The pay factors will be rounded to the nearest 0.01.

**(c) Smoothness**

Smoothness pay adjustments will only be applied when the smoothness is measured by an inertial profiler in accordance with 401.18(a).

The Mean Roughness Index, MRI, will be determined utilizing a fixed interval for each lane for each 0.1 mile section of paving. The MRI for a 0.1 mile section will be the average of the IRI of the two wheel paths. Categorized segments shall be as follows:

1.  Type A. Pavement on a non-interstate with more than a single opportunity to achieve a smooth ride or asphalt pavement on an interstate with a single opportunity or more. The following operations, if performed on the contract, will be considered opportunities.

    a.  A layer of HMA base, intermediate, and surface; each layer is an opportunity. Wedge and level will not be considered an opportunity.

    b.  Profile milling to correct cross slope is considered an opportunity prior to placing base, intermediate, or surface HMA.

2.  Type B. Pavement that is not included in the description above under Type A.

At locations where an inertial profiler is used to accept smoothness, a quality assurance adjustment will be determined for each lane. This adjustment will be applied to all QC/QA HMA pay items within the pavement section. The adjustment will be calculated using the following formula:

$$q_s = (PF_s - 1.00) \sum_{i=1}^{n} \left( A \times \frac{S}{T} \times U \right)$$

where:

$q_s$ = quality assurance adjustment for smoothness for one section
$PF_s$ = pay factor for smoothness
$n$ = number of layers
$A$ = area of the section, sq yd
$S$ = planned spread rate for material, lb/sq yd
$T$ = conversion factor: 2,000 lb/ton
$U$ = unit price for the material, $/ton.

The quality assurance adjustment for smoothness, $Q_s$, for the contract will be the total of the quality assurance adjustments for smoothness, $q_s$, on each section by the following formula:

$$Q_s = \sum q_s$$

880      When smoothness is measured by an inertial profiler, payment adjustments will be made for any 0.1 mile section based on initial MRI generated on the surface course only and in accordance with the following table. Smoothness correction, if required, shall be in accordance with 401.18(e). The MRI pay factors for smoothness will be determined prior to any required smoothness correction.

| PAY FACTORS FOR SMOOTHNESS Posted Speed greater than 45 mph | |
| --- | --- |
| MRI, in./mi. | Pay Factor, PF |
| over 0 to 35 | 1.06 |
| over 35 to 40 | 1.05 |
| over 40 to 45 | 1.04 |
| over 45 to 50 | 1.03 |
| over 50 to 55 | 1.02 |
| over 55 to 60 | 1.01 |
| over 60 to 70 | 1.00 |
| over 70 to 75 | 0.99 |
| over 75 to 80 | 0.98 |
| over 80 to 85 | 0.96 |
| over 85 to 90 | 0.95 |
| over 90 | For Type A, PFs will be 0.95 and the section shall be corrected to 70 or less. |
| over 90 to 110 | For Type B, PFs will be 0.95 and the section does not require correction. |
| over 110 | For Type B, PFs will be 0.95 and the section shall be corrected to 90 or less. |

**401.20 Appeals**

890      **(a) Dense Graded Mixtures and Open Graded Mixtures**
If the QC test results do not agree with the acceptance test results in a sublot, a request, along with a comparison of the QC and acceptance test results, may be made in writing for additional testing of that sublot. The appeal sample will be analyzed in