

## **5.12 Rumble Strips**

### **5.12.1 General**

One method of making roadways safer is by constructing longitudinal rumble strips. The audible warning and vibration made when vehicle tires pass over rumble strips alert motorists that their vehicles have drifted out of their intended travel lane adjacent to a shoulder or the centerline, and that the driver needs to take corrective action to possibly avoid an accident. Rumble strips are constructed on the shoulders of divided highways and freeways; and on undivided roadways, rumble strips are constructed on the centerline and/or the outside shoulder of the pavement.

Rumble strips shall not be constructed on bridge decks or on bridge approaches, but may be constructed on HMA overlays over bridge approaches. Do not construct rumble strips on concrete pavement.

See the Standard Roadway Construction Details for rumble strip layouts and dimensions.

### **5.12.2 Shoulder Rumble Strips**

Along the mainline on all Interstate highways, freeways, and other limited access highways, shoulder rumble strips shall be constructed on inside shoulders that are 3 feet or greater in width and outside shoulders that are 6 feet or greater in width.

Along the mainline of land service highways, shoulder rumble strips shall be constructed on inside shoulders that are 3 feet or greater in width and outside shoulders that are 6 feet or greater in width at locations where:

- Crash data indicates an overrepresentation of roadway departure crashes as compared to the statewide average for the most recent 3 year period.
- The shoulder approaching a bridge overpass or underpass is reduced or eliminated. (In this instance, the rumble strips shall be provided a minimum of 500 feet in advance of the bridge.)

The use of shoulder rumble strips may still prove to be beneficial along the mainline of land service highways where these warrants are not met. For example, when roadside or median obstructions exist that cannot be eliminated or mitigated (refer to Section 8). These cases must be evaluated on an individual basis, and engineering judgment shall be employed in the solution.

Shoulder rumble strips shall not be constructed 100 feet in advance of and beyond all street intersections and commercial driveways. The minimum length of rumble strips measured longitudinally along the shoulder shall be 100 feet.

In order to maintain the integrity of the hot mix asphalt (HMA) pavements, the pavement box under the rumble strips must have a minimum thickness of four inches of hot mix asphalt material.

### **5.12.3 Centerline Rumble Strips**

Centerline rumble strips shall be constructed at the yellow centerline stripe location in rural and urban areas on two-lane roads and multilane undivided highways. Roadway characteristics that warrant centerline rumble strips are:

- Roads with posted speed limits of 35 mph or higher
- Minimum lane width of 10 feet
- HMA pavement must be in good condition with a surface distress index (SDI) greater than 3. Consult with the Pavement Management Unit.

Centerline rumble strips should be specified regardless of the presence of passing zones.

Centerline rumble strips shall be constructed to the end of the centerline stripe at all street intersections.

Centerline rumble strips shall not be constructed along left turn slots and continuous two-way left-turn median lanes.

The minimum length of rumble strips measured longitudinally along the centerline shall be 100 feet.

Fog seal surface treatment shall be applied after construction of the centerline rumble strips. Wait for fog seal treatment to cure based on manufacturers recommendation before application of permanent traffic stripes.