October 21, 2010

REVISION OF SECTION 703

AGGREGATE FOR STONE MATRIX ASPHALT

**NOTICE**

This is a standard special provision that revises or modifies CDOT’s *Standard Specifications for Road and Bridge Construction.* It has gone through a formal review and approval process and has been issued by CDOT’s Project Development Branch with formal instructions for its use on CDOT construction projects. It is to be used as written without change. Do not use modified versions of this special provision on CDOT construction projects, and do not use this special provision on CDOT projects in a manner other than that specified in the instructions unless such use is first approved by CDOT’s Standards and Specifications Unit. The instructions for use on CDOT construction projects appear below.

Other agencies which use the *Standard Specifications for Road and Bridge Construction* to administer construction projects may use this special provision as appropriate and at their own risk.

**Instructions for use on CDOT construction projects:**

Use on projects having stone matrix asphalt.

October 21, 2010

REVISION OF SECTION 703

AGGREGATE FOR STONE MATRIX ASPHALT

Section 703 of the Standard Specifications is hereby revised for this project as follows:

In subsection 703.04, delete the first paragraph and replace with the following:

703.04 Aggregates for Hot Mix Asphalt. Aggregates for hot plant mix bituminous pavement (HMA) shall be of uniform quality, composed of clean, hard, durable particles of crushed stone, crushed gravel, natural gravel, or crushed slag. Excess of fine material shall be wasted before crushing. For Gradings S, SX, and SG, a percentage of the aggregate retained on the 4.75 mm (No. 4) sieve shall have at least two mechanically induced fractured faces when tested in accordance with Colorado Procedure 45. This percentage will be specified in Table 403-1, as revised for the project in Section 403. The angularity of the fine aggregate shall be a minimum of 45.0 percent when determined according to AASHTO T 304. For HMA and SMA aggregate samples representing each aggregate stockpile shall be non-plastic if the percent of aggregate passing the 2.36 mm (No. 8) sieve is greater than or equal to 10 percent by weight of the individual aggregate sample. Plasticity will be determined in accordance with AASHTO T 90. The material shall not contain clay balls, vegetable matter, or other deleterious substances.

In subsection 703.04 delete the third paragraph and replace with the following:

Aggregates for stone matrix asphalt (SMA) shall be of uniform quality, composed of clean, hard, durable particles of crushed stone, crushed gravel, or crushed slag. A minimum of 90 percent of the particles retained on the 4.75 mm (No. 4) sieve shall have at least two mechanically induced fractured faces when tested in accordance with Colorado Procedure 45. The particles passing the 4.75 mm (No. 4) sieve shall be the product of crushing rock larger than 12.5 mm (½ inch).

In subsection 703.04, delete Table 703-5 and replace with the following:

**Table 703-5**

**Master Range Table for Stone Matrix Asphalt**

|  |  |
| --- | --- |
| **Sieve Size** | **Percent by Weight Passing Square Mesh Sieves** |
| **4.75 mm (#4) nominal** | **9.5 mm (3/8”) nominal** | **12.5 mm (1/2”) nominal** | **19.0 mm (3/4”) nominal** |
| 25 mm (1”) |  |  |  | 100 |
| 19.0 mm (3/4”) |  |  | 100 | 90-100 |
| 12.5 mm (1/2”) | 100 | 100 | 90-100 | 50-88 |
| 9.5 mm (3/8”) | 100 | 90-100 | 50-80 | 25-60 |
| 4.75 mm (#4) | 90-100 | 26-60 | 20-35 | 20-28 |
| 2.36 mm (#8) | 28-65 | 20-28 | 16-24 | 16-24 |
| 1.18mm (#16) | 22-36 |  |  |  |
| 600 µm (#30) | 18-28 | 12-18 | 12-18 | 12-18 |
| 300 µm (#50) | 15-22 | 10-15 |  |  |
| 150 µm (#100) |  |  |  |  |
| 75 µm (#200) | 12-15 | 8-12 | 8-11 | 8-11 |