
SECTION 410 ASPHALT PAVEMENT RIDE QUALITY

410.01 DESCRIPTION. This section covers the requirements for the ride quality of completed asphalt pavements. Included are provisions for incentive payments for outstanding work and deductions for acceptable, but lesser quality, work. Ride quality is a measurement of surface tolerance in terms of a Rideability Index (RI). The RI is an index derived from controlled measurements of the longitudinal profile in the wheel tracks and correlated with panel ratings of ride quality. The Contract will specify when ride quality requirements apply.

410.02 MATERIALS AND EQUIPMENT. The Department will measure the longitudinal profile of the surface with an ASTM E 950, Class 1 device.

410.03 CONSTRUCTION.

410.03.01 Lift Thickness. When the Engineer approves, the thickness of individual lifts of asphalt base may be adjusted to improve ride quality. Conform to [Subsection 403.03.06](#).

410.03.02 Corrective Work. Submit corrective work procedure plans to the Engineer for approval before performing the work. Provide a final surface comparable to adjacent pavement that does not require corrective work in respect to texture, appearance, and skid resistance.

410.03.03 Ride Quality.

A) Acceptance Testing. The Department will test the ride quality of the pavement for acceptance after the Contractor:

- 1) makes a request at least 2 weeks in advance;
- 2) partially completes the paving and the Department deems it necessary; or
- 3) completes all mainline paving.

The Department will determine the RI by applying a linear transform, determined by correlation, to the values (average of 2 wheel paths) determined by ASTM E 1926. Thoroughly clean the surface of all dirt and other foreign matter immediately before the Department performs the testing.

The Department will divide and test each traffic lane using one-mile test sections starting at the beginning of the lane and proceeding in the direction of traffic. The Department will exclude discontinuities, such as bridges, in the pavement. When a test section at the end of a lane is less than one mile long, the Department will include that section with the adjacent section. When deemed necessary, the Department will retest the pavement after any corrective work is completed.

When the final riding surface is an open-graded friction course (OGFC), the Department will test it before the OGFC is placed and, when deemed necessary, after it is placed.

B) Requirements. Achieve a RI of 3.45 or greater for each one-mile section. When the RI is less than 3.45, perform corrective work, or remove and replace the pavement to achieve the specified RI. The Department's testing generates a computer file containing the measured longitudinal profile in terms of elevation values of each wheel track at 6-inch intervals. The Department will create a strip chart from the file showing the elevation and distance traveled when the RI is less than 3.60 or upon request for higher RI values.

410.04 MEASUREMENT. The Department will measure the ride quality in terms of the RI according to [Subsection 410.03](#). The Department will not measure the RI as a separate pay unit but will use the RI to calculate a Ride Quality Adjustment payment.

410.05 PAYMENT. The Department will apply a Ride Quality Adjustment for each one-mile section tested. The Department will calculate the Ride Quality Adjustments by multiplying the asphalt surface mixture payment for each one-mile test section by its appropriate ride quality pay value found in the Ride Quality Adjustment Schedule below.

When requesting tests on partially completed pavement, the Department will perform one test at no charge. The Department will perform additional requested testing and retesting for corrective work or pavement replacement at a cost of \$150.00 per lane-mile. The Department will deduct charges for additional requested testing and retesting for corrective work from monies due on the Contract.

REVISION

RIDE QUALITY ADJUSTMENT SCHEDULE	
Rideability Index	Pay Value⁽¹⁾
4.15 or higher	+0.15
4.10 to 4.14	+0.10
4.05 to 4.09	+0.05
3.70 to 4.04	0.00
3.60 to 3.69	-0.05
3.50 to 3.59	-0.10
3.45 to 3.49	-0.15
3.44 or lower	Corrective work or replacement required

⁽¹⁾ The Department will not apply a positive pay value for corrective work other than removal and replacement to achieve the RI.
