

ROAD COMMISSION FOR OAKLAND COUNTY

SPECIAL PROVISION
FOR
CENTERLINE SINUSOIDAL CORRUGATIONS

RCOC/TS:AB

1 of 7

RCOC20SP822B:12-03-24

a. Description. Mill 1/2 inch deep sinusoidal corrugations into the centerline of bituminous pavement at the locations shown on the plans. Complete this work in accordance with section 822 of the Standard Specifications for Construction, and this special provision.

b. Equipment. Use equipment that can continuously mill the required pattern and is able to provide a smooth cut depression with up to 1/8 inch between peaks and valleys within the cut depression. Use cutting head(s) independently suspended from the power unit to allow the cutting tool to self-align with the pavement slope. Equip the cutting tool with guides to provide consistent alignment of each cut in relation to the centerline.

Demonstrate the ability to achieve the desired surface inside each depression without snagging the bituminous surface or spalling the concrete surface prior to production cutting. The use of diamond blades is required for installations on concrete.

c. Construction.

Corrugations are 16 inches wide.

Corrugations must be 14 inches ($\pm 1/2$ inch) long parallel to the direction of travel; the width as shown in the included details for the specified corrugation type ($\pm 1/2$ inch) perpendicular to the direction of travel; and have a cross section depth of 1/16 to 1/2 inch (+1/8 inch) at the edge of the rumble (and increasing towards the center of the rumble on a crowned section). Ensure the cross slope at the bottom of the depression is level on crowned pavements or in the same direction as the superelevated pavement cross slope. The distance from the corrugation to any transverse joint must be at least 6 inches but less than 12 inches. Mill the corrugations in a continuous, repeating sinusoidal pattern as shown in the included details. Gaps in the corrugations shall be made in accordance with what is shown for the corresponding standard corrugations in Standard Plan R-112 Series, as shown in this Special Provision, or as Directed by the Engineer.

Remove the grinding spoils or waste from the roadway surface immediately. Do not permit the spoils or waste to be scattered, blown, tracked by traffic, or blown by the wind.

Raised Pavement Markers (RPM's):

Corrugations may be milled before or after new installations of RMP's, or after existing installations of RMP's. Either way, these RPM's must be gapped out as shown in Figure 7, and as directed by the Engineer.

High Friction Surface Treat (HFST):

Corrugations may be milled before or after the application of HFST.

Order of Operations:

Follow these steps to install pavement markings and sinusoidal mumble strips:

- 1. Complete all Hot Mix Asphalt (HMA) paving (wearing surface), install Type R tape temporary pavement markings, and allow HMA to cure for at least 72 hours.**
- 2. Remove Type R tape temporary markings, then apply permanent centerline and edge-line striping using sprayable thermoplastic.**
- 3. Install centerline sinusoidal mumble strips, and place Type R tape temporary pavement markings along the edges of the mumble strips (one piece on each side).**
- 4. Remove Type R tape temporary markings, then apply permanent wet-reflective sprayable thermoplastic centerline markings.**

Proposed:

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay items:

Pay Item	Pay Unit
Sinusoidal Corrugations, Milled, HMA Centerline, RCOC.....	Foot

Payment for the above pay items includes disposal of spoils necessary to complete the work as described. The completed work will be measured in feet along the corrugation alignment from the center of the first corrugation placed to the center of the last corrugation placed, excluding sections gapped for intersections, bridges, rail crossings or other locations, as directed by the Engineer.

No additional cost for gapping RMP's or milling HFST surfaces will be paid.

All sacrificial layout lines and temporary pavement markings are paid for separately.

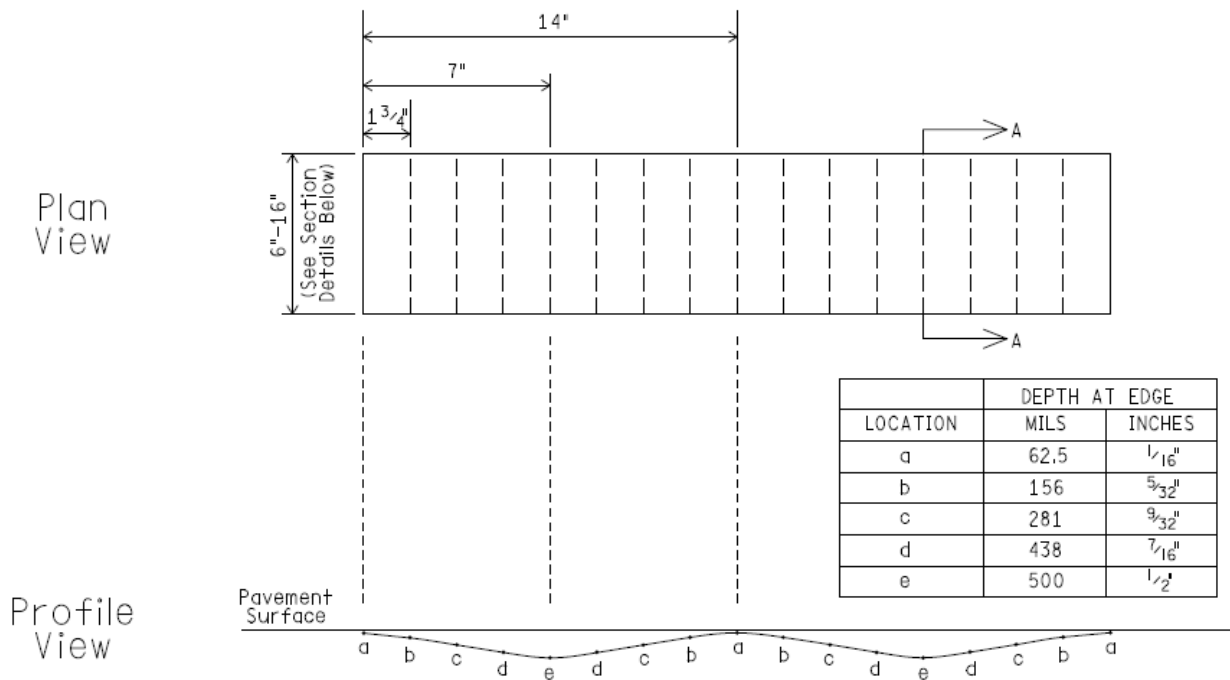


Figure 1: Plan and Profile of Corrugation

Cross-section
Details

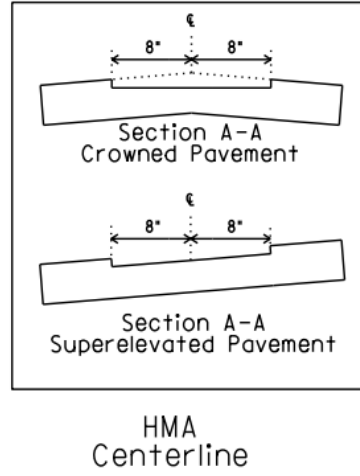
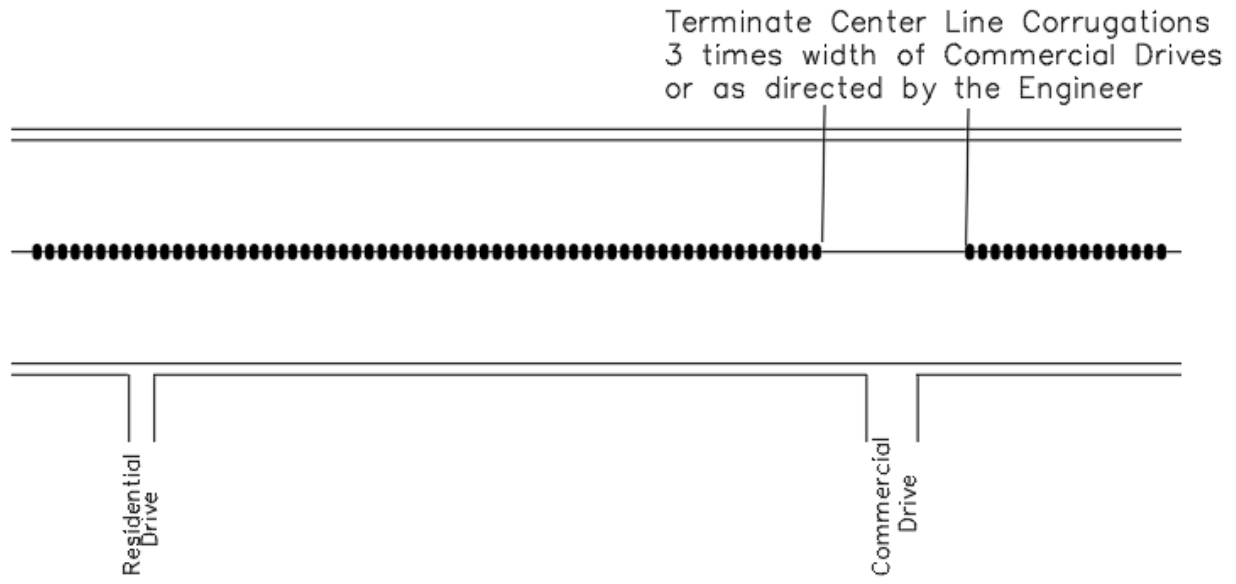
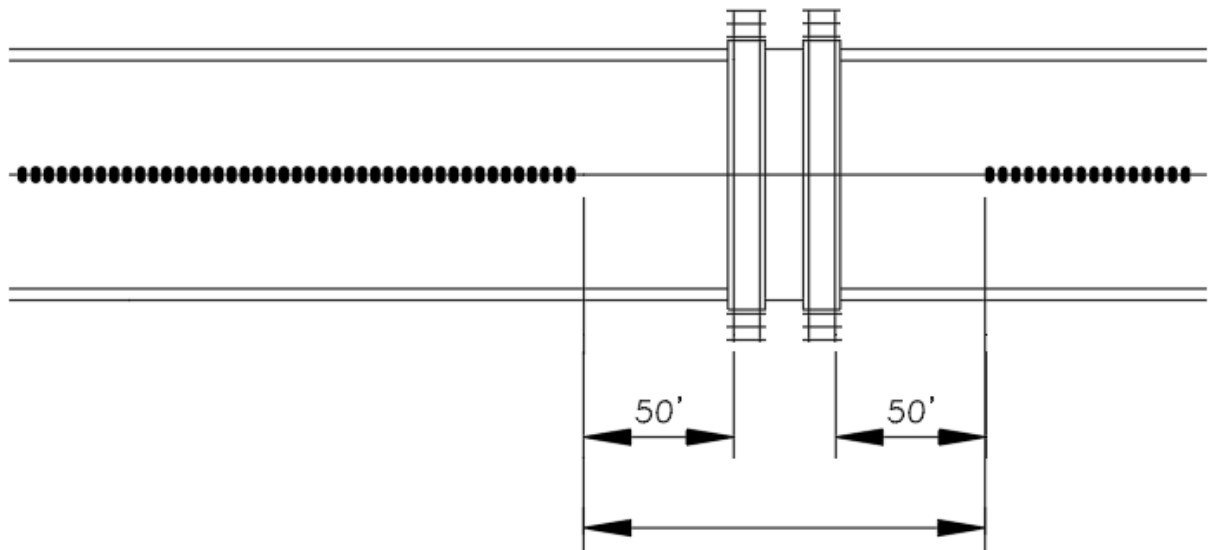


Figure 2: Cross Section of Corrugation



Center Line Corrugations at Driveways or Subdivision

Figure 3: Centerline Corrugation at Driveways or Subdivisions



Omit Centerline Corrugations in this Area

Center Line Corrugations at Railroads

Figure 4: Centerline Corrugations at Railroads

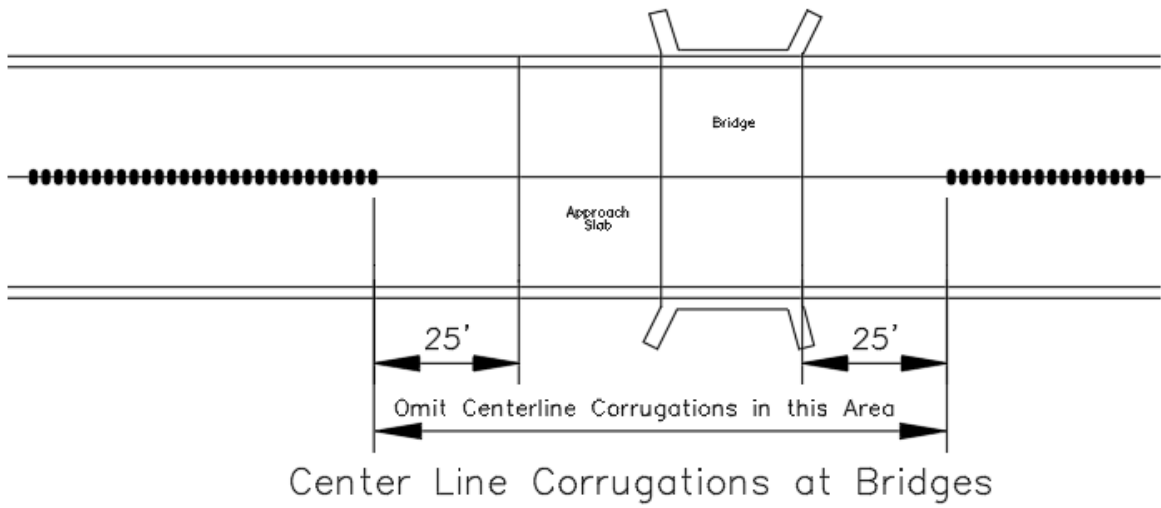


Figure 5: Centerline Corrugations at Bridges/Culverts

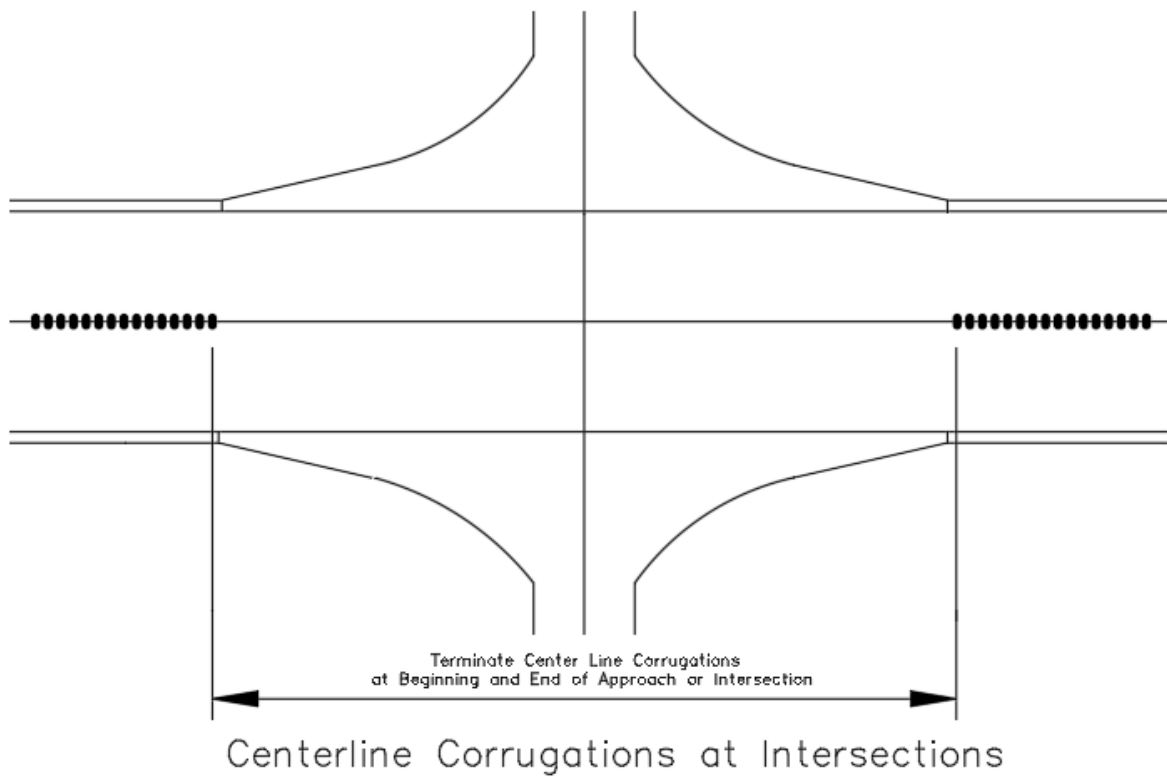


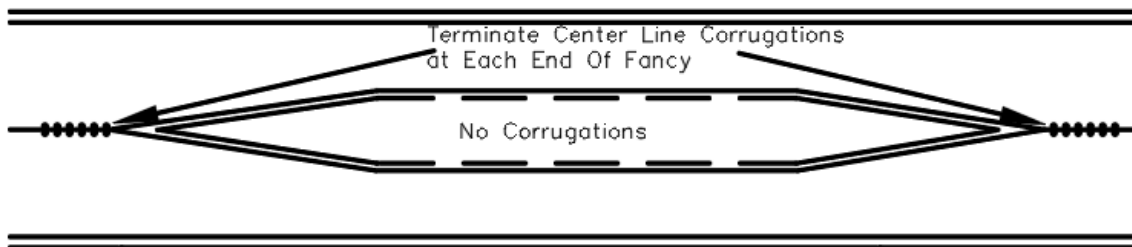
Figure 6: Centerline Corrugations at Intersections

Terminate Center Line Corrugations
18 In from center of RPM on both
sides. 3 ft Total gap



Center Line Corrugations at Raised Pavement Markers

Figure 7: Centerline Corrugations at Raised Pavement Markers (RPM's)



Center Line Corrugations at Beginning and Ending of two way left turn Lane (Fancy)

Figure 8: Centerline Corrugations at ends of two way left turn lanes tapers