(c) RIDEABILITY REQUIREMENTS.

The rideability requirements covered in this Subarticle shall apply only when either Item 410-A, 410-B, or 410-C is included on the plans or in the proposal.

1. TESTING DEVICE.

a. Description.

The testing device shall be a longitudinal profilograph including all accessories and chart paper herein described. The chart paper containing the log of the smoothness index shall become the property of the Department at the time the measurements are taken. The following categories cover the furnishing and disposition of the profilograph:

Pay Item 410-A - The furnishing, by the Contractor, of a new profilograph, including chart paper, and its reconditioning, if deemed necessary by the Engineer, and title transfer to the Department upon completion of its use on the project.

Pay Item 410-B - The furnishing, by the Department, of a profilograph for use on the project. The Contractor shall furnish the chart paper.

Pay Item 410-C - The furnishing, by the Contractor, of a new or acceptable used profilograph, including chart paper, for use on the project with the Contractor retaining ownership of the profilograph.

b. Equipment Requirements.

The profilograph shall be a California type profilograph, completely equipped with all necessary accessories. The profilograph shall be hand-propelled and shall have multiple averaging wheels.

When the profilograph is required to be furnished by the Contractor, the Contractor shall calibrate the profilograph prior to delivery to the project and shall maintain the profilograph during the time its use is required on the project. When the profilograph is furnished by the State, the Department will calibrate and maintain the profilograph.

Chart paper for the profilograph shall be furnished in sufficient quantities for all calibration, test runs, and actual tests deemed necessary by the Engineer.

c. Equipment Delivery.

The profilograph shall be delivered to the project a minimum of two weeks before the beginning of the paving operation of the pavement layer to be tested to allow time for checking the profilograph.

2. TESTING PROCEDURE.

a. Description.

Unless shown otherwise by the plans, the following surfaces will be subject to the requirements of this Subarticle if one of the pay items listed in Subitem 410.05(c)1.a. is included in the proposal:

- Actual wearing surfaces including Polymer Modified Open Graded Friction Course (Section 420);

- The surface of the layer directly beneath the Polymer Modified Open Graded Friction Course.

The actual testing procedure shall be as outlined in ALDOT-335, a copy of which may be obtained from the office of the Materials and Tests Engineer. The Engineer reserves the right to make minor modifications to this procedure if he deems such will produce better results.

The profilograph test shall be performed as soon as practical after the pavement has been rolled and compacted sufficiently to prevent damage to the surface but no later than the next work day after placement of the pavement, unless otherwise authorized by the Engineer. The Contractor shall furnish the necessary personnel to operate the profilograph under the direction of the Engineer.

The profilograph test is considered a part of the paving operation and will be performed immediately in the proper sequence, in a satisfactory manner, even to the exclusion of other work.

b. Rideability Requirements.

The results of the profilograph tests shall be evaluated by Department personnel as outlined in ALDOT-335.

If a Profile Index of 10 inches per mile {160 mm/km} is exceeded in any test section of any daily paving operation, the paving operation will be suspended as soon as possible after results

of the unacceptable test section are obtained. The paving will not be allowed to resume until corrective action is taken by the Contractor.

When the Profile Index is 4 inches per mile {64 mm/km}, or more, per section, a unit price reduction will be assessed. When the Profile Index is below 2 inches per mile {32 mm/km} per section, a unit price increase will be added. The following schedule lists the Profile Index obtained with the corresponding price adjustment:

TABLE I	
Profile Index Inches/Mile/Section {Millimeters/Kilometer/Section}	Contract Price Adjustment Percent of Pavement Unit Bid Price
Under 2.0 {Under 32}	105 – (Profile Index/0.4) {105 – (Profile Index/6.4)}
2.0 to less than 4.0 {32 to less than 64}	100
4.0 thru 10.0 {64 thru 160}	100 - (Profile Index – 4.0)/0.3 {100 - (Profile Index – 64)/4.8}
Over 10.0 {Over 160}	Unacceptable

Any price adjustment for rideability considerations will be applied to the theoretical tonnage {metric tonnage}, calculated using the plan specified rate of placement, placed in those sections testing under 2, or 4 or more, inches/mile {32, or 64 or more, mm/km} per section.

c. On test sections where the Profile Index is less than 4 inches per mile {64 mm/km}, the longitudinal stringline and straightedge requirements of Item 410.05(a)2 may be waived by the Engineer except at transverse construction joints and tie-ins. Within 50 feet {15 m} of all transverse construction joints and tie-ins, and on all test sections where the Profile Index is 4 inches per mile or greater {64 mm/km or greater}, all requirements of Item 410.05(a)2 will apply.

410.06 Defective or Deficient Areas.

Deficiencies in surface smoothness shall be remedied to the extent practicable by rolling while the material is still workable. Otherwise the layer shall be removed and replaced as necessary to obtain required smoothness. "Skin patching" of a surface layer to correct low areas or heating and scraping to correct high areas will not be permitted. Overlays of not less than 80 pounds per square yard {45 kg/m^2} may be authorized by the Engineer for surface smoothness deficiencies provided all material in the overlay is without additional cost to the Department.

Deficiencies in thickness shall be remedied as specified in Item 410.03(f)1.

All areas containing excessive or deficient amounts of liquid asphalt binder, all areas showing unacceptable segregation of materials, and all areas unbonded after rolling shall be removed and replaced at no cost to the Department. Unacceptable segregation of a hot mix asphalt mat is defined as any area in which two six inch {150 mm} cores are taken and the average percent liquid asphalt binder content of the cores have an absolute difference greater than 0.50 percentage points of the design liquid asphalt binder content, or the combined gradation analysis of the two cores on selected sieves has an absolute difference greater than 10 percentage points from the job-mix formula. All testing shall be in accordance with ALDOT-389, "Evaluation of Segregated Areas in Hot Mix Asphalt Pavement." The location of all cores taken for segregation evaluation will be determined by the Department. All coring and traffic control required by ALDOT-389 shall be conducted/supplied by the Contractor at no cost to the Department; however, the Contractor will be reimbursed $500.00 per core when core results are within tolerances and the coring operations require additional traffic control.

At any time that segregation is determined to be unacceptable, work shall be automatically suspended if positive corrective action is not taken by the Contractor to prevent further segregation in the mat. Upon suspension, the Contractor shall place a test section not to exceed 500 tons {500 metric tons} of the affected mixture for evaluation by the Engineer. However, if after a few loads it is apparent that the corrective actions were not adequate, work shall again be suspended and the segregated areas evaluated in accordance with ALDOT-389. Likewise, if after 500 tons {500 metric tons} it is apparent that the problem has been solved, work will be allowed to continue.

When correcting subsurface mixtures (base and binder layers), the removal and replacement may be limited to the actual segregated areas or the full mat width within the limits of individual segregated areas as directed by the Engineer. Removal and replacement of hot mix asphalt wearing