

# MICRO SURFACING INSPECTION GUIDELINES

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*MDOT Standard Specifications for Construction, Section 504*

Make a copy of both pages of this checklist for your use in conducting field inspections.

Review all checklist items which apply to the project to help make sure work is in compliance with the Specifications and Contract Documents.

## 1. MATERIALS MEET SPECIFICATIONS

- ✓ Materials must match those submitted on the Mix Design.
- ✓ A separate Mix Design is required for each aggregate to be used on the project.
- ✓ Mix Design will show the proportioning of materials in the final mixture.
- ✓ A change in aggregate or emulsion source requires a new mix design.

## 2. EQUIPMENT REQUIREMENTS

- ✓ Continuous Machines (self-propelled, front feed, continuous loading) are required on projects greater than 15,000 SY. Truck mounted batch type machines are permitted on projects or sections of projects less than 15,000 SY.
- ✓ Continuous machines require opposite side driver stations on the front of the machine and a remote speed control at the back mixing platform.
- ✓ Sufficient material transport units to assure a continuous operation during construction are required.
- ✓ Readily accessible rate indicators shall be provided for checking the proportioning of each material to be mixed.
- ✓ A secondary strike off, attached to the full width spreader box, is required for use on surface course applications.
- ✓ If a rut box is required, it shall be a V configured screed rut box manufactured to perform micro surface rut fill applications 5 to 6 feet wide.

## 3. PRE PAVING MEETING REQUIREMENTS

- ✓ Equipment inspection, including material transport units.
- ✓ Review Mix Design.
- ✓ Calibrate Micro Surfacing laydown machine(s).
- ✓ Test Strip(s). If more than one machine is used, each must lay a test strip.

## 4. SURFACE PREPARATION REQUIREMENTS

- ✓ Thoroughly clean the pavement as defined in 504.03C – Surface Preparation.
- ✓ A bond coat is required when covering concrete surfaces. A bond coat is the contractors option when covering bituminous surfaces.
- ✓ Protect and then uncover existing structures as a part of the construction process.
- ✓ Remove all plastic pavement markings prior to Micro Surfacing. This should be paid a separate pay item as outlined in 504.04E.

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## 5. METHODS AND RATES

*Standard Micro Surfacing* – The Contractor has the option to apply one of the following:

- ✓ Option 1: One Course of 3FA mixture at 35 lbs. / SY excluding shoulders. 22 lbs. / SY on shoulders.
- ✓ Option 2: Two separate courses of 2FA for a combined rate of at least 30lbs. / SY excluding shoulders. Apply the 2FA mix at 17 lbs. / SY on the surface course and the shoulders.

*Single Course Micro Surfacing* – The Contractor shall apply:

- ✓ A single course using 2FA aggregate applied at an average of 24 lbs. / SY (+ / - 2 lbs.) by weight of dry aggregate to entire area to be covered as indicated in the plans.

*Rut filling* – Ruts exceeding ½” deep should be filled using 3FA aggregate and a rut box.

## 6. SURFACE QUALITY

- ✓ Longitudinal joints shall be constructed with less than a 3” overlap on adjacent passes and no more than a 3/8” overlap thickness as measured with a 10 ft. straight edge.
- ✓ Transverse start up joints shall be constructed with no more than 1/8” difference in elevation across the transverse joint as measured with a 10 ft. straight edge.
- ✓ The finished surface shall be free of excessive scratch marks, tears and rippling.

## 7. WEATHER REQUIREMENTS

- ✓ Air and pavement temperature shall be 45° F or above.
- ✓ No temperature forecasts below 32° F for 24 hours after placement.
- ✓ Upper Peninsula placement is permitted June 1 to Sept. 15. Lower Peninsula is May 1 to Oct. 1.

## 8. QUALITY CONTROL MEETS REQUIREMENTS

- ✓ Provide a finished surface free of excessive scratch marks, tear marks and rippling as defined under 504.03H – Quality Control.
- ✓ Review Quality Control Plan contents.
- ✓ Produced mixture must comply with the Mix Design and tolerances listed in Table 504-3.
- ✓ Asphalt Content shall be checked at random 3 times per day using the counter readings.
- ✓ Application rate shall be calculated at random 3 times per day using counter readings.
- ✓ Documentation – Contractor will submit a Daily Report covering items listed in 504.03H3.

## 9. HOT TOPICS TO DOUBLE CHECK

- ✓ A change in aggregate or emulsion suppliers requires a new Mix Design and recalibration of paver(s).
- ✓ Contractor shall keep his strike offs clean to help minimize scratch marks, tears and other surface irregularities.
- ✓ Temporary traffic markings shall be Type NR Paint, Temporary or traffic tape.
- ✓ Micro Surfacing shall not be opened to traffic until it has cured sufficiently to prevent pick up by tires. To protect the new surface where there is turning traffic (i.e. intersections, Driveways, etc.), the contractor may choose to spread a cover aggregate prior to opening to traffic.