MAINE TURNPIKE AUTHORITY

ADDENDUM NO. 1

CONTRACT 2014.01

PAVEMENT REHABILITATION AND BRIDGE DECK RESURFACING MILE 23.3 TO MILE 30.3

The following changes are made to the Specifications and Plans:

SPECIFICATIONS:

- Remove pages P-3 through P-11 and replace with attached revised P-3 through P-11.
- Remove pages SP-16 and 17 Section 202 and replace with attached Section 202.
- Remove pages SP-25 and 26 Section 205 and replace with attached Section 205.
- Remove subsection 107.1.1 Substantial Completion on page SP-10 and replace with the following.
- Remove pages SP-108 through SP-113 Section 518 and replace with attached Section 518.

107.1.1 Substantial Completion

This Subsection is amended by the addition of the following:

The Resident will be the sole arbitrator as to whether or not substantial completion is met.

Substantially Complete is defined by the Authority as the following:

- All paving and line work has been completed.
- No lane closures, except for demobilization (removal of construction signs and drums, and general clean-up).
- All disturbed slopes have been loamed; seeded, mulched and temporary erosion control blanket has been placed except for the establishment period.
- Guardrail work has been completed.
- All drainage work has been completed.

The interim Substantial Completion date for the Mousam River and Kennebunk River Bridge Deck Repairs shall be May 22, 2014 at 6:00 am. Supplemental liquidated damages on a calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that this

interim Substantial Completion is not achieved for the Mousam River and Kennebunk River Bridge Deck Repairs.

Interim Substantial Completion for the Mousam River and Kennebunk River Bridge Deck Repairs is defined by the Authority as the following:

- All pavement and membrane has been completed.
- All concrete deck and bridge joint modifications are complete. Replacement seals do not have to be in place.
- Phase I and II work areas have been membraned and paved (one lift minimum) as shown on the drawings.
- Three lanes of traffic can traverse the bridges in lanes 1, 2 and 3 as shown in Phase III.
- Temporary Lane Closures, per Appendix A, are only permitted for the removal of temporary striping, installation of final striping and removal of traffic control devices related to the bridge repairs.

Supplemental liquidated damages on a calendar day basis in accordance with Subsection 107.8 shall be assessed for each calendar day that substantial completion is not achieved. Supplemental liquidated damages will continue after the Contract Completion Date if the Contractor is not finished with Contract work. If contract work remains incomplete at the Contract Completion Date, liquidated damages on a calendar day basis in accordance with Maine Turnpike General Provisions Subsection 107.7.2 shall also be assessed for each calendar day that Contract completion is not achieved.

- <u>SECTION 401 HOT MIX ASPHALT PAVEMENT.</u>

Add the following sentence on SP-44, next to last paragraph after "for core density only." <u>The original core density and the recut core density shall be averaged together to determine payment for the sublot.</u>

- Remove 12.5 mm PGAB CONTENT (ARGG) table on SP-46 and replace with attached.

- Remove SECTION 403 HOT BITUMINOUS PAVEMENT SP-51 through SP-53 and replace with attached SECTION 403.

- Remove SECTION 518 STRUCTURAL CONCRETE REPAIRS SP-108 through SP-113 and replace with attached SECTION 518.

- <u>SECTION 627 PAVEMENT MARKINGS</u>

Delete the first paragraph on SP-171 and replace with the following:

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. Groove length and spacing shall be as shown on the contract plans. The groove width for the pavement marking tape shall be the pavement marking tape width plus one (1) inch, with a tolerance of +/- ¼". The groove shall have a depth of 150 mils, +/- 20 mils. The groove position shall be a minimum of two (2) inches from the edge of the groove to the longitudinal pavement joint.

PLANS:

Sheet Number D-3:

Detail "Plan – MM 24.0 Culvert";

Add the following notes:

1. Regrade existing side slopes to a 6:1 slope. Match existing side slopes at limits of work and lines and grades of the culvert flared end section.
2. Ensure that existing positive drainage of ditch lines is maintained. Regrade ditch lines as required.
3. Loam, seed, and mulch all disturbed areas.

Detail "Plan – MM 24.0 Culvert";

Center left dimension on detail – change Station Location Dimension to Read "STA. 1130+30".

The following are questions asked at the pre-bid meeting held on February 6, 2014 or submitted to the Maine Turnpike Authority in writing. Answers to the questions are noted. Bidders shall utilize this information in preparing their bid.

Question 1: Is the Authority's intent to be using 70-28 AC for the item 403.2081?
Answer: See Note A on SP-50.

Question 2: Is RAP allowed in the 403.2081 item?
Answer: No.

Question 3: Do the millings for the RAP need to be MDOT classified for the HMA's?
Answer: See Special Provision Section 401 Subsection 401.021 Recycled Asphalt Materials.

Question 4: Are TOMS used on the outside lines on Sheet 27 of 46?
Answer: Yes and the estimated quantity reflects this.

Question 5: Item No. 606.3622 Guardrail Adjust – Double Rail; is this item to include thrie beam double rail or w-beam double rail only? If there is some thrie beam double rail to adjust, how much approximately?

Answer: Item number 606.3622 does NOT include any adjustments to existing thrie beam rail within the contract limits. Only existing W-beam double rail will be adjusted to a height of 30 inches +/- ½ inch.

Question 6: Is an MTV required on the bridges?

Answer: Possibly if the Contractor chooses to use the same mix as the mainline.

Question 7: In reference to Item 518.86 Bridge Joint Header Concrete Replacement, it appears the quantity or unit of measure of this item is incorrect, please verify quantity and provide method of measurement as I could not find one in the specification?

Answer: See attached Specification and attached Proposal Sheet.

Notes: The above items and attached specifications shall be considered as part of the bid submittal.

The total number of pages included with this addendum is 25

All bidders are requested to acknowledge the receipt of the Addendum No. 1 by signing below and faxing this sheet to J. Ryan Leavitt , P.E., Senior Resident Engineer, MTA at 207-878-8613. Bidders are also required to acknowledge receipt of this Addendum No. 1 on Page P-12 of the bid package.

_____
Business Name

_____
Print Name and Title

_____
Signature

_____
Date

February 7, 2014

Very truly yours,
MAINE TURNPIKE AUTHORITY

_____
Nathanial Carll
Purchasing Manager
Maine Turnpike Authority

SCHEDULE OF BID PRICES
CONTRACT NO. 2014.01
Pavement Rehabilitation and Bridge Deck Resurfacing
Mile 23.3 to Mile 30.3
Base Bid

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
202.202	Removing Pavement Surface - Mainline	Square Yard	308,243				
202.2021	Removing Pavement Surface - Bridge Deck	Square Yard	4,990				
202.2022	Removing Pavement Surface - Full Depth	Square Yard	907				
202.2023	Removing Pavement Surface - Partial Depth	Square Yard	135				
202.2026	Removing Pavement Surface - Drainage Paths	Square Foot	2,500				
202.206	Removing Rumble Strips	Linear Foot	8,190				
203.20	Common Excavation	Cubic Yard	20				
203.241	Common Borrow, Truck Measure	Cubic Yard	135				
205.51	Widening of Existing Shoulder	Linear Foot	1,490				
403.207	Hot Mix Asphalt, 19 mm Nominal Maximum Size	Ton	460				
403.208	Hot Mix Asphalt, 12.5mm Nominal Maximum Size	Ton	246				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
				BROUGHT FORWARD:			
403.2081	Hot Mix Asphalt, 12.5mm Nominal Maximum Size - Bridge Deck	Ton	639				
403.211	Hot Mix Asphalt, Shimming	Ton	130				
409.15	Bituminous Tack Coat - Applied	Gallon	9,327				
409.151	Bituminous Tack Coat - Applied, Bridge	Gallon	274				
419.30	Full Depth Bituminous Sawcut	Linear Foot	1,490				
459.06	Bituminous Concrete Waterway - Type I	Each	6				
459.061	Bituminous Concrete Waterway - Type II	Each	36				
502.701	Bridge Drain Grate Modification	Each	8				
502.81	Installation of Plastic Deck Drains	Each	26				
503.171	Corroded Reinforcing Steel - Repair Per Detail 1	Each	30				
503.172	Corroded Reinforcing Steel - Repair Per Detail 2	Each	30				
507.095	Aluminum Bridge Railing - Splice Modification	Each	52				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
508.141	High Performance Waterproofing Membrane (4,990. SY)	Lump Sum	1				
514.06	Curing Box for Concrete Cylinders	Each	1				
518.391	Repairing Granite Curb Joint and Bedding Mortar	Linear Foot	1,140				
518.80	Partial Depth Concrete Deck Repairs	Square Foot	2,095				
518.81	Full Depth Concrete Deck Repairs	Square Foot	15				
518.86	Bridge Joint Header Concrete Replacement	Square Foot	320				
520.2221	Mousam River - Install New Locking Compression Seals	Linear Foot	254				
520.2223	Mousam River - Modify Existing Gland Seal Joint Armor	Linear Foot	119				
520.23	Asphaltic Plug Joint	Linear Foot	119				
526.306	Temporary Concrete Barrier, Type I - Supplied by Authority (1,820. LF)	Lump Sum	1				
527.341	Work Zone Crash Cushion - TL-3	Unit	4				
603.155	12 inch Reinforced Concrete Pipe - Class III	Linear Foot	27				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
				BROUGHT FORWARD:			
603.247	54 inch Reinforced Concrete Flared End-Class III	Each	1				
603.28	Concrete Collar	Each	1				
604.184	Rebuild Catch Basin to Grade - Type II	Each	2				
604.186	Rebuild Catch Basin to Grade - Type IV	Each	34				
604.242	Catch Basin Type F-3	Each	2				
604.40	Secure Catch Basin Grate	Each	6				
606.1721	Thrie Beam Bridge Attachment - Type I	Each	1				
606.1723	Thrie Beam Bridge Attachment - Type III	Each	1				
606.1725	Bridge Transition - Type III Modification, Shoulder	Each	5				
606.178	Guardrail Beam	Linear Foot	525				
606.24	Guardrail Type 3d Single Rail	Linear Foot	1,925				
606.2652	Terminal End - Remove and Stack	Each	11				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
				BROUGHT FORWARD:			
606.278	Terminal End - Anchored End	Each	13				
606.279	Terminal End - Anchored End, Thrie Beam	Each	4				
606.352	Reflectorized Beam Guardrail Delineator	Each	560				
606.353	Delineator Post	Each	100				
606.354	Delineator Post - Remove and Reset	Each	5				
606.355	Delineator Post - Remove and Stack	Each	74				
606.3621	Guardrail Adjust - Single Rail	Linear Foot	15,115				
606.3622	Guardrail Adjust - Double Rail	Linear Foot	33,875				
606.3631	Guardrail - Remove and Stack	Linear Foot	100				
606.471	Single Offset Block - W Beam	Each	426				
606.472	Single Offset Block - Thrie Beam	Each	10				
606.48	Single Galvanized Steel Post	Each	140				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
606.481	Single Galvanized Steel Post - Thrie Beam	Each	10				
606.701	Asymmetrical Thrie Beam Transition	Each	6				
606.754	Widen Shoulder for Guardrail 350 Flared Terminal	Each	1				
606.80	Guardrail - 350 Fleat Terminal	Each	1				
606.81	Guardrail - 350 SKT Lite Terminal	Each	1				
609.191	Concrete Curbing Type 2	Linear Foot	13				
610.08	Plain Rip Rap	Cubic Yard	10				
613.319	Erosion Control Blanket	Square Yard	2,352				
615.07	Loam	Cubic Yard	141				
618.1401	Seeding Method Number 2, Plan Quantity	Unit	32				
619.1201	Mulch, Plan Quantity	Unit	32				
619.1202	Temporary Mulch	Lump Sum	1				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
				BROUGHT FORWARD:			
620.58	Erosion Control Geotextile	Square Yard	15				
627.18	12 Inch Solid White Pavement Marking Line	Linear Foot	4,540				
627.712	White or Yellow Pavement Marking Line	Linear Foot	146,200				
627.713	Broken White Pavement Marking Line	Linear Foot	146,200				
627.73	Temporary 6 inch Pavement Marking Tape	Linear Foot	3,700				
627.761	Temporary Pavement Marking Line, Yellow or White	Linear Foot	357,600				
627.77	Removing Existing Pavement Markings	Square Foot	49,200				
627.812	Temporary Raised Pavement Markers	Each	7,068				
627.94	Pavement Marking Tape	Linear Foot	5,485				
627.941	Pavement Marking Tape - Dotted White Lane Line	Linear Foot	723				
629.05	Hand Labor, Straight Time	Hour	200				
631.10	Air Compressor (including operator)	Hour	100				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
				BROUGHT FORWARD:			
631.11	Air Tool (including operator)	Hour	180				
631.12	All Purpose Excavator (including operator)	Hour	40				
631.172	Truck - Large (including operator)	Hour	40				
631.36	Foreman	Hour	110				
631.40	Welder (Including Operator)	Hour	30				
645.105	Remove and Stack Sign	Each	1				
645.109	Remove and Reset Sign	Each	1				
652.30	Flashing Arrow	Each	6				
652.312	Type III Barricades	Each	16				
652.3311	Drum, Mill and Fill	Lump Sum	1				
652.35	Construction Signs	Square Foot	6,050				
652.3611	Maintenance of Traffic Control Devices, Mill and Fill	Lump Sum	1				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
				BROUGHT FORWARD:			
652.3911	Maintenance of Traffic Control Devices, Bridge	Lump Sum	1				
652.41	Portable - Changeable Message Sign	Each	3				
652.411	Portable - Changeable Message Sign with Radar Unit	Each	3				
652.45	Truck Mounted Attenuator	Cal. Day	80	$100	00	$8000	00
656.50	Baled Hay, in place	Each	50				
656.632	30 inch Temporary Silt Fence	Linear Foot	1,300				
				BASE BID TOTAL:			

	Item Desciption	Units	Approx. Qty's	Unit Price in Numbers	Bid Amount in Numbers
Bid Alternate #2	403.3011 Hot Mix Asphalt, 12.5 mm (ARGG) - Mill & Fill	Ton	30,299		
Bid Alternate #3	403.2083 Hot Mix Asphalt, 12.5 mm (Polymer Modified) - Mill & Fill	Ton	30,299		
		Total Base Bid +Bid Alt. #2			
		Total Base Bid +Bid Alt. #3			

Contractor must bid on the Base Bid and Bid Alternatives #2 and #3. Basis of award will be Base Bid plus Bid Alternate #2 or Base Bid plus Bid Alternate #3 as determined by the Maine Turnpike Authority. The Authority may choose the lowest Base Bid plus Bid Alternate #2 even if there is a lower Base Bid plus Bid Alternate #3.

SPECIAL PROVISION

SECTION 202

REMOVING STRUCTURES AND OBSTRUCTIONS

(Removing Pavement Surface)

202.01 Description

The following sentences are added:

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

This work shall also consist of removing bituminous concrete overlay and membrane on the Mousam River and Kennebunk River bridge decks to the depth, width, grade, and cross section as shown on the Plans or as directed by the Resident.

This work shall also consist of removing the bituminous concrete pavement (Partial Depth) in all locations to a depth, width, grade listed below or as directed by the Resident.

MM 24. SB lanes 1, 2 and 3----20 feet in length 2 inches deep.
MM 24, NB lane 1----20 feet in length 2 inches deep.
MM 30, NB lane 3----20 feet in length 2 inches deep.

The 2 inch mill shall be replaced with Item 403.207.

This work shall also consist of removing the bituminous concrete pavement (Full Depth) in all locations to the depth, width, grade, and cross section as shown on the Plans or as directed by the Resident. The work shall also include the removal of gravel material to a depth that permits the placement of the proposed bituminous pavement.

This work shall also consist of construction of temporary ramps at all butt joints as shown on the Plans or as approved by the Resident.

202.031 Removing Existing Bituminous Pavement and Concrete Wearing Surface from Bridges

The following is added:

The Contractor shall remove the remaining bituminous overlay and membrane from the Mousam River and Kennebunk River bridge decks using equipment, such as an excavator or loader, approved by the Resident. The use of a milling machine will not be permitted on the Mousam River and Kennebunk River bridge decks. The finished deck surface shall be acceptable to the high performance membrane manufacturer and installer. Extreme care shall be taken to

avoid damaging the existing structural concrete deck. All existing deck concrete 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, shall be a power-operated milling machine or planer capable of removing the bituminous concrete pavement to the required depth. The milling machine shall be capable of accurately establishing profile grades by referencing from a floating straight edge, minimum of 30± feet, for controlling cross slope elevations. The equipment shall also have an effective means for removing excess material from the surface and preventing accidents from flying material in compliance with Subsection 105.2.5, Safety and Convenience of the Public, of the Specification.

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

The Contractor shall be responsible for the layout of the longitudinal centerline between the travel lane and passing lanes. The control points to establish this line will be furnished by the Authority.

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

Name of Facility	Mile Marker	Cubic Yards
Kennebunk Maintenance	Mile 25.3 NB	300

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

202.07 Method of Measurement

The second paragraph is deleted and replaced with the following:

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

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

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

The removal of existing bituminous concrete pavement - full depth 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 facility 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.

Removal of existing bridge deck waterproof membrane will not be measured separately for payment, but shall be incidental to the Removing Pavement Surface – Bridge Deck pay item.

202.08 Basis of Payment

The second paragraph is deleted and replaced with the following:

Removing bituminous concrete wearing surface – bridge deck will be paid for at the unit price per square yard regardless of which method is used. Removing bituminous concrete wearing surface bridge decks will be measured for payment only once regardless of the number of activities and operations required for removal. This price shall be full compensation for removing and disposing of the bituminous and membrane waterproofing materials.

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

Removing pavement surface – partial depth will be paid for at unit price per square yard which price shall be full compensation for removing and disposing of the bituminous materials.

Removing pavement surface – full depth will be paid for at unit price per square yard which price shall be full compensation for removing and disposing of the bituminous and gravel materials

Payment will be made under:

Pay Item		Pay Unit
202.202	Removing Pavement Surface - Mainline	Square Yard
202.2021	Removing Pavement Surface – Bridge Deck	Square Yard
202.2022	Removing Pavement Surface – Full Depth	Square Yard
202.2023	Removing Pavement Surface – Partial Depth	Square Yard

SPECIAL PROVISION

SECTION 205

SHOULDER RECONSTRUCTION

(Widening of Existing Shoulder)

205.01 Description

The following paragraph is added:

This work shall consist of widening existing outside shoulders in areas of proposed single rail guardrail, or as approved by the Resident. The widening shall be done by excavating, furnishing, placing, grading and compacting aggregate subbase course gravel, granular borrow, common borrow, loam, seed, mulch and asphalt grindings in accordance with the thickness and typical sections shown on the Plans.

The following Subsections are added:

205.021 Granular Borrow

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

205.022 Fill Material

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

205.023 Asphalt Grindings

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

205.024 Aggregate Subbase Course-Gravel

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

205.0511 Compaction - Asphalt Grindings

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

205.06 Method of Measurement

The following sentence is added:

The quantity of widening of existing shoulder measured for payment will be per linear foot at locations noted on the Plans.

205.11 Basis of Payment

The following paragraph is added:

The accepted quantity of Widening Existing Shoulder will be paid for at the Contract unit price per linear foot which shall include the asphalt grindings, excavation, aggregate subbase course gravel, granular borrow, loam, seed and mulch. Common Borrow will be measured in accordance with Section 203 of these Specifications.

Payment will be made under:

Pay Item		Pay Unit
205.51	Widening of Existing Shoulder	Linear Feet

Remove 12.5 mm PGAB CONTENT (ARGG) table on SP-46 and replace with following.

12.5 mm PGAB CONTENT(ARGG)	
% PGAB	% PAYMENT
JMF Aim ± 0.5	100
JMF Aim + 0.51 , - 0.51	95
JMF Aim + 0.6 , - 0.6	85
JMF Aim + 0.7 , - 0.7	75
JMF Aim + 0.8 , - 0.8	50
Note: PGAB content is based on samples tested at the plant for each 500 Ton sublot	

SPECIAL PROVISION

SECTION 403

HOT BITUMINOUS PAVEMENT

403.01 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 320. The required PGAB shall be a storage-stable, preblended, homogeneous, polymer modified asphalt binder that meets PG 64E-28 grading requirements in AASHTO MP-19.

Polymer-Modified

The RTFOT (AASHTO T 240) residue of the polymer modified PGAB shall be tested by the Contractor according to ASTM D 6084 and have a minimum elastic recovery value of 60% at a test temperature of 25 °C. The Contractor shall provide the Authority with documentation and test results from the asphalt binder provider showing that the polymer modified PGAB meets the requirements of this special provision. The base asphalt binder PGAB shall be unmodified and meet a **PG 58-28** to **PG 64-28** grading. The Authority may take an informational samples of the polymer modified PGAB at any time to evaluate its elastic recovery value.

403.03 Construction

All areas which have been milled or overlaid shall have a minimum 29 foot temporary ramp constructed 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 control points to establish this line will be furnished by the Authority.

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

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 pavement with (up to) 15% RAP, placed as a wearing surface will be measured under Item 403.2083 Hot Mix Asphalt, 12.5 mm (Polymer Modified) - Mill and Fill.

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 403.2083 Hot Mix Asphalt, 12.5 mm (Polymer Modified) – Mill and Fill.

The following pay items are added:

Pay Item		Pay Unit
403.2083	Hot Mix Asphalt, 12.5 mm (Polymer Modified) – Mill and Fill	Ton

SPECIAL PROVISION

SECTION 518

STRUCTURAL CONCRETE REPAIR

(Abutment Repairs)
(Pier Repairs)
(Fascia and Overhang Repairs)
(Partial Depth Concrete Deck Repairs)
(Full Depth Concrete Deck Repairs)
(Bridge Joint Header Concrete Replacement)

518.01 Description

The following paragraphs are added:

The work includes abutment repairs, pier repairs, fascia and overhang repairs, partial and full depth concrete deck repairs, bridge joint header concrete replacement as described below.

- Abutment repairs include concrete surface repairs on all deteriorated horizontal, vertical and overhead abutment and wingwall surfaces as shown on the Plans or identified by the Resident.

- Pier Repairs include concrete surface repairs on all deteriorated horizontal, vertical and overhead pier surfaces as shown on the Plans or identified by the Resident.

- Fascia and overhang repairs are repairs on all deteriorated vertical and overhead fascia and overhang surfaces on the superstructure less than 7.9 inches in depth that are shown on the Plans or identified by the Resident.

- Partial depth concrete deck repairs are repairs on all deteriorated horizontal deck surfaces less than 4.9 inches in depth as shown on the Plans or identified by the Resident.

- Full depth concrete deck repairs are repairs on deteriorated deck surfaces greater than 4.9 inches in depth as shown on the Plans or identified by the Resident. Full depth concrete deck repairs shall be scheduled and coordinated with the Authority.

- Bridge joint header concrete replacement is the mass removal of existing header concrete, subsequent cleaning of the existing reinforcing steel, installation of new reinforcing steel, placement of bonding agents; and forming, placing, curing, and finishing concrete materials, to a minimum depth of 6 inches or per the details shown on the Plans or identified by the Resident.

The work shall also include the removal of all tectyl (bituminous) coating on the backwalls, bridge seats and breastwalls of the existing bridge structures. This work shall occur prior to the start of the abutment concrete repairs so the Resident may identify additional areas requiring repair.

The work shall also include providing the Resident safe access to the bridge pier shafts and hammerheads for sounding of the existing concrete; and providing safe access to the bridge fascia and overhangs for sounding of the existing concrete. This work shall occur prior to the start of pier and fascia overhang concrete repairs so the Resident may identify additional areas requiring repair.

518.03 Repair Materials is re-designated as Subsection 518.02 Repair Materials.

Paragraphs 1-3 and the Coarse Aggregate Gradation Designation/ Thickness of Placement Table of Section 518.03 Repair Materials are deleted and replaced with the following:

A patching material from the appropriate list provided below may be used instead of concrete for concrete patching at the Contractor's option, provided the manufacturer's published recommendations are met (Note: Not all products are suitable for all depth of placements.). All materials used for repair of concrete or reinforcing steel shall meet the applicable requirements of Division 700 as specified in the Standard Specification Sections 502 and 503 respectively. When concrete is used as the repair material, it shall conform to the requirements of Table 1 of Subsection 502.05 for Class AAA Concrete except that the minimum cement factor shall be **750 pounds** per cubic yard. Concrete mix shall be selected at 1,200 psi above design strength of 4,500 psi. The coarse aggregate size shall conform to ASTM C33 Grading 7.

Materials for non-emergency deck patching, and formed vertical and overhead deck repairs, shall be one of the following:

MTA - AAA modified concrete – transit mixed or mixed on site,
Sikacrete 211, as manufactured by Sika Corporation, 201 Polito Avenue, Lakehurst, NJ 07011
SikaRepair 222 extended with aggregate, as manufactured by Sika Corporation, 201 Polito Avenue, Lakehurst, NJ 07011
BASF LA40 Repair Mortar, as manufactured by BASF Corporation, 889 Valley Park Drive, Shakopee, MN 55379
Civil Structural FPX, as manufactured by Dayton Superior Corporation, 1125 Byers Road, Miamisburg, OH 45342

or an approved proprietary, non-fast setting, shrinkage compensated patching material, manufactured or extended with stone, with the following published properties:

Compressive strength @ 24 hours – less than 3500 psi
Compressive strength @ 28 days – less than 7500 psi
Minimum bond strength @ 28 days – 1500 psi

Note: Rapid-setting high early strength materials are not permitted.

Materials for non-emergency, un-formed vertical and overhead deck repairs shall be one of the following:

SikaTop 123 Plus as manufactured by Sika Corporation, 201 Polito Avenue, Lakehurst, NJ 07011.
SikaRepair 223, as manufactured by Sika Corporation, 201 Polito Avenue, Lakehurst, NJ 07011
Zero-C Vertical Overhead Mortar, as manufactured by BASF Corporation Systems, 889 Valley Park Drive, Shakopee, MN, 55379.
Verticoat Supreme as manufactured by The Euclid Chemical Company, 19218 Redwood Rd., Cleveland, OH, 44110

Materials for emergency deck patching (non-overhead only) may be selected from the Maine Department of Transportation's Qualified Products List for concrete patching materials.

The second sentence in subsection 518.03.1 is revised to read:

"The bonding material shall consist of the following, except that, in the case where an approved proprietary material is used in the repair areas, the manufacturer's published recommendations regarding application and use of bonding materials shall take precedence:"

518.03 Removal of Unsound Concrete

Paragraph 4 item b) is revised to read:
"b) To the minimum depth required per the manufacturer's recommendation, but not less than 1 inch behind the top mat of reinforcing steel, when an approved proprietary material is used."

Paragraph 4 item c) is deleted and not replaced.

Paragraph 4 item d) is revised to read:
"d) To a minimum depth of 1 inch behind the top mat of reinforcing steel."

The following paragraphs are added:

Care shall be taken during the demolition process to ensure the integrity of the surrounding concrete is maintained. The Contractor shall use great care to avoid damaging the existing reinforcing steel during the demolition process. Existing reinforcing steel damaged during the demolition process shall be repaired or replaced by a method approved by the Resident, at no additional cost to the Authority.

All unsound concrete and other material removed shall be disposed of outside the limits of the turnpike right-of-way. 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 Chapter 404 of the Maine Department of Environmental Protection Solid Waste Regulations.

The following Subsection is added:

518.031 Bearing Areas for Superstructure Metal

The Contractor's attention is directed to the fact that the removal of unsound concrete may be immediately adjacent to the structural bearing parts of the steel stringers and may involve removal of unsound concrete under the existing masonry plate.

The Contractor shall submit, a minimum of two (2) weeks prior to the start of work, his proposed method of temporary support which will list the type and size of the proposed members, details of construction, load capacity calculations, and a sequence of operations, all to be made and stamped by a Professional Engineer registered in the State of Maine. Temporary structural supports may bear on the adjacent bridge seat area, backwall or ground.

518.04 Reinforcing Steel

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

All existing reinforcing steel exposed by concrete removal which is to remain in the structure, shall be thoroughly cleaned by sandblasting to an SSPC-SP-6, supplemented by chipping hammers or other means as necessary so that the surfaces are free of rust, scale, mortar and other foreign material, and reasonably free of shadows. The sandblast shall be applied at an angle to the bars so that the embedded steel shall be free of rust and other foreign material to 100 percent of its circumferences. Once the existing reinforcement is cleaned, and prior to casting the repair, all new and existing reinforcing steel shall be coated with an approved epoxy bonding agent. The elapsed time between sandblasting application of the approved epoxy bonding agent shall be a reasonable minimum.

The following paragraphs are added to the end of this Subsection:

Where approved by the Resident, exposed reinforcement shall be depressed to provide 1-1/2 inch clear cover of concrete over the top bars. Minimum clear distance under the bottom of reinforcement bars for horizontal repairs, behind reinforcement bars on vertical repairs, and over the top of reinforcement bars on overhead surfaces shall meet the requirements of Subsection 518.03. Epoxy coated reinforcing support chairs shall be provided by the Contractor to support the bars in their specified location. Bars protruding from sound concrete adjacent to a repair area shall be bent up or down within the repair area to obtain the required minimum clear cover.

New reinforcing steel for the bridge joint header concrete replacement shall be epoxy coated. At the Contractors option the longitudinal reinforcing between construction phases may be spliced using drilled and grouted lap splices, splice bar couplers, or dowel splice bars.

518.07 Placing Repair Materials

The following is added after the first paragraph:

All vertical and overhead repair areas shall be formed over the entire surface with quick erecting forms approved by the Resident. The forms shall be held securely in place and be able to

withstand the hydrostatic pressure of the fluid concrete of the height to which it is to be placed. Forms shall be built such that the resulting repair will duplicate the original lines of the concrete removed. Form faces shall be of new finished plywood or steel, or other smooth surface as approved by the Resident prior to use. Forms will be provided with a top chute, at a maximum spacing of four feet, for providing a compression head of concrete in the form. The overfilled area shall be struck-off flush when forms are removed. Forms shall be placed snugly against the surface of the old concrete at the edges of the patch and shall extend beyond the edges at least three inches. They shall not deflect under the placement of the fresh concrete. Vertical surface repair forms shall remain in place a minimum of 48-hours.

All proposed bearing pads and bearing pad repairs shall be cast monolithically with the abutment repair concrete.

The following paragraphs are added to the end of this Subsection:

Modified Class AAA Concrete may be transit mixed or mixed on-site. The concrete shall be placed in accordance with the provisions of Section 502 except that the pre-plasticized slump shall not exceed three inches. Materials shall be batched by weight. The concrete shall be pumped or hand shoveled into the forms. Internal mechanical vibrators shall be of an approved design and of a size suitable to the work at hand. External vibrators attached to the forms will be permitted if requested, subject to the results obtained. The amount of vibration shall be guided by results obtained from previous placements.

If the concrete cannot be placed satisfactorily, as determined by the Resident, superplasticizers shall be added to the mix as approved by the Resident and at no additional cost to the Authority. After removal of the forms, the concrete shall be smooth rubbed and wet cured and given a smooth rubbed finish.

518.10 Method of Measurement

The sixth paragraph is deleted and not replaced.

The following paragraphs are added:

The quantity of Abutment Repairs, Pier Repairs, Fascia and Overhang Repairs, Partial Depth Concrete Deck Repairs, Full Depth Concrete Deck Repairs, and Bridge Joint Header Concrete Replacement will be measured by the square foot and shall be computed as the sum of the products of the average length and width of each area repaired.

Removal of all tectyl (bituminous) coating from existing abutments will not be measured separately for payment, but shall be incidental to the Repair items.

Providing safe access for the Resident to sound existing pier shaft and hammerhead concrete, and fascia and overhang concrete will not be measured separately for payment, but shall be incidental to the Repair items.

Fabrication and placement of reinforcing steel for concrete repairs will not be measured for payment separately, but shall be considered incidental to the related contract items.

Temporary supports for supporting steel girders for concrete repairs will not be paid separately, but shall be incidental to the Repair item.

Earth excavation required to expose repair areas will be paid for under Structural Earth Excavation, Item 206.081. Backfill of the repair areas will not be measured separately for payment, but shall be incidental to the Structural Earth Excavation item.

518.11 Basis of Payment

The following paragraphs are added:

Abutment Repairs, Pier Repairs, Fascia and Overhang Repairs, Partial Depth Concrete Deck Repairs, Full Depth Concrete Deck Repairs, and Bridge Joint Header Concrete Replacement will be paid for at the Contract unit bid price per square foot for each type of repair; which price shall include, but not necessarily be limited to, removal and disposal of materials; cleaning existing concrete and reinforcing steel; furnishing and placing new reinforcing steel where required; furnishing, placing and removal of forms, staging, temporary supports where required; placing, curing and finishing new concrete; and, all materials, labor, equipment, tools and incidentals necessary to complete the work.

Payment will be made under:

Pay Item		Pay Unit
518.10	Abutment Repairs	Square Foot
518.20	Pier Repairs	Square Foot
518.75	Fascia and Overhang Repairs	Square Foot
518.80	Partial Depth Concrete Deck Repairs	Square Foot
518.81	Full Depth Concrete Deck Repairs	Square Foot
518.86	Bridge Joint Header Concrete Replacement	Square Foot

Maine Turnpike Authority
Contract 2014.01
February 6, 2014 @ 3:00pm
Pavement Rehabilitation and Bridge Deck Resurfacing MM 23.3 to MM 30.3

PREBID

Please Print

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