

ITEM 403.2504--25 - SHOULDER TREATMENT FOR ACCIDENT REDUCTION (STAR) (ASPHALT)

1. DESCRIPTION:

- 1.01 This work shall consist of the installation of a pattern of STAR grooves cut into the asphalt shoulder in accordance with these specifications and at the locations shown in the Contract Documents or directed by the Engineer.

2. MATERIALS:

- 2.01 None.

3. CONSTRUCTION DETAILS:

- 3.01 Construct the pattern of grooves to the dimensions, spacing and locations shown on the drawings, or as directed by the Engineer. The method of cutting shall be either milling or grinding. The cutting head shall be capable of producing a 16 inches wide cut in one pass. If the milling method is used, the outer drum diameter shall be a maximum of 24 inches with a minimum of 50 carbide cutting tips. The rotation speed of the drum shall be a minimum of 600 feet per minute.

- 3.02 Alignment of the edge of the pattern shall be verified and checked by the Engineer. Acceptable deviations from a longitudinal reference line shall be no more than 3 inches. The Contractor shall create a test strip of sufficient length to satisfy the Engineer that the pattern, dimensions, alignment and texture are acceptable. Seven (7) days prior to the test, the Contractor shall inform the Engineer in writing of the proposed location of the test site. The location shall be within the project limits or close proximity to the project and approved by the Engineer. The testing shall not be conducted on finished pavement or interim pavement that will be subjected to traffic. After acceptance of the test installation, the test site shall be restored A.O.B.E.

The cutting head shall be on its own suspension system, independent from that of the power unit, to allow the head to align itself with the slope of the shoulder and/or irregularities in the shoulder surface. The cutting tool shall be equipped with guides or a guidance system, clearly visible to the operator, to provide for consistent alignment of each STAR groove at the offsets from traveled way indicated in the Contract Documents.

The finished STAR grooves shall have a nominal length measured in the direction of travel of 7 inches and a nominal width measured perpendicular to the direction of travel of 16 inches. The depressions shall have a uniform circular concave cross-section with a nominal depth of 1/2 inch and a maximum allowable depth of 5/8 inch. The STAR grooves shall be spaced at intervals of 1 foot as indicated in the Contract Documents or as directed by the Engineer.

- 3.03 Where work is required at a location that abuts an already grooved area, the Contractor shall adjust the alignment of new grooves to blend with that of the existing grooves.
- 3.04 The Contractor shall remove and dispose of millings and/or grinding slurry. The shoulder area shall be returned to a debris-free state prior to re-opening for traffic.

4. METHOD OF MEASUREMENT:

- 4.01 The quantity measured for payment will be the number of linear feet of shoulder grooved in accordance with the Contract Documents or as directed by the Engineer. Measurements will be taken parallel to the edge of pavement for the entire length of shoulder satisfactorily grooved.

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5. BASIS OF PAYMENT:

- 5.01 The unit price bid per linear foot shall include all labor and equipment necessary to accomplish the work. No separate payment shall be made for the removal and disposal of millings or grindings. No payment shall be made for the test strip.