

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR

**WARRANTY WORK REQUIREMENTS FOR MULTIPLE COURSE HOT MIX
ASPHALT OVERLAYS ON CONCRETE PAVEMENT; MULTIPLE COURSE HOT MIX
ASPHALT OVERLAYS ON COMPOSITE PAVEMENT; MULTIPLE COURSE HOT
MIX ASPHALT OVERLAYS ON FLEXIBLE PAVEMENT**

CFS:DJW

1 of 2

APPR:KPK:CJB:03-18-20

FHWA:APPR:03-18-20

a. Description. This special provision must be used in conjunction with 20SP-500A - Materials and Workmanship Pavement Warranty to construct warranted pavement for multiple course Hot Mix Asphalt (HMA) overlays on rigid, flexible and composite pavements using EMH, EH, and Stone Matrix Asphalt (SMA) Superpave mixtures.

b. Limits of Warranted Work. The warranted work includes all multiple course HMA overlays on driving lanes within the project limits unless otherwise indicated on the plans.

c. Warranty Term. The warranty term will be 5 years from the date of Initial Acceptance otherwise termed the Acceptance Date of Construction.

d. Warranty Bond. Supply a warranty bond equal to \$400,000.00 or five percent of the total contract amount whichever is less.

e. Initial Ride Quality Acceptance Criteria. Initial Ride Quality requirements are specified in the contract.

f. Warranty Requirements. Table 1 lists the allowable threshold limit for each condition parameter within each segment and the maximum number of allowable segments within a driving lane for each condition parameter. If any of the warranty requirements are not met, as a result of a defect in materials and/or workmanship, corrective action (warranty work) is required.

The defective segments for surface distress may or may not be contiguous to necessitate corrective action. The maximum allowable number of defective segments for each condition parameter applies to each driving lane in each travel direction. Ensure each driving lane is evaluated independent of adjacent driving lanes. Ensure any pavement surface requiring removal/replacement to correct deficiencies, for any condition parameter, is replaced full-width across the driving lane.

g. Corrective Actions. Table 2 lists recommended corrective actions to outline typical acceptable treatments for the various condition parameters. The Department will accept the listed corrective action if the action addresses the cause of the condition parameter. The Contractor may use an alternative action subject to Department approval.

Table 1: Warranty Requirements

Condition Parameter	Threshold Limits Per Segment (Length = 528 feet)	Max. Defective Segments Per Driving Lane-Mile (a)
Longitudinal Cracking/Open Joint (d)	10% of segment length	1
De-bonding	5% of segment length	1
Raveling	8% of segment length	1
Flushing	4% of segment length	1
Rutting (c)	ave. rut depth = 3/8 inch (b)	1
<p>a. The maximum allowable number of defective segments per driving lane is determined by multiplying by the length of the specific driving lane in miles.</p> <p>b. The rut depth threshold applies to each wheel path independently.</p> <p>c. The pavement surface will be monitored for the presence of rutting on each driving lane throughout the warranty period. The pavement surface will be measured beginning at the POB and every 132 feet thereafter to determine average rut depth to quantify rutting for a particular segment.</p> <p>Rut measurements will be done using a straight rigid device that is a minimum of 7 feet long and of sufficient stiffness that it will not deflect from its own weight, or a wire under sufficient tension to prevent sag when extended 7 feet. Measurements will be taken by placing this "straightedge" across the pavement surface perpendicular to the direction of travel. The straightedge must contact the surface on at least two bearing points with one located on either side of the rut. The straightedge is properly located when sliding the straightedge along its axis does not change the location of the contact points. Rut depth is then measured at the point of greatest perpendicular distance from the bottom of the straightedge to the pavement surface.</p> <p>d. A crack in the new surface will be excluded if it is determined to be "reflective" from a similar underlying crack condition.</p>		

Table 2: Recommended Corrective Actions

Condition Parameter	Recommended Action
Longitudinal Cracking/ Open Joint	Cut and Seal
De-bonding	Mill and Resurface
Raveling	Mill and Resurface
Flushing	Mill and Resurface
Rutting	Microsurface or Mill and Resurface (a)
a. Recommended action is dependent on the depth of the rut susceptible material.	