

# CONSTRUCTION PROCEDURES HANDBOOK

SECTION VI	SUBSECTION U	DATE
CONSTRUCTION OPERATIONS	RIDE QUALITY ACCEPTANCE TESTING FOR HMA	08/03/2018

This procedure does not apply to Concrete Bridge Deck, and Concrete Bridge Approach and Diamond Grinding Surface Acceptance Testing. See 2011 CPH Section VI Subsection F-2 for this procedure.

Subpart 401.03.03.J, 406.03.01 J, and 421.03.03.J “Ride Quality Requirements” of the 2007 Specification requires the Contractor to comply with a specified surface tolerance for HMA Surface Course, and Micro Surfacing for all projects

The Department will evaluate the final pavement riding surface for paving on mainline travel lanes equal to or greater than 2,500 feet length and any lane within the project of at least 1,000 feet length using the International Roughness Index (IRI) as specified in NJDOT Test Methods R-1. The Department will use the measured IRI to calculate the pay adjustment (PA) for mainline travel lanes using pay adjustment equation (PAE) type PA1 as specified in [Table 401.03.03-7](#). PA will be based on lots of 0.01 mile length.

The final riding surface is defined as the last lift of the pavement structure where traffic will be allowed. The Contractor is required by specification to perform quality control testing during lift placement to ensure compliance with the specified ride quality requirements.

For projects paving on mainline travel lanes of less than 2,500 feet length, the RE will visually inspect the final riding surface. If the RE determines that the work may not conform to the ride quality requirements, include these sections in the test request. The Department will evaluate the ride quality of the final riding surface of all tested mainline travel lanes using IRI. The Department will use the measured IRI to calculate the PA using pay equation type PA1 as specified in [Table 401.03.03-7](#).

Visually inspect paving on ramps and shoulders. If it is suspected by the RE that ride quality is unacceptable, include these sections in the test request and use measured IRI to calculate the pay adjustment using pay equation type PA2 as specified in [Table 401.03.03-7](#).

## **Pre-Paving Meeting**

Ensure that the Pavement & Drainage Management & Technology Unit is invited to the Pre-Paving meeting. IRI contract requirements are to be discussed by the RE. Topics for the meeting will include, but not be limited to, IRI requirements and exclusions, scheduling for the testing, preparation for the testing, and reporting of the testing and resulting pay adjustment. Discuss and ensure the contractor understands that IRI will not be waived and additional exclusions will not be provided unless reviewed by the RE and approved by the Pavement & Drainage Management & Technology unit.

### **Scheduling Testing**

The RE is to submit a request to the Pavement & Drainage Management and Technology Unit to perform IRI testing when the pavement is complete at the following link: <http://www.state.nj.us/transportation/eng/pavement/pavementform.shtm>

The RE is to complete all required fields in the request form, add additional comments if desired, check the RE confirmation box and click the submit button.

Testing will only be conducted on lanes with the full length of the lane paved. Requests for partial lane testing cannot be acted upon. The RE is to request testing AFTER completion of paving the final riding surface of the project or when a particular portion of a project is complete as follows:

When at least 2500 feet of continuous paving is complete, and there is a delay in completing paving due to a winter shut down, a request should be sent. The Contract has noncontiguous locations. Request should be made when each location is complete. The Contract has multiple stages of paving where each stage is open to traffic.

Discuss these and other possible paving scenarios to coordinate with the Pavement & Drainage Management & Technology Unit at the pre-paving meeting for direction on how to submit requests.

Once the request is received by the Pavement & Drainage Management & Technology Unit the project will be scheduled for Ride Quality testing on a "first come, first served" basis. Test scheduling is weather dependent, but generally scheduled within a few days of request. The RE will be notified of the proposed testing date and notify the contractor by e-mail so they may arrange any necessary traffic control, sweeping of the project and temporary pavement marking tape layout as needed prior to testing.

### **Preparation for the Testing**

The RE will ensure the following:

- The Contractor provides the necessary traffic safety control set-up and lighting as specified in Subpart 105.01.02 of the 2007 Specifications.
- The contractor is not performing any work that will impede the testing as this will delay testing and push the project to the bottom of list for scheduled testing.
- The road surface is clear of equipment and swept clean of debris.
- The start and stop are marked with a single line of temporary pavement marking tape perpendicular to the roadway baseline at the new pavement transition (beginning and end of new pavement) of each lane, shoulder and ramp to be tested.

Contact Traffic Operations to ensure no NJDOT or Utility work is scheduled on the date of testing. If there is a conflict, coordinate with all parties to correct the conflict.

## **Post Testing**

The RE will receive a pay adjustment report from the Pavement & Drainage Management & Technology Unit. Pay adjustments are to be incorporated in the Contract through a Change Order. New Work, Items 401118M NS HOT MIX ASPHALT RIDEABILITY QUALITY ADJUSTMENT DOLL and /or 507001M NS CONCRETE RIDEABILITY QUALITY ADJUSTMENT DOLL are to be used. They can be positive or negative in value. Their incorporation into the Contract is to be done as soon as the pay adjustment is received by the RE. Do not wait until the end of the Contract to create the Items.

The pay adjustment report will provide the evaluated IRI. For a sub lot with an IRI greater than 170 Inch/Mile, the Department may require corrective action or assess the maximum negative pay adjustment as computed in Pay Equations for Ride Quality Table. Visually inspect sub lots where the reported IRI is greater than 170 inch/mile to determine if any localized unacceptable condition exists that would present a safety concern for vehicles. For example, a sub lot having a manhole which is not set properly and causing an unacceptable bump or unsafe condition to the motorist. If the condition is determined unsafe or unacceptable, then direct the Contractor to remove and replace the work or provide a corrective action plan to fix the identified location as specified in 105.03.

If the Contractor's plan for corrective action is approved and the lot is corrected, the Department will retest and evaluate the corrected area as a new lot that must meet the same requirements as the initial work.

If the Contractor's plan for corrective action is not approved, the Department may require removal and replacement. The replacement work is subject to the same requirements as the initial work.