Design Standards Letter

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Section/Plan No.: None

Subject: Rumble Strips

Body

Please use the attached special provision and drawing to provide rumble strips on bituminous shoulders of interstate and freeway type projects.

The rumble strips shall be rolled into the hot bituminous material on both the outside and median shoulders except that the rumble strips shall be omitted adjacent to ramps, acceleration and deceleration lanes, including tapers, and between the radius points for side road approaches and median crossovers.

These procedures are applicable to both new construction and resurfacing and should be implemented on all projects in such a stage of design as to allow practical revision.

Please advise if you have questions concerning the above.

dd/dh

RUMBLE STRIP

1.0 Description. This work shall consist of constructing depressions in asphalt shoulders in accordance with details shown on the plans.

2.0 Equipment. Equipment used to form rumble strip shall meet requirements of Sec 403.12(c) modified with an adjustable auxiliary steel wheel roller or may be a self-propelled steel wheel roller designed solely for the purpose of forming rumble strip.

2.1 The roller wheel shall have approximate half sections of solid steel bar or steel pipe welded to the face of wheel with the rounded surface of the bar

or pipe away from the wheel. Steel bar shall have a nominal 1 1/2-inch inside diameter. Steel pipe shall have a nominal 1 1/2-inch inside diameter decreased in cross section to provide a nominal 3/4 inch projection of the section when welded to the wheel. Each section of bar or pipe shall be 3 feet in length with a 6-inch longitudinal beveled transition on each end. The center axis of the wheel to maintain equal pressure along the length of the section when in use. Sections shall be spaced at nominal 8-inch centers around the perimeter of the wheel.

2.2 The rumble strip roller wheel shall be equipped with a guidance device to enable the operator to maintain proper linear and offset alignment.

2.3 The rumble strip roller wheel shall have a system for moistening the wheel contact surface.

2.4 Sections shall be replaced if deformed or excessively worn.

3.0 Construction requirements. Rumble strip depressions shall be formed in the hot asphalt surface of the shoulder at 8-inch intervals following the last pass of the final roller. Each depression shall be a nominal 1 1/2-inch wide indentation 3/4 inch deep and 3 feet in length, excepting the two 6-inch end depth transition sections.

3.1 Rumble strip depressions shall be formed in one pass of the roller. Asphalt temperature shall be such that depressions can be formed to the specified length and depth without unacceptable displacement or tearing of the asphalt.

4.0 Method of Measurement. Measurement of rumble strip will be made parallel to the centerline to the nearest 10 linear feet. The accepted quantity of rumble strip shall include all costs incurred by the contractor for roller modifications, equipment, tools, labor, and incidental work necessary to construct rumble strips.

5.0 Basis of Payment. Payment for rumble strip will be made at the contract unit price per station (100 feet).