

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 an International Roughness Index (IRI). The IRI 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 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.

410.03.02 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 IRI 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 0.1-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 0.1 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 the underlying pavement before the OGFC is placed and, when deemed necessary, test the OGFC after it is placed.

B) Requirements.

- 1) Category A. Achieve an IRI of 70 or lower for each 0.1-mile section. When the IRI is greater than 80 for a 0.1-mile section, perform corrective work, or remove and replace the pavement to achieve the specified IRI. At the Department's discretion, a pay deduction of \$1200 per lane mile may be applied in lieu of corrective work.

The Department's testing generates a computer file containing the measured longitudinal profile in terms of elevation values of each wheel track at 3-inch intervals. The Department will create a strip chart from the file showing the elevation and distance traveled when the IRI is greater than 70 or upon request for lower IRI values.

- 2) Category B. Achieve an IRI of 80 or lower for each 0.1-mile section. When the IRI is greater than 90 for a 0.1 mile section, perform corrective work, or

remove and replace the pavement to achieve the specified IRI. At the Department's discretion, a pay deduction of \$750 per lane mile may be applied in lieu of corrective work.

The Department's testing generates a computer file containing the measured longitudinal profile in terms of elevation values of each wheel track at 3-inch intervals. The Department will create a strip chart from the file showing the elevation and distance traveled when the IRI is greater than 80 or upon request for lower IRI values.

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

410.05 PAYMENT. The Department will apply a Ride Quality Adjustment for each 0.1-lane-mile section tested. The Department will determine the Ride Quality Adjustments for each 0.1-lane-mile section using the Ride Quality Adjustment Schedule below. The Department will not apply positive ride quality adjustments to 0.1-lane-mile sections when their associated subplot's density value is less than 0.95.

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 \$300.00 per lane-mile. The Department will deduct charges for additional requested testing and retesting for corrective work from monies due on the Contract.

RIDE QUALITY ADJUSTMENT SCHEDULES

CATEGORY "A" PROJECTS		CATEGORY "B" PROJECTS	
<u>IRI</u>	<u>Pay Value Adjustment⁽¹⁾</u>	<u>IRI</u>	<u>Pay Value Adjustment⁽¹⁾</u>
30 or less	\$750	36 or less	\$500
31	\$630	37	\$420
32	\$520	38	\$350
33	\$420	39	\$280
34	\$330	40	\$220
35	\$250	41	\$170
36	\$180	42	\$120
37	\$120	43	\$80
38	\$70	44	\$45
39	\$30	45	\$20
40 to 70	0	46 to 80	0
71	-\$30	81	-\$20
72	-\$70	82	-\$45
73	-\$120	83	-\$80
74	-\$180	84	-\$120
75	-\$250	85	-\$170
76	-\$330	86	-\$220
77	-\$420	87	-\$280
78	-\$520	88	-\$350
79	-\$630	89	-\$420
80	-\$750	90	-\$500
81 or higher	corrective work ⁽²⁾	91 or higher	corrective work ⁽³⁾

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

⁽²⁾ When it is in the best interest of the Department, a minimum pay value deduction of \$1200 per 0.1-lane-mile section may be applied in lieu of corrective work.

⁽³⁾ *When it is in the best interest of the Department, a minimum pay value deduction of \$750 per 0.1-lane-mile section may be applied in lieu of corrective work.*

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
10005	Ride Quality Adjustment, Asphalt	Dollar

The Department will consider payment as full compensation for all work required under this section.