

**SECTION M.05
PROCESSED AGGREGATE BASE AND
PAVEMENT SURFACE TREATMENT**

M.05.01--Processed Aggregate Base and Pavement: The materials for this work shall conform to the following requirements:

1--Gradation: Coarse and fine aggregates shall be combined and mixed by approved methods so that the resulting material shall conform to the following gradation requirements:

Square Mesh Sieves	Percent Passing by Mass
Pass 63 mm	100
Pass 50 mm	95-100
Pass 19 mm	50-75
Pass 6.3 mm	25-45
Pass 425 μ m	5-20
Pass 150 μ m	2-12

2--Coarse Aggregate: Coarse aggregate shall be either gravel, broken stone or reclaimed miscellaneous aggregate containing no more than 2 percent by mass of asphalt cement, at the option of the Contractor. When tested by means of the Los Angeles Machine, using AASHTO Method T 96, the coarse aggregate shall not have a loss of more than 50 percent.

(a) If gravel is used for the coarse aggregate, it shall consist of sound, tough, durable particles of crushed or uncrushed gravel or a mixture thereof, free from soft, thin, elongated or laminated pieces, lumps of clay, loam and vegetable or other deleterious substances.

(b) If broken stone is used for the coarse aggregate, it shall consist of sound, tough, durable fragments of rock of uniform quality throughout. It shall be free from soft disintegrated pieces, mud, dirt, organic or other injurious material.

(c) If the reclaimed miscellaneous aggregate is used for the coarse aggregate, it shall consist of sound, tough, durable fragments of uniform quality throughout. It shall be free from soft disintegrated pieces, mud, dirt, glass, organic or other injurious material.

(d) Soundness for Gravel, Broken Stone and Reclaimed Miscellaneous Aggregate: When tested by magnesium sulfate solution for soundness using AASHTO Method T104, the coarse aggregate shall show a loss of not more than 15 percent at the end of five cycles.

3--Fine Aggregate: The fine aggregate shall be natural sand, stone sand, screenings or any combination thereof. The fine aggregate shall be limited to material 95 percent of which passes a 4.75 mm sieve having square openings and not more than 8 percent of which passes a 75 μ m sieve. The material shall be free from clay, loam and deleterious materials.

(a) Plasticity: When natural sand is used, the fine aggregate shall conform to the requirements of Article M.02.06-2.

(b) Plasticity: When screenings or any combination of screenings and natural sand or any combination of stone sand and natural sand are used, the following requirements shall apply:

(1) When the fraction of the dry sample passing the 150 μ m mesh sieve is 6 percent or less by mass, no plastic limit test will be made.

(2) When the fraction of the dry sample passing the 150 μ m mesh sieve is greater than 6 percent and not greater than 10 percent by mass, that fraction shall not have sufficient plasticity to permit the performing of the plastic limit test, using AASHTO Method T 90.

(3) When the fraction of the dry sample passing the 150 μ m mesh sieve is greater than 10 percent by mass, the sample shall be washed; and additional material passing the 150 μ m mesh sieve shall be determined by AASHTO Method T

146, except that the 150 µm mesh sieve shall be substituted for the 425 µm mesh sieve where the latter is specified in AASHTO Method T 146. The combined materials that have passed the 150 µm mesh sieve shall not have sufficient plasticity to permit the performing of the plastic limit test using AASHTO Method T 90.

M.05.02--Surface Treatment: Materials for this work shall conform to the following requirements:

1--Bituminous Material: The Bituminous materials shall be selected from the following grades and shall meet the requirements shown in Section M.04.

Asphaltic Cutback	MC-70 or MC-800
Tar	RT-2, RT-4 or RT-6
Asphalt Emulsion	As directed by the Engineer

The type of bituminous material to be used, as well as its viscosity or grade, will depend upon the character and condition of the surface to be treated, the season of the year at which the work is to be done, and will be determined by the Engineer. The Contractor shall not order any material for this work until he has obtained definite instructions from the Engineer as to whether tar, asphalt or asphalt emulsion is required and as to the type of the bituminous material selected.

2--Sand Cover: Sand shall contain not more than 3 percent inorganic silt and clay by actual dry mass, using AASHTO Method T 11 and shall conform to the following gradation requirements:

Square Mesh Sieves	Percent Passing by Mass
Pass 12.5 mm	100
Pass 9.5 mm	95-100
Pass 4.75 mm	80-100
Pass 300 µm	10-30
Pass 150 µm	0-10