

**ATTACHMENT 13**

**Asphalt Mix Group Specifications #945**

**IFB #23291**

State of New York Executive Department  
**Office of General Services**  
**Procurement Services**  
 Corning Tower - 38<sup>th</sup> Floor  
 Empire State Plaza  
 Albany, NY 12242

**GROUP SPECIFICATION**

<b>COMMODITY GROUP</b> 31502 - 31503  BITUMINOUS CONCRETE - ASPHALT MIX	<b>DATE OF ISSUE</b>	October 20, 2022
	<b>NO. OF PAGES</b>	8
	<b>SPECIFICATION NO.</b> 945 (Supersedes SPEC- 943 dated August 13, 2020)	

**BIDDERS ARE REQUESTED TO RETAIN THIS SPECIFICATION FOR FUTURE REFERENCE**

**Table of Contents**

**GENERAL INFORMATION.....3**

**MATERIALS: .....3**

**QUALITY ADJUSTMENT FACTOR (QAF) (QUALITY UNITS): .....3**

**GROUP SPECIFICATIONS.....4**

**GENERAL: .....4**

**ASPHALT CONCRETE PAVEMENT WITH CRUSHED GLASS.....5**

        SCOPE:.....5

        MATERIAL REQUIREMENTS: .....5

        CONSTRUCTION DETAILS: .....5

        METHOD OF MEASUREMENT: .....5

        BASIS OF PAYMENT:.....5

**MISCELLANEOUS ASPHALT MIX PATCHING MATERIALS .....6**

        SCOPE.....6

        DESCRIPTION.....6

        MATERIALS.....6

        CONSTRUCTION DETAILS .....9

        METHOD OF MEASUREMENT .....9

        BASIS OF PAYMENT.....9

**GENERAL INFORMATION**

**MATERIALS:**

The following are the material descriptions of items that may be included in IFB's and contracts derived from this specification, the Standard Specification Section 404 – Asphalt Pavements:

<u>Item</u>	<u>Material Description</u>
302.01	Bituminous Stabilized Course
404.03810218	Miscellaneous Patching F1, Asphalt Mix
404.03820218	Miscellaneous Patching F2, Asphalt Mix
404.03830218	Miscellaneous Patching F3, Asphalt Mix
404.03890218	Miscellaneous Patching F9, Asphalt Mix
404.017901	Truing & Leveling F9, Asphalt, 70 Series Compaction
404.018901	Truing & Leveling F9, Asphalt, 80 Series Compaction
404.058901	Shim Course F9, Asphalt
404.068101	6.3 F1, Top Course Asphalt, 80 Series Compaction
404.068201	6.3 F2, Top Course Asphalt, 80 Series Compaction
404.068301	6.3 F3, Top Course Asphalt, 80 Series Compaction
404.098101	9.5 F1, Top Course Asphalt, 80 Series Compaction
404.098201	9.5 F2, Top Course Asphalt, 80 Series Compaction
404.098301	9.5 F3, Top Course Asphalt, 80 Series Compaction
404.128101	12.5 F1, Top Course Asphalt, 80 Series Compaction
404.128201	12.5 F2, Top Course Asphalt, 80 Series Compaction
404.128301	12.5 F3, Top Course Asphalt, 80 Series Compaction
404.198901	19.0 F9, Binder Course Asphalt, 80 Series Compaction
404.258901	25.0 F9, Binder Course Asphalt, 80 Series Compaction

**QUALITY ADJUSTMENT FACTOR (QAF) (Quality Units):**

The Quality Adjustment Factor will be 1.0 for all material produced under resultant contract for any agency other than the New York State Department of Transportation.

The following Quality Unit Index prices are from the latest Engineering Bulletin publication and will apply to material produced under resultant contracts for the New York State Department of Transportation:

<u>Region</u>	<u>Index Price (\$/Quality Unit)</u>
1	\$75
2	\$75
3	\$65
4	\$85
5	\$85
6	\$70
7	\$70
8	\$105
9	\$75
10	\$125
11	\$145

## **GROUP SPECIFICATIONS**

### **GENERAL:**

All plant mixed Asphalt items shall be furnished in accordance with Sections 401, and 404 of the New York State Department of Transportation Standard Specifications with the effective date of January 1, 2023, Construction and Materials Methods, including all latest updates.

The current version of the NYSDOT Standard Specifications can be found at:

<https://www.dot.ny.gov/main/business-center/engineering/specifications/updated-standard-specifications-us>;

The latest Materials Method 5.16 found at:

<https://www.dot.ny.gov/divisions/engineering/technical-services/materials-bureau-repository/mm516.pdf> ;

Chapter 6 of the Comprehensive Pavement Design Manual, latest version (Revision 9, dated September 1, 2021) found at:

<https://www.dot.ny.gov/divisions/engineering/design/dqab/cpdm/repository/chapter6.pdf> ; and

(The links listed above are from the NYS Department of Transportation website at [www.dot.ny.gov](http://www.dot.ny.gov)).

References are made herein to New York State Department of Transportation, Standard Specifications with the effective date of January 1, 2023, Construction and Materials, including all updates.

Copies may be obtained through the following links:

<https://www.dot.ny.gov/main/business-center/engineering/specifications/updated-standard-specifications-us>

**GROUP SPECIFICATIONS**

**ASPHALT CONCRETE PAVEMENT WITH CRUSHED GLASS**

**SCOPE:**

This specification covers the requirements for the addition of crushed glass to asphalt concrete mixes. The provisions of Section 401 – Plant Production and Section 404 - Asphalt Pavements applies except that the Contractor has the option of blending crushed glass in the following mixes:

- 37.5 Nominal Max. Size
- 25.0 Nominal Max. Size
- 19.0 Nominal Max. Size
- Truing and Leveling Course

If the Contractor chooses the crushed glass option, the following modifications to the Standard Specifications shall apply:

**MATERIAL REQUIREMENTS:**

Crushed glass shall be subject to the approval of the Regional Materials Engineer prior to its use. The crushed glass shall contain no more than 1% (by weight) contaminants and shall meet the following gradation:

Sieve Size	Percent Passing
3/8 in.	100
1/4 in.	90-100
No. 20	0-20

Note: The gradation requirements may be modified upon approval of the Regional Materials Engineer.

Crushed glass may be included in the mixture up to 5%, maximum, of the total aggregate weight. The crushed glass, aggregate and added asphalt cement shall meet the requirements specified in Table 401-1, Composition of Hot Mix Asphalt Mixtures and latest MM 5.16, for aggregate gradation, PG binder content, PG binder grade and temperature range.

**CONSTRUCTION DETAILS:**

The crushed glass shall be proportioned from a separate feed bin approved by the Regional Materials Engineer. In addition, all requirements pertaining to aggregate shall apply to crushed glass including the equipment requirements for automatic proportioning and recording stipulated for aggregate in §401-3.08.

**METHOD OF MEASUREMENT:**

The provisions of Section 401-4 shall apply.

**BASIS OF PAYMENT:**

The provisions of Section 404-5 shall apply.

**GROUP SPECIFICATIONS**

**MISCELLANEOUS ASPHALT MIX PATCHING MATERIALS**

**SCOPE**

This specification covers the requirements for Miscellaneous Asphalt patching materials. The requirements of Section 401-Plant Production and Section 404 – Asphalt Pavements shall apply.

**DESCRIPTION**

This work shall consist of developing an asphalt mixture for pothole patching, small pavement repairs, and paver placed patching.

**MATERIALS**

The materials and composition for Miscellaneous Patching mixtures shall meet the requirements specified in §401-2 and §404-2, Materials, except as noted herein.

<b>TABLE 1 - COMPOSITION OF MISCELLANEOUS PATCHING ASPHALT MIX</b>		
<b>Screen Sizes</b>	<b>General Limits % Passing<sup>1</sup></b>	<b>Job Mix Tolerance %<sup>2</sup></b>
<b>1/2 in.</b>	100	-
<b>3/8 in.</b>	95-100	-
<b>1/4 in.</b>	90-100	-
<b>No. 4</b>	67-85	±4
<b>No. 8</b>	35-60	±6
<b>No. 16</b>	24-50	±7
<b>No. 30</b>	12-34	±7
<b>No. 50</b>	6-22	±4
<b>No. 100</b>	3-11	±3
<b>No. 200</b>	2-6	±2
<b>Asphalt Content, %<sup>3,4</sup></b>	6.0 – 8.0	±0.4
<b>HMA Mixing and Placing Temperature Range °F</b>	250-325 <sup>5</sup>	
<b>WMA Mixing and Placing Temperature Range °F</b>	230-295	

Notes:

1. All aggregate percentages are based on the total weight of the aggregate.
2. In no case shall the job mix tolerance fall outside the general limits.
3. The asphalt content is based on the total weight of the mix. When using slag aggregates in the mix, the asphalt content shall be increased accordingly, a minimum of 25 percent for an all slag mix.
4. Use a standard Performance-Graded Binder (PG Binder) appropriate for the county in which the mix shall be used, as specified in Table 6-4 Performance Graded Binder Selection of the Comprehensive Pavement Design Manual (CPDM).
5. The use of a conventional asphalt binder mix is allowed if warm mix modified binder is not available.

**GROUP SPECIFICATIONS**

**MISCELLANEOUS ASPHALT MIX PATCHING MATERIALS (Cont'd)**

Use Table 2, Pay Item Selection Criteria, to select the appropriate friction requirements for the location and type of use for the mixture.

<b>TABLE 2 - PAY ITEM SELECTION CRITERIA</b>			
<b>Use Type</b>	<b>Traffic Volume<sup>2</sup></b>	<b>Location<sup>3</sup></b>	<b>Pay Items</b>
Paver-Placed Patching and Pavement Repairs greater than 10 feet in length <sup>1</sup>	High	Downstate	404.03810218 (Type F1 Conditions)
		Upstate	404.03820218 (Type F2 Conditions)
	Low	Statewide	404.03830218 (Type F3 Conditions)
Pothole Patching and Pavement Repairs 10 feet or less in length <sup>1</sup>	High or Low	Statewide	404.03890218 (Type F9 Conditions)

Notes:

1. Pavement Repair lengths are measured in the longitudinal direction of the roadway.
2. “High Volume” refers to 2- or 3-lane highways with design-year, two-way AADT over 8,000, or for more than three lanes with a two-way AADT over 13,000. “Low Volume” refers to highways with lower volumes for the specified number of lanes.
3. The City of New York and the surrounding counties of Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk, and Westchester are referred to as “Downstate.” All other areas are referred to as “Upstate.”

**A. Coarse Aggregate Type F1 Conditions:** Use one of the following types of coarse aggregate.

1. Sandstone, granite, chert, traprock, ore tailings, slag, or other similar noncarbonate materials.
2. Gravel, or a natural or manufactured blend of the following types of materials: limestone, dolomite, gravel, sandstone, granite, chert, traprock, ore tailings, slag or other similar materials, meeting the following requirements:
  - a. 12.5 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8-inch particles must comprise a minimum of 30.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 90.0% of plus 3/8-inch particles must be non-carbonate.
  - b. 9.5 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8-inch particles must comprise a minimum of 30.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 90.0% of plus No. 4 particles must be non-carbonate.
  - c. 6.3 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus No. 8 particles must comprise a minimum of 30.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 90.0% of plus No. 4 particles must be non- carbonate.

## GROUP SPECIFICATIONS

### MISCELLANEOUS ASPHALT MIX PATCHING MATERIALS (Cont'd)

**B. Coarse Aggregate Type F2 Conditions: Use one of the following types of coarse aggregate.**

1. Limestone, dolomite, or a blend of the two having an acid-insoluble residue content of not less than 20.0%.
2. Sandstone, granite, chert, traprock, ore tailings, slag, or other similar noncarbonate materials.
3. Gravel or a natural or manufactured blend of the following types of materials: limestone, dolomite, gravel, sandstone, granite, chert, traprock, ore tailings, slag, or other similar materials, meeting the following requirements:
  - a. 12.5 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8-inch particles must comprise a minimum of 10.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 20.0% of plus 3/8-inch particles must be noncarbonate.
  - b. 9.5 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8-inch particles must comprise a minimum of 10.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 20.0% of plus No. 4 particles must be noncarbonate.
  - c. 6.3 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus No. 8 particles must comprise a minimum of 10.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 20.0% of plus No. 4 particles must be non-carbonate.

**C. Coarse Aggregate Type F3 Conditions: Use one of the following types of coarse aggregate.**

1. Limestone or a blend of limestone and dolomite having an acid-insoluble residue content of not less than 20.0%.
2. Dolomite.
3. Sandstone, granite, chert, traprock, ore tailings, slag, or other similar noncarbonate materials.
4. Gravel or a natural or manufactured blend of the following types of materials: limestone, dolomite, gravel, sandstone, granite, chert, traprock, ore tailings, slag, or other similar materials, meeting the following requirement:
  - a. 12.5 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8-inch particles must comprise a minimum of 10.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 20.0% of plus 3/8-inch particles must be noncarbonate.
  - b. 9.5 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus 1/8-inch particles must comprise a minimum of 10.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 20.0% of plus No. 4 particles must be noncarbonate.
  - c. 6.3 Nominal Maximum Size Aggregate Mixes. Noncarbonate plus No. 8 particles must comprise a minimum of 10.0% of the total aggregate (by weight with adjustments to equivalent volumes for materials of different specific gravities). A minimum of 20.0% of plus No. 4 particles must be non-carbonate.



**GROUP SPECIFICATIONS**

**MISCELLANEOUS ASPHALT MIX PATCHING MATERIALS (Cont'd)**

**D. Coarse Aggregate Type F9 Conditions**

Use coarse aggregate meeting the requirements of § 703-02, Coarse Aggregate.

**CONSTRUCTION DETAILS**

The provisions of §401-3 and §404-3 Construction Details, shall apply except as noted herein.

Compact the pavement in accordance with 404-3.07 D. 80 Series Compaction Method. Use the same number of passes as for 9.5 Top Pavement Course in Table 404-3, Number of Machine Passes.

**METHOD OF MEASUREMENT**

The provisions of §401-4 and §404-4 Method of Measurement, shall apply. A QAF of 1.00 will be assigned to material meeting the specification requirements as certified by the QCT. A QAF of 0.85 will be assigned to material that fails to meet the specification as tested by the QAT. Quality Units will be determined when there is a disincentive and will be calculated as per §404-4, Method of Measurement.

**BASIS OF PAYMENT**

The provisions of subsection 404-5 Basis of Payment shall apply. Payment will be made under:

<b>ITEM NO</b>	<b>ITEM</b>	<b>PAY UNIT</b>
404.03810218	Miscellaneous Patching F1, Asphalt Mix	Ton
404.03820218	Miscellaneous Patching F2, Asphalt Mix	Ton
404.03830218	Miscellaneous Patching F3, Asphalt Mix	Ton
404.03890218	Miscellaneous Patching F9, Asphalt Mix	Ton

- THE END OF GROUP SPECIFICATION -

-