

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MATERIALS AND WORKMANSHIP PAVEMENT WARRANTY

CFS:DJW

1 of 8

APPR:KPK:NDM:03-14-24
FHWA:APPR:03-18-24

a. Description. The materials and workmanship pavement warranty consists of the warranty bond, the terms of this special provision, and the Special Provision for Warranty Work included in the contract. This special provision establishes the common terms and definitions applied to pavement projects requiring a warranty. The Materials and Workmanship Pavement Warranty warrants the Department against defects in materials and workmanship.

b. Definitions.

Acceptance Date of Construction. The date when the warranted work is complete and confirmed in writing on the initial acceptance document, by the Department, to be in compliance with the contract specifications and is open to traffic. This is the date of initial acceptance and constitutes the start date for the warranty period. There may be more than one acceptance date of construction for a project.

Conflict Resolution Team (CRT). The five-person team responsible for resolving disputes between the Department and the Contractor regarding any claim of non-compliance with the warranty requirements.

Concrete Pavement Distresses.

A. **Crack.** A visible fissure or surface discontinuity that may or may not extend through the entire slab/pavement. Cracks may be singular or in multiple patterns. Crack types are:

1. **Corner.** Orientation is generally diagonal and located near a slab corner. It intersects both the transverse and longitudinal pavement joints.
2. **Longitudinal.** A crack, at least five feet in length, that is oriented primarily in the longitudinal direction versus the transverse direction. That is, the angle between the overall crack line and the centerline is less than 45 degrees. It can exist anywhere in the driving lane; i.e., at the pavement centerline joint, wheel path, center of lane, or lane/shoulder joint.
3. **Map.** Interconnecting, variable spaced cracks in a random orientation and pattern.
4. **Transverse.** A crack, at least five feet in length, that is oriented primarily in the transverse direction versus the longitudinal direction. That is, the angle between the overall crack line and the transverse line is less than 45 degrees. It can be either straight or irregular in direction.

B. **Joint Sealant Failure.** The loss of material integrity consisting of either adhesive failure

(debonding), cohesive failure (material separation), or the complete loss of sealant material.

- C. **Scaling.** The concrete surface has a visible, exposed, rough texture from a loss of either aggregate or mortar.
- D. **Shattered Slab.** A pavement slab broken into four or more sections by full-depth cracks.
- E. **Spall.** Broken or missing piece of concrete contiguous with the perimeter edge of a slab with a surface area exceeding two square inches.

Driving Lane(s). The delineated pavement surface used by traffic and the portion of the pavement considered warranted work. Each of the following is considered a separate driving lane.

- Each individual mainline lane.
- The sum of all ramp lanes and the associated acceleration/deceleration lanes is considered a separate driving lane.
- The sum of all auxiliary lanes, such as passing lanes and turn lanes, is considered a separate driving lane.

Approaches, driveways, shoulders and adjoining transition tapers between various types of pavement are not considered driving lanes for the purpose of this provision.

Hot Mix Asphalt (HMA) Pavement Distresses.

- A. **Crack.** A visible fissure or surface discontinuity that may or may not extend through the entire slab/pavement. Cracks may be singular or in multiple patterns. Crack types are:
 - 1. **Alligator.** Parallel longitudinal cracks with transverse tears between them exhibiting a pattern similar to an alligator hide. An alligator crack typically starts in a wheel path and may extend to other lane locations.
 - 2. **Block.** Transverse and longitudinal cracking that has progressed to a pattern that the pavement is broken into blocks of size less than 12 foot by 12 foot. The shape of each block may be irregular.
 - 3. **Longitudinal/Open Joint.** A crack, at least five feet in length, that is oriented primarily in the longitudinal direction versus the transverse direction. That is, the angle between the overall crack line and the centerline is less than 45 degrees. It can exist anywhere in the driving lane; i.e., at the pavement centerline joint, wheel path, center of lane, or lane/shoulder joint.
 - 4. **Transverse.** A crack, at least five feet in length, that is oriented primarily in the transverse direction versus the longitudinal direction. That is, the angle between the overall crack line and the transverse line is less than 45 degrees. It can be either straight or irregular in direction.
- B. **De-bonding.** A physical separation of two HMA layers. De-bonding will be visually identified as shoving, or the loss of the new surface course. Surface potholes, regardless of depth, will be classified as de-bonding.

- C. **Flushing.** The accumulation of excess asphalt binder on the pavement surface that creates a shiny, reflective condition and becomes tacky to the touch at high temperatures.
- D. **Raveling.** Surface disintegration, due to the loss of coarse or fine aggregate material, that occurs over an area or in a continuous longitudinal strip.
- E. **Rutting.** A longitudinal surface depression in the wheel path. It may have associated transverse displacement or humping.

Materials and Workmanship Warranty. The Contractor is responsible for correcting defects in the pavement caused by elements within the Contractor's control (i.e., the materials supplied and the workmanship), during the warranty period. Since the Department is responsible for the pavement design, the Contractor assumes no responsibility for defects that are design related. If a defect is attributable to both, the materials and/or workmanship, and the design, responsibility for correcting the defect will be shared by the Department and the Contractor; the Contractor is responsible for the percentage of fault attributable to the workmanship and/or materials, and the Department is responsible for the percentage of fault attributable to the design.

Slab. The concrete pavement outlined between consecutive transverse joints and longitudinal joints or a longitudinal joint and the outer edge.

Warranty Bond. A bond issued by a surety which guarantees that the warranty requirements will be met.

Warranty Work. Corrective action taken to correct a deficient pavement as outlined in the applicable warranty special provision.

c. Initial Acceptance. The Department and the Contractor must jointly review all completed warranted work, or a portion thereof, as determined by the Department. If the work does not meet contract requirements, the Contractor must make all necessary corrections, at their expense, prior to initial acceptance. Initial acceptance will occur as soon as the Department confirms in writing, on the initial acceptance form, that contract requirements have been met for the warranted work. The date on which initial acceptance occurs is termed the Acceptance Date of Construction.

Initial acceptance will be documented and executed jointly by the Department and the Contractor on a form furnished by the Department. A copy of the form will be sent to the Contractor's warranty bond surety agent by the Department. Neither the initial acceptance nor any prior inspection, acceptance or approval by the Department diminishes the Contractor's responsibility under this warranty.

The Department may accept the work and begin the warranty period, excluding any area needing corrective work, to accommodate seasonal limitations or staged construction.

Acceptance of material, in penalty, under the Department's quality assurance program will not relieve the Contractor from meeting the material and workmanship warranty requirements for the accepted material.

d. Warranty Bond. Furnish a single term warranty bond, in an amount stipulated in the Special Provision for Warranted Work Requirements, prior to contract award. The effective

starting date of the warranty bond will be the Acceptance Date of Construction. The warranty bond will be released at the end of the warranty period or after all warranty work has been satisfactorily completed, whichever is latest.

e. Rights and Responsibilities of the Department. The Department:

1. Reserves the right to approve the schedule proposed by the Contractor to perform warranty work.
2. Reserves the right to approve all materials and specifications used in warranty work.
3. Reserves the right to determine if warranty work performed by the Contractor meets the contract specifications.
4. Reserves the right to perform, or have performed, routine maintenance during the warranty period, which routine maintenance will not diminish the Contractor's responsibility under the warranty.
5. Reserves the right, if the Contractor is unable, to make immediate emergency repairs to the pavement to prevent an unsafe road condition as determined by the Department. The Department will attempt to notify the Contractor that action is required to address an unsafe condition. However, should the Contractor be unable to comply with this requirement, to the Department's satisfaction and within the time frame required by the Department, the Department will perform, or have performed any emergency repairs deemed necessary. Any such emergency repairs undertaken will not relieve the Contractor from meeting the warranty requirements of this special provision. Any costs associated with the emergency repairs, including but not limited to all maintaining traffic and restoring all associated pavement features will be paid by the Contractor if it is determined the cause was from defective materials and/or workmanship.
6. Reserves the right, if the Contractor is unresponsive, to call the surety to complete the applicable warranty work
7. Is responsible for monitoring the pavement throughout the warranty period and will provide the Contractor all written reports of the surface treatment's condition related to the warranty requirements. The Contractor will not be relieved of any responsibility based upon a claim that the Department failed to adequately monitor the pavement or to report its findings to the Contractor.
8. Is responsible for notifying the Contractor, in writing, of any corrective action required to meet the warranty requirements.

f. Rights and Responsibilities of the Contractor. The Contractor:

1. Must warrant to the Department that the warranted work will be free of defects in materials and workmanship. Ensure the warranty bond is described on a form furnished by the Department. Submit the completed form to the Department prior to award of contract.
2. Is responsible for performing all warranty work including, but not limited to, maintaining traffic and restoring all associated pavement features, at the Contractor's expense.

3. Is responsible for performing all temporary or emergency repairs, resulting from being in non-compliance with the warranty requirements, using Department approved materials and methods.

4. Must notify the Department and submit a written course of action for performing the needed warranty work a minimum of 10 calendar days prior to commencement of warranty work, except in the case of emergency repairs as detailed in this special provision. The submittal must propose a schedule for performing the warranty work and the materials and methods to be used.

5. Must follow a Department approved maintaining traffic plan when performing warranty work. Ensure all warranty work is performed under permit issued by the TSC Permits Staff. The permit fee and an individual permit performance bond will not be required. The permit insurance requirements, however, will apply.

6. Will be responsible for reimbursing the Department a portion of any incentive payments paid to the Contractor for early completion of the original work. Reimbursements will be required if the proposed maintaining traffic plan for corrective action requires lane closures during peak hour traffic. Peak hours will be determined by the Region Traffic and Safety Engineer. The daily reimbursement amount must not exceed 25 percent of the original daily earned incentive payment. The Department will determine the actual percentage on a project by project basis.

7. Must furnish to the Department, if warranty work is required, a supplemental lien bond and liability insurance in the amount required by the Department to cover the costs of warranty work using Department approved forms. Ensure supplemental coverages are furnished prior to beginning any warranty work.

8. Must complete all warranty work prior to conclusion of the warranty period, or as otherwise agreed to by the Department.

9. Will be liable during the warranty period in the same manner as Contractors currently are liable for their construction related activities with the Department pursuant to the standard specifications, including, but not limited to subsections 104.07.C, 107.10 and 107.11 of the Standard Specification for Construction. This liability will arise and continue only during the period when the Contractor is performing warranty work. This liability is in addition to the Contractor performing and/or paying for any required warranty work, and will include liability for injuries and/or damages and any expenses resulting therefrom which are not attributable to normal wear and tear of traffic and weather, but are due to non-compliant materials, faulty workmanship, and to the operations of the Contractor as set forth more fully in subsections 104.07.C, 107.10 and 107.11 of the Standard Specification for Construction.

g. Evaluation Method. The Department will conduct pavement evaluations by dividing the project into segments. Each individual driving lane will be divided into segments of 528 feet (1/10 mile) in length for measuring and quantifying the condition parameters. Evaluation will include use of both the Department's Pavement Management System and/or field pavement condition reviews. This evaluation may be waived in emergency situations.

The beginning point for laying out segments will be the Point of Beginning (POB) of the project. Segments will be laid out consecutively to the Point of Ending (POE) of the project. The original segmentation of the project will be used for all successive reviews throughout the warranty period.

h. Condition Parameters. Condition parameters are used to measure the performance of the warranted pavement during the warranty term. Each condition parameter has a threshold level applied to each segment and a maximum number of defective segments allowed before corrective action (warranty work) is required.

During the warranty period, the Contractor will not be held responsible for pavement distresses that are caused by factors unrelated to materials and workmanship. These include but are not limited to: chemical and fuel spills, vehicle fires, snow plowing, and quality assurance testing such as coring. Other factors considered to be beyond the control of the Contractor which may contribute to pavement distress will be considered by the Engineer on a case by case basis upon receipt of a written request from the Contractor.

i. Warranty Requirements. Warranty work will be required when the following two criteria are met as a result of a defect in materials and/or workmanship.

Criterion 1 - The threshold limit for a condition parameter is exceeded, and

Criterion 2 - The maximum allowable number of defective segments is exceeded for one or more condition parameters for a driving lane.

Specific threshold limits and segment limits are covered in the Special Provision for Warranted Work.

To determine whether the failure to meet the warranty criteria is a result of defects in materials and/or workmanship, a joint field investigation by the Department and the Contractor will be conducted. The Department and/or Contractor may elect to have a forensic investigation conducted. The decision to undertake a forensic investigation, the scope of it, and the selection of the party to conduct it will be agreed to by the Department and the Contractor. The forensic investigation will be conducted following the *NCHRP Report 747 "Guide for Conducting Forensic Investigations of Highway Pavements."* If agreement cannot be reached, either party may serve written notice that appointment of a Conflict Resolution Team (CRT) is required. Convene the CRT in accordance with this special provision.

j. Conflict Resolution Team. The sole responsibility of the Conflict Resolution Team (CRT) is to provide a decision on disputes between the Department and the Contractor regarding application or fulfillment of the warranty requirements. The CRT will consist of five members:

- Two members selected and compensated by the Department.
- Two members selected and compensated by the Contractor.
- One member mutually selected by the Department and the Contractor. Compensation for the third party member will be equally shared by the Department and the Contractor.

The CRT may decide to conduct a forensic investigation, will determine the scope of work and select the party to conduct the investigation. All costs related to the forensic investigation will be shared proportionately between the Contractor and the Department based on the determined cause of the condition. The forensic investigation will be conducted following the *NCHRP Report 747 "Guide for Conducting Forensic Investigations of Highway Pavements."*

k. Emergency Repairs. If the Department determines that emergency repairs are necessary for public safety, the Department or its agent may take repair action. Ensure

emergency repairs are authorized by the Region Engineer.

Prior to emergency repairs, the Department will document the basis for the emergency action. In addition, the Department will preserve evidence of the defective condition.

l. Non-extension of Contract. This special provision must not be construed as extending or otherwise affecting the claim process and statute of limitation applicable to this Contract.

m. Measurement and Payment. All costs, including engineering and maintaining traffic costs, associated with meeting the requirements of this special provision are considered to be included in the contract unit prices for the warranted work items regardless of when such costs are incurred throughout the warranty period. These costs include but are not limited to, all materials, labor and equipment necessary to complete required warranty work.

Michigan Department
of Transportation
1029 (10/17)

File 107

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