

SECTION 802
FINE AGGREGATES

802.04 Bituminous Pavement Fine Aggregate.

Fine aggregate for use in bituminous paving mixtures is defined as aggregate passing the 3/8 inch {9.5 mm} sieve and with a minimum 80 percent passing the No. 4 {4.75 mm} sieve. The aggregate may be natural fine aggregate or manufactured fine aggregate. The fine aggregate shall be non-plastic when tested in accordance with AASHTO T 89, as modified by ALDOT-232, and AASHTO T 90 and shall have a maximum of 1.0 percent clay lumps and friable particles as determined by AASHTO T 112. It shall consist of hard tough grain, free of injurious amounts of clay, loam, or other deleterious substances.

Manufactured fine aggregate shall be the product produced from the crushing of aggregates meeting the requirements of Section 801 and shall have 100 percent passing the 3/8 inch {9.5 mm} sieve with 95 percent of the material retained on the No. 8 {2.36 mm} sieve having at least one freshly fractured face.

Natural fine aggregate is defined as any fine aggregate that is not manufactured fine aggregate. Natural fine aggregate shall be reasonably clean, non-plastic, and uniformly graded sand which shall pass the 3/8 inch {9.5 mm} sieve and not have more than 10 percent passing the No. 200 {75 µm} sieve when tested in accordance with AASHTO T 11 and T 27.

Mineral filler meeting the requirements of Section 805, agricultural limestone, or carbonate stone screenings may be used when additional fines are needed.

802.05 Blank.

802.06 Manufactured Sand for Portland Cement Concrete.

Manufactured sand shall meet all of the requirements for ALDOT #100 concrete sand, Article 802.02, except the requirement of Subitem 802.02(b)1a may be increased to five percent if the material is "Dust of Fracture."

Manufactured sand may be produced from crushing gravel, granite, sandstone, or quartzite which may be used either as a blend with natural sand or as one hundred percent of the total fine aggregate. Gravel used to produce manufactured sand for use in concrete pavement or bridge superstructure concrete (except prestress concrete) shall have a bulk specific gravity greater than 2.550 (AASHTO T 85).

Manufactured sand produced from crushing limestone shall not be used in bridge decks or concrete pavement. However, manufactured limestone sand may be used in prestressed or precast concrete, or cast in place concrete, which will not be exposed to vehicular traffic, if approved by the Engineer.

802.07 Fine Aggregate for White Concrete.

Fine aggregate for white concrete shall be a natural white, washed sand and/or an artificial sand made from white quartz, crushed white limestone, white marble, or white granite and shall contain no discoloring material, clay loam, or other foreign matter. It shall be secured from sources previously tested and approved by the Department for whiteness and light reflecting qualities or by visual comparison shall be, in the opinion of the Engineer, at least as white as the approved standard sample on file in the Engineer's office. Other requirements for this fine aggregate shall conform to Article 802.02, with the gradation requirements in accordance with ALDOT Size No. 106.

802.08 Blank.

802.09 Gradation.

Fine aggregate shall be well graded between the limits specified and the size or sizes designated shall conform to the limits shown in the Fine Aggregate Gradation Table.

TABLE OF ALDOT FINE AGGREGATE SIZES								
Aggregate Size Number	DESCRIPTION	PERCENT PASSING BY WEIGHT {MASS}, SIEVE SIZE ¹						
		3/8 inch {9.5 mm}	No. 4 {4.75 mm}	No. 8 {2.36 mm}	No. 16 {1.18 mm}	No. 50 {300 µm}	No. 100 {150µm}	No. 200 {75µm}
100	Concrete Sand	100	95-100	80-100	50-90	5-30	0-10	
101	Mortar Sand			100		15-40	0-10	
104	Plant Mix Sand	100	80-100					
105	Manufactured Sand	100	95-100		50-80	20-50	10-25	5-12
106	White Concrete Fine Aggregate	100	95-100	75-100	50-90	10-35	5-15	0-5