TEMPORARY RUMBLE STRIPS

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Texas Department of Transportation

August 2018
What are Temporary Rumble Strips?
What are Temporary Rumble Strips

- Creates similar effect as standard edge/center line rumble stripes
  - Driver will feel & hear the bumps

- Portable (no glue or nails)

- Placed in accordance with TxDOT standard WZ(RS)-16

- Currently only approved strip is *RoadQuake 2* by Plastic Safety Systems, Inc.
Why is TxDOT now using temporary rumble strips?
Why Are They Needed?

To ensure drivers are aware of upcoming work zones in order to protect the workers and drivers
Why Are They Needed?

Distracted Drivers

Visual

Cognitive

Manual
Why Are They Needed?

Tired Eyes

Sleepy

Inattentive
Why Are They Needed?

Additional method to warn and protect motorists
Began with May 2013 Let Construction and Maintenance project

MEMORANDUM

TO: District Engineers
FROM: Carol T. Robinson, P.E., Director Traffic Operations Division

DATE: November 12, 2012

SUBJECT: Work Zone Temporary Rumble Strip Standard Sheet

The Traffic Operations Division has developed the Work Zone Temporary Rumble Strip standard sheet, WZ(RS)-12, for use on temporary lane closures to enhance safety.

Temporary rumble strips are to be used on:

- one-lane, two-way flagging operations with a posted speed limit of 70 mph or less
- lane closures on conventional highways with a posted speed limit of 70 mph or less

If Portable Traffic Signals or Automated Flagger Assistance Devices are used in lieu of flaggers for lane closures, this standard sheet also applies.

This standard sheet is required for Construction and Maintenance let projects that meet either of the conditions listed above starting with the May 2013 letting.

The temporary rumble strip standard sheet is to be used immediately by district maintenance crews as soon as the rumble strips become available in the warehouse.

The General Services Division (GSD) has placed a one-time purchase order for the temporary rumble strips and they will be stocked at the Athens and Seguin distribution centers. Attached is a list with the total number of complete sets that has been ordered for each district. Each complete set will comprise of 30 temporary rumble units. A strip is made of 3 units. An array will have 3 strips (9 units). Four arrays will make a complete set of temporary rumble strips. GSD has also ordered 2 "RUMBLE STRIPS AHEAD" signs and portable sign stands for each complete set of rumble strips.
New Standard outlines the use of Temporary Rumble Strips

- Standard allows for some TRS to be optional
- Approved speed limits of 75 mph or less

5. Temporary Rumble Strips should not be used on horizontal curves, loose gravel, soft or bleeding asphalt, heavily rutted pavements or unpaved surfaces.

<table>
<thead>
<tr>
<th>Flagger to Flagger (Length of Work Area)</th>
<th>ADT</th>
<th># of Rumble Strip Arrays</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8 Mile</td>
<td>&lt; 4,500</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>≥ 4,500</td>
<td>2</td>
</tr>
<tr>
<td>1/4 Mile</td>
<td>&lt; 3,500</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>≥ 3,500</td>
<td>2</td>
</tr>
<tr>
<td>1/2 Mile</td>
<td>&lt; 2,600</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>≥ 2,600</td>
<td>2</td>
</tr>
<tr>
<td>1 Mile</td>
<td>&lt; 1,600</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>≥ 1,600</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 1 Mile</td>
<td>N/A</td>
<td>2</td>
</tr>
</tbody>
</table>
Revised spacing requirements based on speed.

**TABLE 2**

<table>
<thead>
<tr>
<th>Speed</th>
<th>Approximate distance between strips in an Array</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 40 MPH</td>
<td>10’</td>
</tr>
<tr>
<td>&gt; 40 MPH &amp; ≤ 55 MPH</td>
<td>15’</td>
</tr>
<tr>
<td>&gt; 55 MPH</td>
<td>20’</td>
</tr>
</tbody>
</table>

**GENERAL NOTES**

1. Even though the existing rumble strips are not lined up to create a continuous run, a series of the rumble strips are recommended to be placed on one side of the lane where they are originally located.

2. Where the spacing between the rumble strips is greater than 6 feet, it is recommended that an additional sign is placed between the rumble strips as necessary to provide further reassurance.

3. Temporary rumble strips will be placed on the roadway at a minimum distance of 300 feet.

4. The standard spacing between temporary rumble strips should be determined prior to starting the project, unless otherwise specified.

5. Temporary rumble strips should not be used on roads with a high volume of traffic, roads with a high rate of accidents, or roads with a high rate of vandalism.

6. Temporary rumble strips should be installed and maintained as per the manufacturer’s recommendations.

7. This standard should not be used in conjunction with other temporary traffic control devices or project specific design for the project.

8. The temporary rumble strips may be used on temporary, or projects that need additional traffic calming devices.
Understanding the Terminology

1 Complete Set = 3 Arrays = 9 Hinged Strips

WZ(RS-1b)-16

Complete Set

Array

Hinge

Strip
When should a project use temporary rumble strips?
When should a project use temporary rumble strips?

Current Requirement

- One-Lane, Two Way flagging** operation with a posted speed of 75 MPH or less
- Lane closures** on a road or highway with a posted speed limit of 75 MPH or less

**NOTE: Includes Portable Traffic Signals and Automated Flagging Devices

Optional

- Freeways
- Expressways
What We’ve Learned

Do not place on:

- Horizontal or Vertical Curves
- Fresh Seal Cost Jobs
- Bleeding Asphalt
- Soft Pavement
- Heavily Rutted Roads
What We’ve Learned

Installation Issues

- Must install properly to be effective and remain in place
- Potential noise complaints
- Weight
Texas Transportation System

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