

H. Sawcutting and Sealing Joints. After completion of diamond grinding operations as specified in 405.03.04 and before opening to traffic as specified in 405.03.02.K, sawcut 3/8-inch-wide transverse and longitudinal joints to a depth of 1/2 inch at relief joints and butt joints. After sawcutting, immediately remove sawing slurry from the sawcut cavity and surrounding pavement surface. Clean sawcuts with a 150-pounds-per-square-inch water blast to remove remaining debris in the sawcut cavity, and then blow sawcuts with a hot-air lance to provide a dry surface. Seal sawcuts immediately after blowing.

Seal joints with joint sealer before opening to traffic. Seal joints when the ambient temperature is between 50 and 80 °F. Pour joint sealer in the sawcuts, ensuring that joint sealer is not spilled on the surface of the concrete. If spillage occurs, immediately remove spilled joint sealer from the surface of the concrete. Fill joints to ensure that the joint sealer is 1/8 to 1/4 inch below the adjacent surface. Do not allow traffic over the poured joints until the joint sealer has hardened to resist pickup.

I. Thickness Requirements. The ME will divide the concrete pavement into lots of approximately 5000 square yards. The ME will divide each lot into 5 equal sections. The RE will direct the Contractor to drill 1 core, as specified in 405.03.03, from a randomly selected location within each section. The ME will test these cores for thickness as specified in ASTM C 174.

The Department will determine conformance with thickness requirements as follows and will assess the greater of the 2 pay reductions or direct the Contractor to remove and replace the lot:

1. Average Core Thickness. If the average core thickness is greater than or equal to the specified core thickness, the Department will not apply a payment reduction. If the average thickness is less than the specified thickness, but is greater than or equal to the specified thickness minus 1/2 inch, the Department will determine payment reduction by the following formula:

$$PPR = \frac{T_S - T_A}{T_S}$$

Where:

T_S = Specified thickness.

T_A = Average thickness.

PPR = Percent payment reduction

2. Individual Core Thickness. When more than 2 individual cores in the lot are less than the specified thickness minus 1/4 inch, the Department will reduce the payment for the lot by 2 percent.

3. Remove and Replace. If the average thickness is less than the specified thickness minus 1/2 inch, the RE will require that the lot be removed and replaced.

J. Ride Quality Requirements. Ensure that diamond grinding is completed before testing ride quality. The Department will evaluate ride quality acceptance as specified in 401.03.03.J using the Other Roadways equations.

K. Opening to Traffic. Ensure that diamond grinding is completed before opening to traffic. The RE will determine when the concrete surface is to be opened to traffic or construction equipment. Do not allow construction vehicles or equipment on the concrete pavement within 10 days of placing, or until the concrete has achieved a compressive strength of 3000 pounds per square inch as determined by 2 test cylinders that are field cured according to AASHTO T 23. For concrete containing fly ash, opening to traffic is governed solely by the 3000-pounds-per-square-inch compressive strength requirement and not by time elapsed.

405.03.03 Core Samples

Drill cores before performing diamond grinding operations. Drill cores in the concrete pavement at locations as directed by the RE for thickness testing. Drill 3-inch diameter cores through the entire thickness of the concrete pavement. Use a water-cooled, diamond-tipped, masonry-type drill bit capable of obtaining a valid test sample through the entire pavement thickness. Identify each core by painting the RE supplied number on the side of the sample, and accompany each with a laboratory form supplied by the RE. Transport samples to the Department Laboratory.

After removing the core from the pavement, pump water from the hole, and use a quick-setting patch to fill the hole flush with the adjacent pavement surface.