the disposal site (include locus sheet).
- Identification and description of any potential impacts to Essential Fish Habitat.
- Delineation of submerged aquatic vegetation (e.g., eelgrass beds).

**Information for aquaculture projects that may be required:**

- Maine Aquaculture guidelines and joint Corps/Maine DMR applications may be found at: [www.maine.gov/dmr/aquaculture/index.htm](http://www.maine.gov/dmr/aquaculture/index.htm).
- In addition to the information required above, applications must also include:
  - Whether canopy predator nets are being used.

## Appendix D: Instruction for USFWS IPaC Project Builder/Official Species List

NOTE: These instructions are subject to change by the USFWS. Users should check this GP's Corps webpage for the latest instructions or click [here](#).

In your internet browser go to <http://ecos.fws.gov/ipac/>

1. Click on get started.
2. Click on enter project location.
3. Search or zoom to your project location. (You can enter an address and then zoom in with your mouse).
4. Define your area. (Select the polygon tool and click around the boundary of your project.) or (Use the draw a line tool for linear projects)

Note: You can change/select the map from Streets to Satellite or Topo in the lower left corner of the map.

5. Click finished drawing then click confirm and select continue.

6. On the next page under Tasks (lower left), select Request an official species list. The pane will open. Select "request official species list" again.

7. A new page will open. Fill in the project information blanks with the project name, brief description, project type, lead agency, and contact information. Be sure to check the box to verify this is a legitimate project. Click on Submit Official Species List Request.

8. You will be sent an e-mail with instructions to complete the request by clicking on the link provided.

9. The site will open Official Species List Request Completed. Under the Maine Ecological Services Field Office address you will see "Official Species List Document". Click on that link and your document will open. Save and or print a copy and **include the entire report with your application.**

Note, you will receive a second e-mail with the same information. You can save the link in the event you need to return to the IPaC site for an updated list.

If a period of time has passed since your initial "Official Species List" identifier number was generated, you may choose to generate an "UPDATED SPECIES LIST". To do this, return to the IPaC homepage at <http://ecos.fws.gov/ipac> site. In the middle of the page, click the purple "Need an updated species list" link.

On the request an "Updated Official Species List" page, complete the information in the boxes provided. You will need the project specific official consultation code generated and stated on the original official list as well as the email address entered with the original submission.

Click "Request Updated Species List". Print, or save.

## Appendix E: Contacts and Tribal Areas of Interest

### 1. Federal

U.S. Army Corps of Engineers  
Maine Project Office  
675 Western Avenue #3  
Manchester, ME 04351  
(207) 623-8367 (phone); (207) 623-8206 (fax)

Federal Emergency Management Agency  
99 High St.  
Boston, MA 02110  
(877) 336-2734 (phone)  
*(Flood Plain Management)*

U.S. Environmental Protection Agency  
5 Post Office Square  
Suite 100 (OEP05-2)  
Boston, MA 02109-3912  
(617) 918-1589 (phone)

National Marine Fisheries Service  
55 Great Republic Drive  
Gloucester, MA 01930  
(978) 281-9102 (phone); (978) 281-9301 (fax)  
*(Federal endangered species & EFH)*

U.S. Fish and Wildlife Service  
Maine Field Office  
17 Godfrey Drive, Suite 2  
Orono, ME 04473  
(207) 866-3344 (phone); (207) 866-3351 (fax)  
*(Federal endangered species)*

National Park Service  
North Atlantic Region  
15 State Street  
Boston, MA 02109  
(617) 223-5203 (phone)  
*(Wild and Scenic Rivers)*

National Marine Fisheries Service  
Maine Field Office  
17 Godfrey Drive Suite 1  
Orono, ME 04473  
(207) 866-7379 (phone); (207) 866-7342 (fax)  
*(Federal endangered species)*

Commander (dpb)  
First Coast Guard District  
One South Street - Battery Bldg  
New York, NY 10004-1466  
(212) 668-7021 (phone); (212) 668-7967 (fax)  
*(bridge permits)*

### 2. State of Maine

#### a. Department of Environmental Protection *(State permits & Water Quality Certifications)*

Division of Land Resource Regulation  
Bureau of Land and Water Quality  
17 State House Station  
Augusta, Maine 04333  
(207) 287-7688 (phone)

Eastern Maine Regional Office  
106 Hogan Road  
Bangor, Maine 04401  
(207) 941-4570 (phone)

Southern Maine Regional Office  
312 Canco Road  
Portland, Maine 04103  
(201) 822-6300 (phone)

Northern Maine Regional Office  
1235 Central Drive - Skyway Park  
Presque Isle, Maine 04769  
(207) 764-0477 (phone)

b. Department of Agriculture, Conservation and Forestry

i. Maine Land Use Planning Commission (LUPC) (*State permits & Water Quality Certifications in the unorganized areas of the State*)

Augusta Office  
22 State House Station  
Augusta, Maine 04333-0022  
(207) 287-2631 (phone); (207) 287-7439 (fax)

Greenville Regional Office  
43 Lakeview Drive  
P.O. Box 1107  
Greenville, Maine 04441  
(207) 695-2466 (phone); (207) 695-2380 (fax)

Rangley Regional Office  
133 Fyfe Road  
PO Box 307  
West Farmington, ME 04992  
(207) 670-7493 (phone); (207) 287-7439 (fax)

Downeast Regional Office  
106 Hogan Rd, Suite 8  
Dorothea Dix Complex  
Bangor, Maine 04401  
(207) 941-4052 (phone); (207) 941-4222 (fax)

Ashland Regional Office  
45 Radar Road  
Ashland, ME 04732-3600  
(207) 435-7963 (phone); (207) 435-7184 (fax)

East Millinocket Regional Office  
191 Main Street  
East Millinocket, ME 04430  
(207) 746-2244 (phone); (207) 746-2243 (fax)

ii. Maine Coastal Program

Department of Agriculture, Conservation and Forestry  
Bureau of Resource Information and Land Use Planning  
17 Elkins Lane {physical address}  
State House Station 93  
Augusta, Maine 04333-0038  
(207) 287-2801 (phone); (207) 287-2353 (fax)  
(*CZM consistency determinations*)

iii. Division of Parks and Public Lands

22 State House Station  
Augusta, Maine 04333  
(207) 287-3061 (phone); (207) 287-6170 (fax)  
(*submerged lands leases*)

c. Department of Marine Resources

P.O. Box 8  
West Boothbay Harbor, Maine 04575  
(207) 633-9500 (phone); (207) 624-6024 (fax)  
(*aquaculture leases*)

**3. Historic Properties**

a. State Historic Preservation Officer (SHPO)

Mr. Kirk F. Mohney, Director

Maine Historic Preservation Commission (MHPC)  
65 State House Station  
Augusta, Maine 04333-0065  
(207) 287-2132 (phone); (207) 287-2335 (fax)  
Area of concern: The entire State of Maine

b. Tribal Historic Preservation Officers (THPOs)

Note: The area of concern for each tribe is the entire State of Maine

THPO & Environmental Planner  
*Houlton Band of Maliseet Indians*  
88 Bell Road  
Littleton, Maine 04730  
(207) 532-4273, x215 (phone)  
(207) 532-6883 (fax)  
envplanner@maliseets.com  
ogs1@maliseets.com

THPO  
*Aroostook Band of Micmacs*  
7 Northern Road  
Presque Isle, Maine 04769  
(207) 764-1972 (phone); (207) 764-7667 (fax)  
jpictou@mimca-nsn.gov

THPO  
*Passamaquoddy Tribe of Indians*  
Pleasant Point Reservation  
P.O. Box 343  
Perry, Maine 04667  
(207) 853-2600 (phone); (207) 853-6039 (fax)  
soctomah@gmail.com

THPO  
*Penobscot Nation*  
Cultural and Historic Preservation Dept.  
12 Wabanaki Way  
Indian Island, Maine 04468  
(207) 817-7471 (phone)  
chris.sockalexis@penobscotnation.org

THPO  
*Passamaquoddy Tribe of Indians*  
Indian Township Reservation  
P.O. Box 301  
Princeton, Maine 04668  
(207) 796-2301 (phone)  
(207) 796-5256 (fax); soctomah@gmail.com

**4. Organizational Websites (Note – Subject to Change):**

U.S. Army Corps of Engineers, N.E. District	<a href="http://www.nae.usace.army.mil/missions/regulatory.aspx">www.nae.usace.army.mil/missions/regulatory.aspx</a>
U.S. Army Corps of Engineers, Headquarters	See above link>>Useful Links>>Federal Agency Links
U.S. Environmental Protection Agency	<a href="http://www.epa.gov/owow/wetlands">www.epa.gov/owow/wetlands</a>
National Marine Fisheries Service	<a href="http://www.nmfs.noaa.gov">www.nmfs.noaa.gov</a>
U.S. Fish and Wildlife Service	<a href="http://www.fws.gov/mainefieldoffice">www.fws.gov/mainefieldoffice</a>
National Park Service	<a href="http://www.nps.gov/rivers/index.html">www.nps.gov/rivers/index.html</a>
Maine Department of Environmental Protection	<a href="http://www.maine.gov/dep">www.maine.gov/dep</a>
Maine Department of Agriculture, Conservation and Forestry	<a href="http://www.maine.gov/acf/index.shtml">www.maine.gov/acf/index.shtml</a>
Maine Land Use Planning Commission	<a href="http://www.maine.gov/doc/lupc/commission/offices.shtml">www.maine.gov/doc/lupc/commission/offices.shtml</a>
Maine Department of Marine Resources	<a href="http://www.maine.gov/dmr/index.htm">www.maine.gov/dmr/index.htm</a>
State of Maine - Aquaculture Guidelines	<a href="http://www.maine.gov/dmr/aquaculture/index.htm">www.maine.gov/dmr/aquaculture/index.htm</a>



## Appendix F: Definitions

### Definitions

**Attendant Features:** Occurring with or as a result of; accompanying.

**Biodegradable:** A material that decomposes into elements found in nature within a reasonably short period of time and will not leave a residue of plastic or a petroleum derivative in the environment after degradation. Examples of biodegradable materials include jute, sisal, cotton, straw, burlap, coconut husk fiber (coir) or excelsior. In contrast, degradable plastics break down into plastic fragments that remain in the environment after degradation.

**Boating facilities:** These provide, rent or sell mooring space, such as marinas, yacht clubs, boat yards, dockminiums, town facilities, land/home owners, etc. Not classified as boating facilities are piers shared between two abutting properties or town mooring fields that charge an equitable user fee based on the actual costs incurred.

**Brushing the Flats:** The placement of tree boughs, wooden lath structure, or small-mesh fencing on mudflats, or any bottom disturbance (e.g., discing, plowing, raking, etc.), to enhance recruitment of shellfish.

**Buffer Zone:** The buffer zone of an FNP is equal to three times the authorized depth of the FNP.

**Construction mats:** Constructions, swamp and timber mats (herein referred to as “construction mats”) are generic terms used to describe structures that distribute equipment weight to prevent wetland damage while facilitating passage and providing work platforms for workers and equipment. They are comprised of sheets or mats made from a variety of materials in various sizes. A timber mat consists of large timbers bolted or cabled together. Corduroy roads, which are not considered to be construction mats, are cut trees and/or saplings with the crowns and branches removed, and the trunks lined up next to one another. Corduroy roads are typically installed as permanent structures. Like construction mats, they are considered as fill whether they are installed temporarily or permanently.

**Cumulative effects:** See “Direct, secondary, and cumulative effects.”

### **Direct, secondary, and cumulative effects:**

Direct Effects: The loss of aquatic ecosystem within the footprint of the discharge of dredged or fill material. Direct effects are caused by the action and occur at the same time and place.

Secondary Effects: These are effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material. Information about secondary effects on aquatic ecosystems shall be considered prior to the time final Section 404 action is taken by permitting authorities. Some examples of secondary effects on an aquatic ecosystem are a) aquatic areas drained, flooded, fragmented, or mechanically cleared, b) fluctuating water levels in all impoundment and downstream associated with the operation of a dam, c) septic tank leaching and surface runoff from residential or commercial developments on fill, and d) leachate and runoff from a sanitary landfill located in waters of the U.S. See 40 CFR 230.11(h).

Cumulative Effects: The changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual 1) discharges of dredged or fill material, or 2) structures. Although the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems. See 40 CFR 230(g).

### **Dredging:**

Maintenance Dredging: Includes areas and depths previously authorized by the Corps and dredged. The Corps may require proof of authorization. Maintenance dredging typically refers to the routine removal of accumulated sediment from channel beds to maintain the design depths of navigation channels, harbors, marinas, boat launches and port facilities. Routine maintenance dredging is conducted regularly for navigational purposes (typically at least once every ten years) and does not include any expansion of the previously dredged area or depth. The Corps may review a maintenance dredging activity as new dredging if sufficient time has elapsed to allow for the colonization of SAS,

shellfish, etc. The main characteristics of maintenance dredging projects are variable quantities of material; soft, uncompacted soil; contaminant content possible; thin layers of material; occurring in navigation channels and harbors; repetitive activity

**New Dredging:** Dredging of an area or to a depth that has never been authorized by the Corps or dredged.

**Dredged material & discharge of dredged material:** These are defined at 323.2(c) and (d). The term dredged material means material that is excavated or dredged from waters of the U.S.

**Essential Fish Habitat (EFH):** This is broadly defined to include those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

**Fill material & discharge of fill material:** These are defined at 323.2(e) and (f). The term fill material is defined as material placed in waters of the U.S. where the material has the effect of either replacing any portion of a water of the U.S. with dry land or changing the bottom elevation of any portion of a water of the U.S.

**Federal anchorages, Federal channels and Federal turning basin:** Refer to Appendix H for those in Maine

**Federal navigation projects (FNPs):** These areas are maintained by the Corps; authorized, constructed and maintained on the premise that they will be accessible and available to all on equal terms; and are comprised of Federal Anchorages, Federal Channels and Federal Turning Basins. The buffer zone is equal to three times the authorized depth of a FNP. More information on the following FNPs is provided at [www.nae.usace.army.mil/missions/navigation.aspx](http://www.nae.usace.army.mil/missions/navigation.aspx) >> Navigation Projects.

**Flume:** An open artificial water channel, in the form of a gravity chute, that leads water from a diversion dam or weir completely aside a natural flow. A flume can be used to measure the rate of flow.

**Frac out:** During normal drilling operations, drilling fluid travels up the borehole into a pit. When the borehole becomes obstructed or the pressure becomes too great inside the borehole, the ground fractures and fluid escapes to the surface.

**Independent utility:** A test to determine what constitutes a single and complete non-linear project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

**Individual Permit:** A Department of the Army authorization that is issued following a case-by-case evaluation of a specific structure or work in accordance with the procedures of 33 CFR 322, or a specific project involving the proposed discharge(s) in accordance with the procedures of 33 CFR 323, and in accordance with the procedures of 33 CFR 325 and a determination that the proposed discharge is in the public interest pursuant to 33 CFR 320.

**Maintenance:** Regulations on maintenance are provided at 33 CFR 323.4. The following definitions are applicable:

**Minor deviations:** Deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards, which are necessary to make repair, rehabilitation, or replacement are permitted, provided the adverse environmental effects resulting from such repair, rehabilitation, or replacement are minimal.

**Currently serviceable:** Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

**Marina reconfiguration zone:** A Corps-authorized area in which permittees may rearrange pile-supported structures and floats without additional authorizations. A reconfiguration zone does not grant exclusive privileges to an area or an increase in structure or float area.

**Navigable waters of the U.S.:** See Waters of the U.S. below.

**Overall project:** See "single and complete linear project" below.

**Practicable:** Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

**Permanent impacts:** Permanent impacts means waters of the U.S. that are permanently affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent impacts include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. Temporary impacts include waters of the U.S. that are temporarily filled, flooded, excavated, drained or mechanically cleared because of the regulated activity.

**Pre-construction notification (PCN):** A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by this GP. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of these GPs. A PCN may be voluntarily submitted in cases where PCN is not required and the project proponent wants confirmation that the activity is authorized under this GP.

**Secondary effects:** See “Direct, secondary, and cumulative effects.”

**Single and complete linear project:** A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the U.S. (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for the purposes of this GP. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

The overall project, for purposes of this GP, includes all regulated activities that are reasonably related and necessary to accomplish the project purpose.

**Single and complete non-linear project:** For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. For non-linear projects, the single and complete project must have independent utility (see definition).

**Special aquatic sites:** These include inland and saltmarsh wetlands, mud flats, vegetated shallows, sanctuaries and refuges, coral reefs, and riffle and pool complexes. These are defined at 40 CFR 230 Subpart E.

**Stream channelization:** The manipulation of a stream’s course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

**Temporary impacts:** See permanent impacts above.

**Utility line:** Any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term ‘utility line’ does not include activities that drain a water of the U.S., such as drainage tile or French drains, but it does apply to pipes conveying drainage from another area.

**Vegetated shallows:** Permanently inundated areas that under normal circumstances support communities of rooted aquatic vegetation, such as eelgrass and widgeon grass (*Ruppiamaritima*) in marine systems (doesn’t include salt marsh) as well as a number of freshwater species in rivers and lakes. Note: These areas are also commonly referred to as submerged aquatic vegetation (SAV).

**Vernal pools (VPs):** For the purposes of this GP, VPs are depressional wetland basins that typically go dry in most years and may contain inlets or outlets, typically of intermittent flow. Vernal pools range in both size and depth depending upon landscape position and parent material(s). Pools usually

support one or more of the following obligate indicator species: wood frog, spotted salamander, blue-spotted salamander, marbled salamander, Jefferson's salamander and fairy shrimp. However, they should preclude sustainable populations of predatory fish.

VP areas are:

- Depression (includes the VP depression up to the spring or fall high water mark, and includes any vegetation growing within the depression),
- Envelope (area within 100 feet of the VP depression's edge), and
- Critical terrestrial habitat (area within 100-750 feet of the VP depression's edge).

Note: See footnote to GC 23. The Corps may determine during the PCN review that a waterbody should not be designated as a VP based on available evidence.

**Water diversions:** Water diversions are activities such as bypass pumping (e.g., "dam and pump") or water withdrawals. Temporary flume pipes, culverts or cofferdams where normal flows are maintained within the stream boundary's confines aren't water diversions. "Normal flows" are defined as no change in flow from pre-project conditions.

**Weir:** A barrier across a river designed to alter the flow characteristics. In most cases, weirs take the form of a barrier, smaller than most conventional dams, across a river that causes water to pool behind the structure (not unlike a dam) and allows water to flow over the top. Weirs are commonly used to alter the flow regime of the river, prevent flooding, measure discharge and help render a river navigable.

**Waters of the U.S. & Waters of the United States (U.S.):** The term waters of the U.S. and all other terms relating to the geographic scope of jurisdiction are defined at 33 CFR 328. Also see Section 502(7) of the Federal CWA [33 USC 1352(7)]. Waters of the U.S. include jurisdictional wetlands. Not all waters and wetlands are jurisdictional. Contact the Corps with any questions regarding jurisdiction.

**Navigable waters:** Refer to 33 CFR 329. These waters include the following federally designated navigable waters in New England. This list represents only those waterbodies for which affirmative determinations have been made; absence from this list should not be taken as an indication that the waterbody is not navigable:

ME: All tidal waters; Kennebec River to Moosehead Lake; Penobscot River to the confluence of the East and West Branch at Medway, Maine; Lake Umbagog within the State of Maine.

## Appendix G: Additional References

### 1. GC 2: Federal Jurisdictional Boundaries.

(a) Corps Wetlands Delineation Manual, regional supplements, and Corps Wetland Delineation Data Sheets: [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) and then “Wetlands and Jurisdictional Limits.”

(b) The USFWS publishes the 1988 National List of Plant Species that Occur in Wetlands

([www.nwi.fws.gov](http://www.nwi.fws.gov)).

The Natural Resources Conservation Service (NRCS) publishes the current hydric soil definition, criteria and lists: <http://soils.usda.gov/use/hydric>. For the Field Indicators for Identifying Hydric Soils in N.E., see [www.neiwpc.org/hydricsoils.asp](http://www.neiwpc.org/hydricsoils.asp).

### 2. GC 5: Single and Complete Project.

*Single and complete project* means the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. For example, if construction of a residential development affects several different areas of a headwater or isolated water, or several different headwaters or isolated waters, the cumulative total of all filled areas should be the basis for deciding whether or not the project will be covered by Category 1 or 2.

The *Independent utility* test is used to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

### 3. GC 8: Threatened and Endangered Species.

(a) The following NMFS site must be referenced to ensure that listed species or critical habitat are not present in the action area [GC 8(b)] or to provide information on federally-listed species or habitat [GC 8(e)]: [www.nero.noaa.gov/prot\\_res/esp/ListE&Tspec.pdf](http://www.nero.noaa.gov/prot_res/esp/ListE&Tspec.pdf). Contact the USFWS for information to check for the presence of listed species (see Appendix D for contact information & procedures).

(b) The Endangered Species Act Consultation Handbook – Procedures for Conducting Section 7 Consultations and Conferences, defines action area as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. [50 CFR 402.02].”

### 4. GC 42: Essential Fish Habitat.

As part of the GP screening process, the Corps may coordinate with NMFS in accordance with the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act to protect and conserve the habitat of marine, estuarine and anadromous finfish, mollusks, and crustaceans. This habitat is termed “Essential Fish Habitat (EFH)”, and is broadly defined to include “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” There are EFH waters throughout inland and coastal waters in Maine. For additional information, see the EFH regulations 50 CFR 600 at [www.nero.noaa.gov/hcd](http://www.nero.noaa.gov/hcd) including the “Guide for EFH Descriptions” at [www.nero.noaa.gov/hcd/list.htm](http://www.nero.noaa.gov/hcd/list.htm). Additional information on the location of EFH can be obtained from NMFS (see Appendix D for contact information).

### 5. GC 4: Avoidance, Minimization and Compensatory Mitigation.

(a) See [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) and then “Mitigation” to view the April 10, 2008 “Final Compensatory Mitigation Rule” (33 CFR 332) and related documents. The Q&A document states: “In order to reduce risk and uncertainty and help ensure that the required compensation is provided, the rule establishes a preference hierarchy for mitigation options. The most preferred option

is mitigation bank credits, which are usually in place before the activity is permitted. In-lieu fee program credits are second in the preference hierarchy, because they may involve larger, more ecologically valuable compensatory mitigation projects as compared to permittee-responsible mitigation. Permittee-responsible mitigation is the third option, with three possible circumstances: (1) conducted under a watershed approach, (2) on-site and in kind, and (3) off-site/out-of-kind.

(b) Compensatory mitigation may take the form of wetland preservation, restoration, enhancement, creation, and/or in lieu fee (ILF) for inclusion into the Natural Resources Mitigation Fund for projects in DEP and LURC territories. Avoidance of wetland impacts will reduce the ILF dollar total for applicants. The ILF compensation program was established to provide applicants with a flexible compensation option over and above traditional permittee responsible compensation projects. See the Maine ILF Agreement at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory), “Mitigation” and then “Maine,” or [www.maine.gov/dep/blwq/docstand/nrpa/ILF\\_and\\_NRCP/index.htm](http://www.maine.gov/dep/blwq/docstand/nrpa/ILF_and_NRCP/index.htm).

## **6. GCs 24, 15, and 43: Invasive Species.**

(a) Information on what are considered “invasive species” is provided in our “Compensatory Mitigation Guidance” document at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under “Mitigation.” The “Invasive Species” section has a reference to our “Invasive Species Control Plan (ISCP) Guidance” document, located at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under “Invasive Species,” which provides information on preparing an ISCP.

(b) The June 2009 “Corps of Engineers Invasive Species Policy” is at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under “Invasive Species” and provides policy, goals and objectives.

## **7. GC 44: Bank Stabilization.**

This generally eliminates bodies of water where the reflected wave energy may interfere with or impact on harbors, marinas, or other developed shore areas. A revetment is sloped and is typically employed to absorb the direct impact of waves more effectively than a vertical seawall. It typically has a less adverse effect on the beach in front of it, abutting properties and wildlife. See the Corps Coastal Engineering Manual [EM 1110-2-1100](http://www.nae.usace.army.mil/missions/regulatory) at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under “Useful Links and Documents” for design and construction guidance.

## **8. GC 45: Stream and Wetland Crossings.**

(a) Projects should be designed and constructed to ensure long-term success using the most recent manual located at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under “Stream and River Continuity,” currently “Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream Crossings, by the U.S. Forest Service.” Section 5.3.3 is of particular importance. Sections 7.5.2.3 Construction Methods and 8.2.11 Stream-Simulation Bed Material Placement both show important steps in the project construction.

(b) For more information on High-Quality Stream Segments and their components see:

i. High-Quality Stream Segments are shown at [www.maine.gov/dep/gis/datamaps](http://www.maine.gov/dep/gis/datamaps).

ii. Class A Waters or Class AA Waters:

[www.mainelegislature.org/legis/statutes/38/title38sec465.html](http://www.mainelegislature.org/legis/statutes/38/title38sec465.html), and

[www.mainelegislature.org/legis/statutes/38/title38sec467.html](http://www.mainelegislature.org/legis/statutes/38/title38sec467.html).

iii. Outstanding river segments [www.mainelegislature.org/legis/statutes/38/title38sec480-P.html](http://www.mainelegislature.org/legis/statutes/38/title38sec480-P.html).

(c) The Massachusetts Dam Removal and the Wetland Regulations offer guidance to evaluate the positive and negative impacts of culvert replacement, including the loss of upstream wetlands, which may be offset by the overall benefits of the river restoration. See

[www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) and then “Stream and River Continuity.”



(d) The ME DOT's document "Waterway and Wildlife Crossing Policy and Design Guide for Aquatic Organism, Wildlife Habitat, and Hydrologic Connectivity," 3rd Edition, July 2008, may be used as guidance to evaluate impacts to aquatic, wildlife and surface water resources when designing, constructing, repairing and maintaining stream crossings. Note: Adherence to this DOT document does not ensure compliance with this GP. Projects must comply with the requirements of this GP including GC 45 and the Corps General Stream Crossing Standards contained therein.

[www.maine.gov/mdot/environmental-office-homepage/fishpassage/3rd%20edition%20-%20merged%20final%20version%207-01-08a1.pdf](http://www.maine.gov/mdot/environmental-office-homepage/fishpassage/3rd%20edition%20-%20merged%20final%20version%207-01-08a1.pdf).

(e) GC 45(f): The Skidder Bridge Fact Sheet at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under "Stream and River Continuity" may be a useful temporary span construction method.

**9. GC 45: Wetland Crossings.** The Maine DEP's crossing standards are at 06-096 DEP, Chapter 305: Permits by Rule, 9 & 10) Crossings (utility lines, pipes and cables).  
[www.maine.gov/dep/blwq/rules/NRPA/2009/305/305\\_effective\\_2009.pdf](http://www.maine.gov/dep/blwq/rules/NRPA/2009/305/305_effective_2009.pdf)

**10. GC 23: Protection of Vernal Pools.**

(a) The state's Significant Wildlife Habitat rules ([Chapter 335](#), Section 9(C) "Habitat management standards for significant vernal pool habitat") are located at

[www.maine.gov/dep/blwq/docstand/nrpapage.htm#rule](http://www.maine.gov/dep/blwq/docstand/nrpapage.htm#rule) under "Rules."

(b) The following documents provide conservation recommendations:

i. Best Development Practices: Conserving pool-breeding amphibians in residential and commercial development in the northeastern U.S., Calhoun and Klemens, 2002. Chapter III, Management Goals and Recommendations, Pages 15 – 26, is particularly relevant. (Available for purchase at [www.maineaudubon.org/resource/index.shtml](http://www.maineaudubon.org/resource/index.shtml) and on Corps website\*.)

ii. Science and Conservation of Vernal Pools in Northeastern North America, Calhoun and deMaynadier, 2008. Chapter 12, Conservation Recommendations section, Page 241, is particularly relevant. (Available for purchase via the internet. Chapter 12 is available on Corps website\*.)

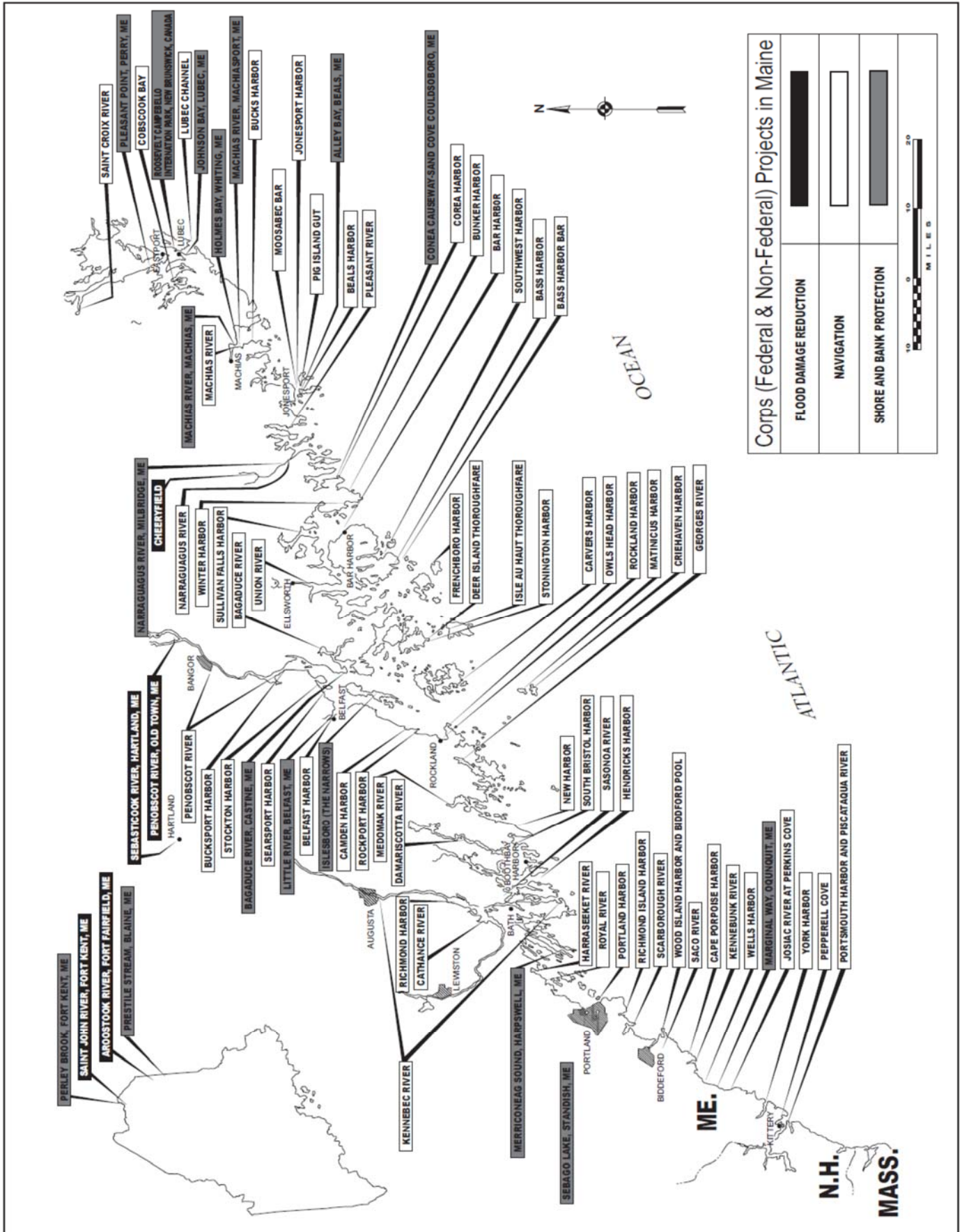
\* [www.nae.usace.army.mil/reg](http://www.nae.usace.army.mil/reg) under "Vernal Pools."

(c) Cape Cod Curbing: For smaller roads and driveways, the most important design feature to consider is curbing. Granite curbs and some traditional curbing can act as a barrier to amphibian and hatchling turtle movements. Large numbers of salamanders have been intercepted in their migrations by curbs and catch basins. Use of Cape Cod curbs rather than traditional curbing may be one solution. Alternatively, where storm water management systems require more traditional curbing, it may be possible to design in escape ramps on either side of each catch basin. Cape Cod curbing is shown on Page 35 of the document cited in 10.b.i above. Bituminous material is not required; other materials such as granite are acceptable.

(d) The VP Directional Buffer Guidance document is located at [www.nae.usace.army.mil/missions/regulatory](http://www.nae.usace.army.mil/missions/regulatory) under: 1) "State General Permits" and then "Maine," and 2) "Vernal Pools."

**11. GC 29: Maintenance.** River restoration projects that are designed to accommodate the natural dynamic tendencies of the fluvial system are maintained in accordance with the project's design objectives (Category 1) or the Corps authorization letter (Category 2). These projects are generally designed to support and implement channel assessment and management practices that recognize a stream's natural dynamic tendencies.

# Appendix H: Federal Navigation Projects in Maine





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