

TECHNICAL SPECIFICATIONS

ITEM 00320 SINGLE COURSE SURFACE TREATMENT

320.1 Description. This item shall consist of a wearing surface composed of a single application of asphaltic material, covered with aggregate, constructed on a prepared base course or surface in accordance with these specifications.

Single course surface treatment shall not be applied when the air temperature is below 60°F and is falling, but it may be applied when the air temperature is above 50°F and is rising. Air temperature shall be taken in the shade and away from artificial heat. Asphaltic material shall not be placed when general weather conditions, in the opinion of the Engineer, are not suitable.

320.2 Materials. Asphaltic material shall conform to the requirements of Item 300, "Asphalts, Oils and Emulsions", contained in the Texas Department of Transportation's (TxDOT's) "Standard Specifications For Construction of Highways, Streets and Bridges", latest edition. The asphaltic material shall be Grade CRS-1P or CRS-2P. The CRS-2P shall be a rapid setting cationic emulsion for use in placing surface treatments, when the air temperature is 6°F and rising. The CRS-1P shall be a rapid setting cationic emulsion for use in placing surface treatments when the air temperature is between 4°F and 7°F. The emulsion shall break and cure in a reasonable amount of time when the aggregate is applied, regardless of sunlight or humidity conditions. The emulsion supplier shall furnish the Engineer samples of the base asphalt and polymer used in making the finished emulsion, to be tested in accordance with TxDOT Article 300.2.

The aggregate shall be washed crushed limestone and shall consist of angular fragments of rock (excluding schist, shale or slate), of uniform quality throughout, with not more than 5-percent of soft friable material and not more than 5-percent of flat or elongated pieces, the width of which is less than half the length, and with a percent of wear not more than 35 when tested in accordance with the Los Angeles Abrasion Test (ASTM Method C131). Pre-coated aggregate shall be aggregate of the type and grade specified, coated with 0.5 to 1.5 percent by weight, or residual bitumen from a pre-coating material. The limestone rock asphalt shall be fluxed with 0.5 to 1.5 percent by weight of fluxing material.

When tested by TxDOT Test Method Tex-200-F, Part 1, the aggregate shall meet the gradation requirements specified below:

Table No. 1

Square Sieve Size	Percent Retained, By Weight
3/4-inch Screen	0
5/8-inch Screen	0 – 2
1/2-inch Screen	20 – 40
3/8-inch Screen	80 – 100
1/4-inch Screen	95 – 100
No. 10 Screen	99 – 100

320.3 Construction Methods. All holes, ruts, depressions or other defects in the surface shall be repaired by cleaning out defective areas by scarifying, or acceptable hand methods and after being filled with new material of the same character as contained in the road surface, or other materials approved by the Engineer, shall be compacted by rolling or tamping so that a smooth, hard, well cemented surface, conforming to the lines, grade and typical cross-section shown on the plans is

secured. After the required repairs have been made in an acceptable manner and the patches allowed to set-up under traffic and are properly bonded, the surface of the roadway shall be swept clean from dirt, dust and other deleterious matter by means of a mechanical rotary street sweeper, hand brooms or compressed air. All cakes of dust or clay and all foreign matter shall be removed and the surface thoroughly cleaned before any bituminous material is applied and until the embedded aggregate is cleaned, but not discharged or loosened. If found necessary by the Engineer, the surface may be lightly sprinkled just prior to application of the bitumen.

CRS-1P or CRS-2P bituminous material shall be applied on the clean surface at the rate of approximately 0.35 gallons per square yard and covered with the aggregate at the rate of one cubic yard (loose measure) to each 95 square yards of surface area.

The entire surface shall be thoroughly rolled with a self-propelled roller giving a compression of not less than 200-pounds per inch of roller width. The roller used shall be as specified by the Engineer.

The Contractor shall repair all fatty spots with additional cover material and all lean mixtures by additional asphalt to the extent that a uniform dense treatment is finally obtained. Should depressions or unevenness or irregular spots develop in the surface, they shall be remedied and the surface brought to true grade and cross-section. Brooming and rolling shall be repeated on two successive work days, after application of aggregate.

320.4 Measurement. Asphaltic material will be measured at the point of application, on the road, in gallons at the application temperature. The quantity to be paid for shall be the number of gallons used, as directed, in the accepted surface treatment.

Aggregate shall be measured by the ton of 2,000 pounds, dry weight, actually used in the work. The dry weight shall be determined by deducting the weight of the moisture from the weight of the material.

320.5 Payment. The work performed and the materials furnished as prescribed by this item and measured as provided under measurement will be paid for at the unit prices bid for "Asphalt" and "Aggregate" which price shall be full compensation for cleaning and sprinkling the base; for furnishing, preparing, hauling and placing all materials; for all freight involved; and for all manipulations, labor, tools, equipment and incidentals necessary to do the work, including rolling.