

MEMORANDUM

State of Alaska

Department of Transportation & Public Facilities
Statewide Design & Engineering Services Division

TO: Distribution

DATE: July 13, 2009

TELEPHONE: 465-6958

FAX: 465-2460

TEXT TELEPHONE: 465-3652

FROM: Roger Healy, P.E.
Chief Engineer

SUBJECT: **Chief Engineer's Directive-
Rumble Strip Policy**

Attached Alaska Policy on Rumble Strip Installation is adopted effective July 20, 2009. This policy supersedes the May 30, 2001 CE Directive posted on the department web site.

Incorporate this updated policy on applicable projects advertised after July 20, 2009.

Attachment

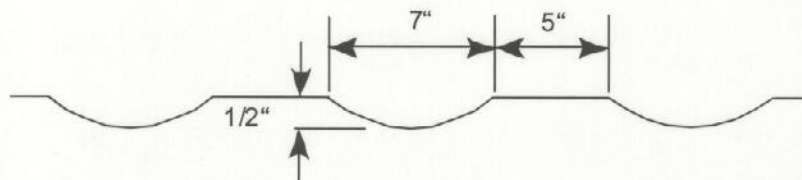
Distribution:

Colleen Ackiss, P.E., Northern Region Traffic & Safety Engineer, MS 2550
Dave Bloom, P.E., Northern Region Preconstruction Engineer, MS 2550
Rob Campbell, P.E., Central Region Construction and Operations Director, MS 2525
Chuck Correa, P.E., Regional Construction Engineer, MS 2506
Gary Davis, Regional Director, Southeast Region, MS 2506
Al Fletcher, Safety and Operations Engineer, FHWA, Juneau Office
Lars Gregovich, P.E., Preconstruction Standards Engineer, MS 2500
Gordon Keith, P.E., Regional Director, Central Region, MS 2525
Lon Krol, P.E., Regional Construction Engineer, MS 2550
Robert Laurie, Transportation Planner, Statewide Project Development, MS 2500
David Miller, Division Administrator, Federal Highway Administration, Juneau Office
Carolyn Morehouse, P.E., Southeast Region Traffic & Reconnaissance Engineering Manager, MS 2506
Mark Neidhold, Chief, Design & Construction Standards, MNS 2500
Jeff Otteson, Director Statewide Project Development, MS 2500
Jim Petropolus, Regional Preliminary Design & Engineering Chief, MS 2506
K. Kim Rice, P.E., Central Region Preconstruction Engineer, MS 2525
Kurt Smith, P.E., Statewide Traffic & Safety Engineer, MS 2500
Scott Thomas, P.E., Central Region Traffic & Safety Engineer, MS 2525
Steve Titus, P.E., Regional Director, Northern Region, MS 2550
Vic Winters, P.E., Southeast Region Preconstruction Engineer, MS 2506
Jennifer Witt, Central Region Preconstruction & Planning Chief, MS 2525

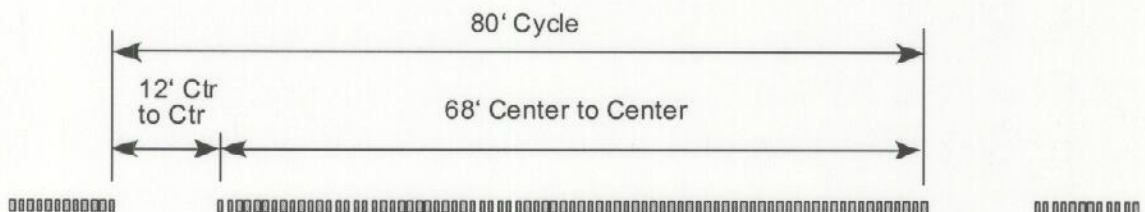
Alaska DOT/PF Policy on Rumble Strip Installation

Shoulder Rumble Strips

1. Where to install: Rumble strips should be installed on rural roads with:
 - a. speed limits of 50 MPH and above, and
 - b. 6' or wider shoulders without guardrail or 7' or wider shoulders with guardrail.
2. Installation Method: Milled rumble strips are more effective safety enhancements than rolled-in rumble strips. Use milled rumble strips unless milling is not feasible, in which case rumble strips may be rolled in.
3. Lateral Width: 16"
4. Longitudinal Milling Pattern: 7" groove, 1/2" deep, 5" flat



5. Gaps for bicycles: Do not install gaps on roads where bicycles are prohibited. On other roads use a 12' gap and a 68' rumble on an 80' cycle. The gap and rumble dimensions given are measured from center to center of grooves.



Exception: A 12' gap, 48' rumble, and a 60' cycle may be used on road segments with an unusually high level of bicycle usage. Regional Preconstruction Engineers must approve this change in writing, submit an informational copy of the approval to the Chief Engineer, and include the approval in the Design Study Report. Bicycle volumes must be documented. Changes in cycle length should be minimized and start/end at locations where there are significant changes in bicycle volume.

6. Offset and Alignment: Offset the rumble strip so its inside edge is 4" from the outside edge of the shoulder stripe. If shoulder stripe location or alignment is not consistent, use offset from the centerline or lane lines. Remove existing striping and re-stripe all locations where the rumble strips overlap existing striping. In no case should rumble strips protrude inside the shoulder stripe.

7. Clear shoulder width outside of rumble strips:

- Segments with guardrail: Provide at least 5' between the edge of rumble strip and the face of rail (note that this precludes rumble strip installation on 6' shoulders with guardrail).
- Segments without guardrail: Provide at least 4' between the edge of rumble and the edge of pavement.
- Segments where bicycles are prohibited: No minimum.

These width requirements apply to shoulders on climbing and passing lanes as well as other locations.

A 6" deviation from required clear widths is allowed for distances under 100'. If a width deficiency exceeds 6" for any distance, or lasts longer than 100', discontinue the rumble strip until the required clear width becomes available again.

Care in maintaining clear width: As-built plans may be inaccurate. Spot check shoulder width during design and monitor shoulder width during construction often enough to ensure minimum clear shoulder width is provided.

8. Breaks: Break rumble strips for intersections, driveways, and freeway exit gores.

9. Setbacks: Terminate rumble strips 100' before exit ramp angle points.

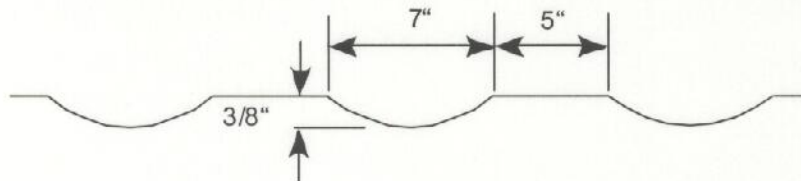
10. Exclusions: Do not install shoulder rumble strips:

- a. on roads with speed limits of 45 MPH or lower,
- b. on pavements or surface treatments less than 2" thick.
- c. on pavement with substantial alligator and/or fatigue cracking
- d. between through lanes and turning lanes
- e. on bridge decks, bridge approach slabs, or concrete weigh-in-motion slabs
- f. on roads that are programmed for overlay, rehabilitation, or reconstruction in less than three years.

Centerline Rumble Strips

Centerline rumbles may be installed on the centerline of undivided rural highways where there is a history of severe head-on/crossover crashes.

1. Installation Method: Install centerline rumble strips by milling.
2. Lateral Width: 12"
3. Longitudinal Milling Pattern: 7" groove, 3/8" deep, 5" flat.



4. Continuity: Where installed, centerline rumble strips should continue through both passing and no-passing zones.
5. Medians: Centerline rumbles may be installed in painted medians where a double yellow stripe separates opposing traffic.
6. Breaks: Centerline rumbles should be broken for all public streets and commercial approaches with 500 or more vehicles per day. Centerline rumbles should not be broken for private driveways, public streets, or commercial approaches with 500 or fewer vehicles per day.
7. Exclusions: Do not install centerline rumble strips:
 - a. bordering two-way left turn lanes,
 - b. in urban areas,
 - c. on roads with speed limits of 45 MPH or less,
 - d. where combined lane and shoulder width in each direction is less than 14 feet,
 - e. on pavements or surface treatments less than 2" thick,
 - f. on bridge decks, bridge approach slabs, or concrete weigh-in-motion slabs,
 - g. on roads that are programmed for overlay, rehabilitation, or reconstruction in less than three years.
8. Striping Replacement: Replace existing pavement markings where removed by centerline rumble installation.