

# STATE OF MAINE DEPARTMENT OF TRANSPORTATION 16 STATE HOUSE STATION AUGUSTA, MAINE 04333-0016

DAVID A. COLE

COMMISSIONER

February 23, 2009 Subject: I-295, Brunswick to West Gardiner Federal Project Nos. IM-1511(450)E & IM-1598(400)E State Pin Nos.015114.50 & 015984.00 Amendment No. 2

Dear Sir/Ms:

Make the following changes to the Bid Documents:

In the Bid Book, after page 36, **INSERT** the attached "SPECIAL PROVISION, SECTION 104, GENERAL RIGHTS AND RESPONSIBILITIES, (Electronic Payroll Submission)".

In the Bid Book (pages 115 through 117), **REMOVE** "SPECIAL PROVISION, DIVISION 400, PAVEMENTS, (Hot Mix Asphalt Pavement Longitudinal Joint Construction)", 3 pages dated January 28, 2009 and **REPLACE** with the attached new "SPECIAL PROVISION, DIVISION 400, PAVEMENTS, (Hot Mix Asphalt Pavement Longitudinal Joint Construction)", 3 pages dated February 19, 2009.

In the Bid Book (pages 127 and 128), **REMOVE** "SPECIAL PROVISION, SECTION 403, HOT MIX ASPHALT OVERLAY" (Mill and Overlay), 2 pages dated January 27, 2009 and **REPLACE** with the attached new "SPECIAL PROVISION, SECTION 403, HOT MIX ASPHALT OVERLAY" (Mill and Overlay), 2 pages dated February 19, 2009.

In the Bid Book (pages 134 through 139), **REMOVE** "SPECIAL PROVISION, SECTION 410, CHIP SEAL, (ASPHALT-RUBBER SURFACE TREATMENT WITH AGGREGRATE COVER)" 6 pages dated January 24, 2009 and **REPLACE** with the attached new "SPECIAL PROVISION, SECTION 410, CHIP SEAL, (ASPHALT-RUBBER SURFACE TREATMENT WITH AGGREGRATE COVER)" 6 pages dated 19 February, 2009.

The following question has been received:

**Question:** Plan Sheet 7 of 55 gives 5 locations for guardrail to be placed back to back. Is this intended to be double rail or is it temporary?

**Response:** The sections of guardrail in question are located in the median and are intended to protect both northbound and southbound traffic. This work will be paid under item 606.24 with no further compensation.



**Question:** The plans call for 3/8" anchor plate on the bridge connection; shouldn't it be a 5/8" galvanized plate? 5/8" plate usually goes on the outside of concrete, 3/8" non-galvanized usually goes on the inside with 7/8 bolts welded on.

Response: Yes, it should be 5/8" thick.

**Question:** Bid Item 410.25 spec. calls for it not to be laid before May 15<sup>th</sup> and at 50 degrees and rising. Would the Department consider changing the start date and using 40 degrees and rising for the temperature if it would be covered with shim before any traffic travels on it?

Response: See the attached Special Provision, Section 410.

**Question:** The spec's call for no night paving on the surface course, while another section of the spec's say that within 1500' of the toll booth must be done at night. Please clarify.

**Response:** All surface pavements will be done during daylight hours except any paving within 1500' of the toll booth unless otherwise authorized by the Maine Turnpike Authority.

**Question:** Do any of the ramps receive item # 410.25?

Response: No

**Question:** Will the surface center line joint be required to be trimmed before the other lane is paved on the sections of road that have live traffic on them?

Response: Yes

Question: Please define the word "infrared"?

**Response:** See the new attached Special Provision, Division 400, page 3.

Question: Can the pavement joints on the lower 2 lifts be heated with propane?

Response: No

**Question:** Is there a pay item for the 975 feet where "stations listed require guardrail beam placed back to back for protection of southbound traffic"?

**Response:** The sections of guardrail in question are located in the median and are intended to protect both northbound and southbound traffic. This work will be paid under item 606.24 with no further compensation.

**Question:** Division 400, page 2 of 3 states that the milling centerpoint joint will be paid under 2020.202. There is no item 2020.202 in the Schedule of Items. Is this item suppose to be in the Schedule or was it intended to be 202.202?

Response: See the new attached Special Provision, Division 400.

**Question:** Will asphalt adjustment be made for the Performance Graded Binder used in item 410.25?

Response: No

Consider these changes and information prior to submitting your bid on February 25, 2009.

Sincerely,

Scott Bickford

Contracts & Specifications Engineer

## SPECIAL PROVISION <u>SECTION 104</u> GENERAL RIGHTS AND RESPONSIBILITIES

(Electronic Payroll Submission)

<u>104.3.8.1 Electronic Payroll Submission</u> The prime contractor and all subcontractors and lower-tier subcontractors will submit their certified payrolls electronically on this contract utilizing the Elation System web based reporting. There is no charge to the contracting community for the use of this service. The successful contractor will receive detailed instruction on the use of this system to pass onto their subcontractors.

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### SPECIAL PROVISION <u>DIVISION 400</u> PAVEMENTS

(Hot Mix Asphalt Pavement Longitudinal Joint Construction)

<u>Description</u> This work shall consist of furnishing all labor, equipment and materials necessary to trim, clean, heat, seal, and compact hot mix asphalt mixtures used to construct longitudinal and transverse bituminous concrete pavement joints. All bituminous materials are to be thoroughly compacted during the construction of bituminous pavement courses.

The asphalt rubber joint sealer shall be used where specified to seal the longitudinal construction joint in the 12.5mm polymer modified (PGAB 70-28 or 76-28) intermediate base and surface course, to adhere the adjoining HMA materials together.

The Contractor shall utilize infrared technology to heat the base course longitudinal joint immediately before being matched with the adjoining material.

#### CONSTRUCTION REQUIREMENTS

#### 2.0 Joint Construction

<u>2.1 Transverse Joints</u> The Contractor shall construct wearing course transverse joints in such a manner that minimum tolerances shown in Section 401.101 - Surface Tolerances are met when measured with a straightedge.

The paver shall maintain a uniform head of HMA during transverse joint construction.

The HMA shall be free of segregation and meet the temperature requirements outlined in section 401.04. All joints shall be straight and neatly trimmed. The Contractor may form a vertical face exposing the full depth of the course by inserting a header, by breaking the bond with the underlying course, or by cutting back with hand tools.

<u>2.2 Longitudinal Joints</u> Longitudinal joints shall be generally straight to the line of travel, and constructed in a manner that best ensure joint integrity. Methods or activities that prove detrimental to the construction of straight, sound longitudinal joints will be discontinued.

On Contracts requiring multiple lifts or courses, the width of the individual lifts shall be arranged such that the centerline longitudinal joints of each successive lift are offset from the previous lift approximately 150mm (6 inch).

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<u>2.22 Surface and Intermediate Course</u> On the top two lifts/courses of pavement under this contract, or when the Department directs, the Contractor shall pave a minimum of 3" and a maximum of 6" over the proposed centerline on the first pass and then shall cut or mill the pavement back to the proposed centerline prior to placing the second pass. Prior to placing the second lift, the contractor shall cut or mill the pavement back to the proposed centerline and the joint shall be a neat, even and vertical joint that is straight. The Department will not permit broken or raveled edges and joints that are not straight.

All construction joints shall be swept or blown free of loose material, dirt, and other debris. Material removed from the joint shall be removed from the pavement surface by means of a power sweeper or appropriate hand tools as required. Joints shall additionally be cleaned by appropriate hand tools if contaminants remain on the face. All debris and water shall be removed to enhance adhesion of the crack sealing material.

On the surface and intermediate course, or as otherwise outlined in the contract, the Contractor shall apply a coating of Low Modulus Asphalt Joint Sealer, as per Special Provision 424) to the vertical face of the course being matched, except for those formed by pavers operating in echelon.

The Department will pay for all Hot Mix Asphalt Pavement under the appropriate pay item, all pavement cutting or milling under Item 202.202 and all Joint Sealing under Item 424.3333. All other costs of work necessary for the preparation of joints is incidental to related contract pay items.

The final longitudinal joint in the traveled way surface course of two lane roadways shall be at the centerline, and at the lane widths shown in the plans on roadways with more than two lanes.

<u>2.23 Base Courses</u> On base mix courses, not in the top two lifts/courses, the Contractor shall apply a coating of emulsified asphalt, or PGAB 64-28 asphalt to the vertical face and 3 in of the adjacent portion of any pavement being overlaid, except for those formed by pavers operating in echelon.

In areas of bridge approaches and underpasses the base courses shall be placed wide enough to allow the joint to be constructed and or to be trimmed prior to placing the pavement course in the other lane or as directed by the Department.

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The Contractor shall utilize infrared technology consisting of one or more low-level radiant energy heaters (energy in the form of high-frequency electromagnetic waves), or microwave infrared-type heaters to heat and soften the HMA pavement prior to compaction of the longitudinal joint. The heaters shall not generate excessive smoke when the units pass over areas of new or previously paved material. Infrared equipment shall be thermostatically controlled to provide a uniform, consistent temperature increase within a 200-325 F degree range.

- 3.0 Alternatives The Contractor shall submit a detailed plan to the Department for the construction of sound longitudinal joints. The detailed plan shall address the manner in which centerline control will be established, the placement of all courses, action plan to correct deficiencies in alignment, thickness, or soundness of the joint materials, methods of trimming and removal of the required excess materials, and methods of compaction of the longitudinal joints. Innovative methods, such as specialized joint construction screed modifications, infrared technology, or echelon paving may be allowed by the Department. Once approved, this plan will become part of the QCP, and be subject to penalties outlined in section 106- Quality.
- 4.0 Research The contractor shall cut cores on centerline at a rate of 1/2000' on the top two lifts/courses of Hot Mix Asphalt Pavement. The cores shall be cut either the day of or the day after pavement has been placed. The cores will become property of the Department and will be tested as Research. The results will be shared with the contractor and the results may be used in decision making by the Department and contractor on how best to proceed with constructing joints.

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### SPECIAL PROVISION SECTION 403 HOT MIX ASPHALT OVERLAY

Desc. of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes		
Sta. 1674+20 to 478+00								
1 1/2" Mill and Fill HMA Resurface								
<u>Travel and Passing Lanes</u>								
Base	12.5mm	403.2131	N/A	11/2"	1	1,5,7,12		
Sta. 1674+20 to 478+00 1½" Overlay								
HMA Resurface Travel and Passing Lanes								
***	10.5		ssing Lane Sho			1 7 7 10 00		
Wearing	12.5mm	403.2081	N/A	1½"	1	1,5,7,12,22		
Sta. 1674+20 to 478+00 1½" Overlay HMA Resurface Travel Lane Shoulders								
and Guardrail Shoulders								
Wearing	12.5mm	403.208	N/A	1½"	1	5,7,12		
3" HMA Guardrail widening								
Wearing	12.5 mm	403.208	N/A	1½"	1	5,7,12		
<u>Wearing</u>	12.5 mm	403.213	N/A	1½"	1	5,7,12		
Overlay and Miscellaneous Areas								
Shim	9.5 mm	403.211	N/A	variable	1	2,4,7,11		

#### **COMPLEMENTARY NOTES**

- 1. The required PGAB for this mixture will meet a <u>PG 70-28</u> to <u>PG 76-28</u> grading. The use of Recycled Asphalt Pavement (RAP) <u>will not</u> be permitted in mixtures utilizing modified PGAB's.
- 2. The density requirements are waived.
- 4. The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations.**
- 5. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **75 gyrations**.
- 7. Section 106.6 Acceptance, (1) Method A.
- 10. Section 106.6 Acceptance, (2) Method D.
- 11. A "FINE" 9.5 mm mix with a gradation above or through the restricted zone shall be used for this item

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- 12. A "**Fine**" 12.5mm mixture with a gradation above or through the restricted zone shall be used for this item.
- 22. The final pavement surface shall be evaluated for smoothness in accordance with Special Provision section 402 Pavement Smoothness dated 1-27-09. Acceptance limits shall be as outlined under the **Level 1** classification.

#### Tack Coat

A tack coat of emulsified asphalt, RS-1 or HFMS-1, Item #409.15 shall be applied to any existing pavement at a rate of approximately 0.025 G/SY, and on milled pavement approximately 0.05 G/SY, prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim / intermediate course and the surface course, at a rate not to exceed 0.025 G/SY.

Tack used between layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

### SPECIAL PROVISION <u>SECTION 410</u> CHIP SEAL

(ASPHALT-RUBBER SURFACE TREATMENT WITH AGGREGATE COVER)

<u>Description</u> The Contractor shall furnish and place one or more courses of Asphalt Rubber Surface Treatment with Aggregate Cover on an approved base in accordance with the Contract Documents and in reasonably close conformity with the lines, grades, and thicknesses and typical sections shown on the plans or otherwise established in the field. References to Standard Specifications, Special Provisions, or other documents, shall be determined as the most current version available at the time of bid.

#### 1.0 MATERIALS

- 1.1 <u>Performance graded binder</u> Performance graded binder for the asphalt-rubber mixture shall be PG 58-28 OR PG 64-28 conforming to the requirements of AASHTO M 320, Section 700 Materials: 702.01 Asphalt Cement, and 703.07 Aggregates for HMA Pavement. The grade selected shall be based on laboratory testing by the asphalt-rubber supplier.
- 1.2 <u>Anti-stripping Agent</u> If required by the job-mix formula to produce appropriate water resistance, an anti-stripping agent that is heat stable and approved for use by the Department shall be incorporated into the asphalt-rubber material at the dosage required by the job-mix formula (up to 1.0% by weight of asphalt). It shall be added to the asphalt cement prior to blending with the granulated rubber.
- 1.3 <u>Rubber</u> The granulated rubber shall be vulcanized rubber product from the ambient temperature processing of scrap, pneumatic tires. The granulated rubber shall meet the following gradations: No substitutions will be accepted.

Sieve Size	% Passing
2.00 mm, [#10]	100
1.18 mm, [#16]	90 – 100
0.60 mm, [#30]	25 – 75
0.18 mm, [#80]	0 - 20

The use of rubber of multiple types from multiple sources is acceptable provided that the overall blend of rubber meets the gradation requirements. The length of the individual rubber particles shall not exceed 3 mm, [1/8"]. The rubber shall be accepted by certification from the rubber supplier.

1.4 <u>Aggregate</u> The aggregate shall be of quarried stone and conform to the requirements of Section 703.07 Aggregates for HMA Pavements. Crushed gravel stone will not be permitted. Percentage of wear as determined by the Los Angeles Abrasion Test (AASHTO-T96) shall be a maximum of 30. The aggregate shall be pre-heated to a temperature between 93°C and 149°C, [200°F and 300°F], and be pre-coated with 0.4% to 0.8% (by weight of aggregate) of PG 64-28, or PG 58-28 prior to application. It is required that the gradation of the aggregate shall meet the following limits:

Sieve Size	<u>% Passing – Nominal Size</u>	
	12.5 mm, [1/2"]	
15.8 mm, [5/8"]	100%	
12.5 mm, [1/2"]	85-100%	
9.5 mm, [3/8"]	15 – 60%	
4.75 mm, [#4]	0 – 15%	
2.36 mm, [#8]	0 – 5%	
0.30 mm, [#50]	0 - 2%	
0.075 mm, [#200]	0 - 2%	

1.5 <u>Materials Testing</u> A minimum of 60 days prior to construction the Maine DOT or contractor (if asphalt-rubber supplier is acting as a sub-contractor) shall send a representative sample of the Performance graded binder and the aggregate proposed for use to the asphalt-rubber supplier for testing. Testing for stripping and asphalt content will be performed to assure that appropriate characteristics are achieved when blended with the granulated rubber.

#### 2.0 ASPHALT-RUBBER MIXING AND REACTION

2.1 <u>Mixing and Reaction</u> The percent of rubber shall be a minimum of 15% by weight of total asphalt-rubber mixture. The exact granulated rubber content shall be determined by the mix design submitted by the asphalt-rubber supplier based on laboratory testing.

The temperature of the asphalt shall be between 177°C and 218°C, [350°F and 425°F], at the time of addition of the granulated reclaimed rubber. The asphalt and rubber shall be combined and mixed together in a blender unit and reacted for a minimum of one hour. The temperature of the asphalt-rubber mixture shall be above 163°C, [325°F], during the reaction period.

- 2.2 <u>Delays</u> If a job delay occurs after full reaction, the asphalt-rubber asphalt blend may be allowed to cool. The asphalt-rubber shall be reheated slowly in the tank just prior to application, but not to a temperature exceeding 204°C, [400°F]. An additional quantity of granulated rubber or additive not exceeding 3% by volume of the hot asphalt-rubber mixture will be added after reheating.
- 2.3 <u>Viscosity</u> Each load of blended asphalt-rubber shall be tested by the supplier using a Haake type field viscometer. The viscosity of the final product shall be in the range of 1,500 to 5,000 centipoise.

#### 3.0 EQUIPMENT

3.1 <u>Mechanical Blender</u> A mechanical blender for proper proportioning and thorough mixing of the asphalt-cement and granulated rubber is required. This unit shall be equipped with: an asphalt totaling meter (liters or gallons); a flow rate meter (liters per minute or gallons per minute); a positive displacement auger to feed the rubber properly to mixing chamber at the specified rate; and a static motionless mixer. Blender will have a separate asphalt cement feed pump and finished product pump to maximize production. Blender shall be capable of providing 100% proportional mix at any given time during the blending cycle and documentation from the manufacturer, supporting this, shall be submitted to the Maine DOT if requested.

3.2 <u>Distributor Truck</u> On projects exceeding 31.8 metric tons, [35 tons], of liquid asphalt rubber, at least two pressure-type bituminous distributor trucks in good condition will be required. The distributor shall be equipped with an internal heating device capable of heating the material evenly up to 218°C, [425° F]; an internal mixing unit capable of maintaining a proper mixture of asphalt cement and granulated rubber; have adequate pump capacity to maintain a high rate of circulation in the tank and to spray the asphalt-rubber at a viscosity of 1,000 to 3,500 centipoise; have adequate pressure devices and suitable manifolds to provide constant positive cut-off to prevent dripping from the nozzles. Distributor shall be equipped with an electronically controlled computerized compensation unit for controlling application rates at various width and speed changes. The application unit shall have electronic controls and a digital read out installed and operated from the inside of the cab of the distributor. The distribution bar on the distributor shall be fully circulating. Any distributor that produces a streaked or irregular distribution of the material shall be promptly repaired or removed from the project.

Distributor equipment shall include a tachometer, pressure gauges, volume measuring devices, and a thermometer for reading temperature of tank contents. Controls for spray bar shall be located in cab of truck, for controlling width and rate of spray of product. It shall be so constructed that uniform applications may be made at the specified rate per square meter with a tolerance of plus or minus 0.2 liters per square meter, [0.05 gal. / Sq. Yd].

3.3 <u>Hauling Equipment</u> Trucks for hauling cover material shall be rear discharge conveyor-fed or "live bottom" trucks and shall be equipped with a device to lock onto the hitch at the rear of the chip spreader to prevent aggregate spillage.

Sufficient hauling vehicles will be available to ensure continuous operation of the distributor and chip spreader.

- 3.4 <u>Aggregate Spreader</u> The aggregate spreader shall be hydrostatically driven and self propelled. It must be equipped with a hydraulically controlled variable adjustable head that is capable of spreading stone in widths from 1.4 to 5.4 meters, [4.5 to 18 feet]. The spreader shall be mounted on pneumatic tires, and shall apply the stone on the road surface in a manner that ensures that the tires do not contact the road surface until after the stone has been applied. The unit shall be equipped with an electronic radar type sensor used to measure ground speed and will automatically adjust the stone application rate depending on width of application and the speed of chip spreader. It shall have the ability to apply stone on any grade from 0 6%. The spreader shall be equipped with an integral hopper with a minimum capacity of 4.5 metric tons, [5 tons], of stone which shall be filled by trucks in a manner which ensures that the truck tires never come in contact with asphalt treated road surfaces until the stone has been properly applied. To maintain constant stone application, a self-locking truck hitch will permit towing of aggregate trucks without stopping the chip spreader. It will be capable of maintaining positive engagement over irregular terrain.
- 3.5 <u>Pneumatic-Tired Roller</u> Two (2) self-propelled, multiple wheel, pneumatic-tired rollers shall be used and shall weigh between 6.5 and 10.9 metric tons, [7 and 12 tons], each roller shall have a total compacting width of at least 1.4 meters, [56 inches], have a minimum tire pressure of 414 kPa, [60 psi], and be equipped with a watering system.

3.6 <u>Steel-Wheel Roller</u> One (1) self-propelled, 2-axle (tandem) steel-wheel roller shall be used and shall weigh between 7.3 and 10.9 metric tons, [8 and 12 tons], and be equipped with scrapers, wetting pads and watering system. Combination pneumatic and steel drum-type rollers are acceptable, as one unit only.

#### 4.0 CONSTRUCTION PROCEDURES

4.1 <u>Preparation</u> Potholes, other areas of pavement failure, and major depressions in the existing pavement surface shall be repaired under the appropriate contract items. A leveling course shall be placed on planed, milled, or existing surface under the appropriate contract items, if required.

Immediately prior to application of the asphalt-rubber, the surface shall be thoroughly cleaned by sweeping. Contractor shall be responsible for covering all utility irons just prior to application and uncovering after aggregate is spread.

- 4.2 <u>Seasonal, Weather and other Limitations</u> The asphalt-rubber shall not be applied prior to <u>April 20<sup>th</sup></u>, or after the Saturday following September 15<sup>th</sup>, or when weather conditions are unfavorable to obtaining a uniform spread. Construction shall proceed only when the atmospheric temperature is at least <u>45°F</u>, and rising. Absolutely No water shall be present on the road surface. Traffic and construction equipment will not be allowed to travel on the Asphalt-Rubber Surface Treatment with Aggregate Cover. The contractor shall apply the shim layer/course (Item 403.211) with in three calendar days of placing the Asphalt-Rubber Surface Treatment with Aggregate Cover.
- 4.3 <u>Application</u> The asphalt-rubber mixture shall be applied at a temperature of 170° to 215°C, [338°F to 419°F], at a rate of 2.5 to 2.9 liters per square meter, [0.55 to 0.65 gallons per square yard]. Exact rate to be determined by the aggregate gradation, traffic volume and pavement condition. The asphalt-rubber shall not be spread further in advance of the aggregate spread than can be immediately covered.

Longitudinal joints shall be reasonably true to line and parallel to centerline. Where any construction joint occurs, the edges shall be broomed back and blended so there are no gaps and the elevations are the same, and free from ridges and depressions. Longitudinal joints shall be overlapped from 10.2 to 15.2 centimeters, [4 to 6 inches].

During application, adequate provision shall be made to prevent marring and discoloration of adjacent pavements, structures, vehicles, foliage or personal property. The Contractor shall provide a person to continuously monitor the application of the asphalt-rubber. This person shall have an unobstructed view of the spray bar at all times, and shall be responsible for assuring a uniform application of the asphalt-rubber material.

4.4 <u>Aggregate Application</u> The application of aggregate shall follow as close as possible behind the application of the hot asphalt-rubber. Construction equipment or other vehicles shall not drive on the uncovered asphalt-rubber. The hot-precoated aggregate shall be spread uniformly by a self-propelled spreader at a rate of spread directed by the Agency, generally between 16.3 to 21.7 kilograms per square meter, [30 to 40 lb/yd²]. Any deficient areas shall be covered with additional material.

4.5 <u>Rolling</u> A minimum of three (3) rollers shall be used for aggregate compaction into the hot asphalt-rubber. Two rollers must be pneumatic-tired and one must be steel-wheel unless otherwise directed by the Department.

Rolling shall commence immediately following the spreading of the aggregate. There shall be at least three coverages by the pneumatic-tired rollers to embed the aggregate particles firmly into the asphalt-rubber. A coverage shall be as many passes as are necessary to cover the entire width being spread with a pass being one movement of a roller in either direction. Additional coverage of the steel-wheel roller will follow. Water shall be applied to the tires or wheels as required to limit sticking of the asphalt-rubber and aggregate to the rollers.

4.6 <u>Sweeping</u> When the maximum amount of aggregate has been embedded into the asphalt-rubber and the pavement has cooled, all loose material shall be swept or otherwise removed. This will be done at a time and in a manner which, will not displace any embedded aggregate or damage the asphalt-rubber. Pre and post sweeping is the responsibility of the Prime Contractor. Your bid form shows this as an option

#### 5.0 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

5.1 <u>Acceptance</u> Material acceptance shall be in accordance with Section 401.203 - Testing Method C. The Lot size will be the entire production for the project. Sublot sizes shall be 30,000 square yards for gradation properties, with unanticipated over-runs of up to 1650 square yards rolled into the last sublot. The minimum number of sublots per Lot for gradation properties shall be 4.

TABLE 4: ACCEPTANCE CRITERIA

PROPERTIES	POINT OF SAMPLING	TEST METHOD
Gradation	Stockpile	AASHTO T27

TABLE 7: METHOD C ACCEPTANCE LIMITS

Property	USL and LSL	
Passing 4.75 mm and larger sieves	Target +/-7%	
Passing 2.36 mm to 1.18 mm sieves	Target +/-4%	
Passing 0.60 mm	Target +/-3%	
Passing 0.30 mm to 0.075 mm sieve	Target +/-2%	

5.2 <u>Pay Adjustment</u> The Department will sample, test, and evaluate aggregate in accordance with Section 106 - Quality and Section 401.20 - Acceptance, of Division 400 – Pavements. The Department will use the sieve sizes listed in this specification for the type of aggregate represented in the JMF.

The Department will determine a pay factor using Table 7: Method C Acceptance Limits. The Department will calculate the price adjustment for Mixture Properties as follows:

PA = (% Passing Nom. Max PF-1.0)(Q)(P)X0.05+(% passing 2.36 mm PF-1.0)(Q)(P)X0.05+(% passing 0.30 mm PF-1.0)(Q)(P)X0.05+(% passing 0.075 mm PF-1.0)(Q)(P)X0.10

- 5.3 <u>Method of Measurement</u> The Department will measure Asphalt Rubber Surface Treatment with Aggregate Cover (Chip Seal) by the square the yard. Payment will be for the actual number of square yards applied in accordance with the typicals and Standard Specifications Section 109 Measurement and Payment. Payment shall be full compensation for all labor, materials and equipment required to complete the work in accordance with these specifications.
- 5.4 <u>Basis of Payment</u> The Department will pay for the Work, in place and accepted, in accordance with the applicable sections of this Special Provision, at the contract unit price per square yard applied.

Payment will be made under:

Pay Item Pay Unit

410.25 Asphalt-Rubber Surface Treatment With Aggregate Cover Square Meter [square yard]