

Ohio Department of Transportation

Warranty Application Guidelines



November 25, 2002 rev 3

In order to assure success of the warranty program, ODOT must apply warranty specifications and supplements to the proper projects. These guidelines are intended to clarify application and reduce the chances for disagreements during the warranty period. Failure to follow these guidelines may lead to disagreements in the future and could void the warranty or harm the warranty program.

Below please find a list of available warranty specifications contained in this document. Questions regarding this document should be directed to the Key Person(s) listed.

Item	Specification	Period (Years)	Application	Key Person(s)
Asphalt	880	7	New pavement and major rehabilitation (see additional specification detail)	Aric Morse 614-995-5994 Dave Powers 614-275-1387
Asphalt	1059	3	Minor rehabilitation and All PM (see additional specification detail)	Dave Miller 614-995-5991 Keith Keeran 614-644-6622
Bridge Deck - New	893 894	7	New bridge deck (see additional specification detail)	Harold Schultz 614-644-6628
Concrete	884	7	New pavement and major rehabilitation (see additional specification detail)	Aric Morse 614-995-5994 Dave Miller 614-995-5991 Keith Keeran 614-644-6622
Chip Seal	882	2	All PM (see additional specification detail)	
Hot In-place Recycling	886	3	For average to good existing conditions and good structure (see additional specification detail)	Aric Morse 614-995-5994 Dave Powers 614-275-1387 Keith Keeran 614-644-6622
Microsurfacing	881	3	All PM (see additional specification detail)	

PM = Projects that qualify for preventive maintenance according to the Pavement Preventive Maintenance Program Guidelines.

Bridge Deck Warranty Application Guidelines

The warranty covers three different types of possible defects. These defects are alligator or map cracking, scaling, and spalling. These three defect are the result of actions under the control of the contractor and are independent of the design of the deck.

The following items apply to all bridge deck warranty specifications:

1. Must be used on all priority system routes.
2. Must be used for projects with average daily traffic (ADT) greater than 30,000.
3. Requiring the Contractor to provide a warranty does not relieve ODOT from the responsibilities of performing proper inspection. The maximum warranty period is only 7 years while bridges are designed to last much longer then this period.

Supplemental Specification 893

Class S Concrete for New Bridges Decks With Warranty

This is intended for new bridge decks and requires the use of SS 842 (Item 511 when the 2002 C & MS is used).

The pay description is: **Item 893 Class S Concrete for Bridge Deck with Warranty**

Supplemental Specification 894

High Performance Concrete for New Bridges Decks With Warranty

This is intended for new bridge decks and requires the use of SS 844 (Item 511 when the 2002 C & MS is used).

The pay description is: **Item 894 High Performance Concrete for Bridge Deck with Warranty**

Pavement Warranty Application Guidelines

Requiring the Contractor to provide a warranty does not relieve ODOT of its responsibility to apply the proper pavement rehabilitation strategy. Pavements which require full depth repairs in a non-warranty situation, require those same repairs under a warranty. The warranty does not hold the Contractor responsible for the condition of the existing pavement. Failures during the warranty period which were the result of the existing conditions are still ODOT's responsibility and not the Contractor's. To prevent these sorts of failures, ODOT must specify the proper treatment(s) of the existing pavement so the Contractor has the opportunity to provide a pavement which will last through the warranty period. Failure to follow these guidelines may lead to disagreements in the future and could void the warranty.

The following documents are to be followed for all pavement warranty projects, where applicable:

1. Policy 515-002 (P), Pavement Design and Selection Process (Pavement Policy)
2. Pavement Design & Rehabilitation Manual (Pavement Manual)
3. Pavement Preventive Maintenance Program Guidelines.

The recommended minimum project length for pavement warranties is one lane-mile.

The following pages detail guidelines for application of each of the pavement warranty specifications and supplements.

Supplemental Specification 880
Asphalt Concrete with Warranty (7 year)

The following items apply:

1. Restricted to new pavement, pavement replacement, and major rehabilitation (Rubblize and Roll, and Crack and Seat).
2. Must be used on all projects that have a continuous pavement length greater than 1 mile.
3. May not be used on urban routes with forced stop conditions along the mainline.
4. Must be structurally designed for a 20 year life.

Plan development is intended to be done in a timely manner in order to sell the project within the time frame assumed in the pavement design calculations. Contract documents must include the Design Designation and all pertinent information necessary for a successful contract.

A project file containing all pavement design information must be kept on file in the District office until the end of the warranty period. This file must include all traffic information, ESAL calculations, deflection data and analysis, all pavement history performance information, and any other design information used in the design and analysis of the pavement.

The warranty requirements for rutting are waived within 200' of the end of a ramp if the pavement depth is tapered down. Districts should consider following the High Stress Guidelines, Appendix B of the Pavement Manual, and specifying non-warranted material in these locations.

Typical Sections will show assumed lift thicknesses and step widths according to Section 103 of the Pavement Manual. A note must be included in the General Notes stating; "Lift thicknesses and step widths shown in the plan are for quantity estimation only and are not required lift thicknesses for actual construction."

The pay description is: **Item 880 Asphalt Concrete (7 year warranty)**.

Supplemental Specification 884 Concrete Pavement with Warranty

The following items apply:

1. Restricted to new pavement, pavement replacement, and major rehabilitation (Unbonded Concrete Overlay).
2. Must be used on all priority system routes.
3. Must be used for projects with average daily traffic (ADT) greater than 30,000.
4. Must be used on all projects that have a continuous pavement length greater than 1 mile.
5. Must be structurally designed for a 20 year life.

Plan development is intended to be done in a timely manner in order to sell the project within the time frame assumed in the pavement design calculations. Contract documents must include the Design Designation and all pertinent information necessary for a successful contract.

A project file containing all pavement design information must be kept on file in the District office until the end of the warranty period. This file must include all traffic information, ESAL calculations, deflection data and analysis, all pavement history performance information, and any other design information used in the design and analysis of the pavement.

Plans must show the entire concrete pavement, mainline, shoulders, ramps, etc., as Item 884. Typical sections must specify the locations and types of longitudinal joints. Transverse joints and intersection details are not necessary. All Standard Drawings for concrete pavement are still required.

This Item may be placed on an asphalt base or an aggregate base. When an asphalt base is used, a minimum of 4 inches Item 301 or 302 Bituminous Aggregate Base on 6 inches of Item 304 Aggregate Base is required. When aggregate base is used, a minimum of 6 inches of Item 304 Aggregate Base is required. It is up to the Department to specify the base to be used.

The warranty specification allows the Contractor to choose reinforced or plain (451 or 452) concrete pavement. The pay item description is: **Item 884 Portland Cement Concrete Pavement (7 year warranty)**

Supplement 1059 Asphalt Concrete Surface Course Warranty Requirements

This Supplement requires the Contractor to provide a 3 year warranty. Standard specification items are used in the plans for all pavement materials, i.e. 446, 448, etc.

The following items apply:

1. Must be used on all **priority system** preventive maintenance projects that qualify for thin hot-mix overlay, as defined in the Pavement Preventive Maintenance Program Guidelines.
2. May be used on all **general system** preventive maintenance projects that qualify for thin hot-mix overlay, as defined in the Pavement Preventive Maintenance Program Guidelines.
3. Must be used on all **priority system** minor rehabilitation projects, **designed** in accordance with Pavement Design and Rehabilitation Manual.
4. May not be used on urban routes with forced stop conditions along the mainline.
5. May be used on two-lane routes for non preventative trial projects with prior approval from the Office of Pavement Engineering.
6. The warranty shall only be applied to current items listed in the item master as approved by Central Office.

To qualify for minor rehabilitation, the projected PCR must be between 55 and 75 in the year construction is to take place. PCR projection equations are given in Section 100 of the Pavement Manual. Projects which do not qualify for preventive maintenance nor have been designed in accordance with the minor rehabilitation requirements, are not eligible for a warranty.

Where preventive maintenance or minor rehabilitation is set up to address medium or high severity rutting as defined in the PCR manual, considerations of milling must be in accordance with High Stress Guidelines, Appendix B of the Pavement Manual.

The warranty requirements for rutting are waived 250' prior to a forced stop control (i.e. stop sign, traffic signal, etc.). Districts should consider following the High Stress Guidelines, Appendix B of the Pavement Manual, and specifying non-warranted material in these locations.

Typical pavement items such as full depth repair or milling must be specified in the plans as they have always been. The warranty requirements do not require the Contractor to perform any work not specified in the plans nor do they hold him responsible for any failures resulting from existing conditions.

Typical sections will specify each layer of asphalt and the thickness according to Section 404 of the Pavement Manual. SS 1059 Warranty only applies to the surface course. For the warranted layers, only the surface pay item description will change. Examples of pay items are:

Item 446, Asphalt Concrete Surface Course, Type 1H with Supplement 1059 Warranty

Item 448, Asphalt Concrete Surface Course, Type 2, PG 64-28 with Supplement 1059 Warranty

Item 442, Asphalt Concrete Surface Course, 12.5 MM, Type A (446) With Supplement 1059 Warranty

etc.

Supplemental Specification 881 Micro-Surfacing with Warranty

This Item requires the Contractor to provide a 3 year warranty. The following items apply:

1. Must be used on all preventive maintenance projects that qualify for micro-surfacing, as defined in the Pavement Preventive Maintenance Program Guidelines.
2. This Item can be used on minor rehabilitation projects which do not require a structural overlay (see Pavement Design and Rehabilitation Manual).

Projects which do not qualify for preventive maintenance nor have been designed in accordance with the minor rehabilitation requirements, are not eligible for a warranty.

High stress locations are not candidates for micro-surfacing and must be treated in accordance with High Stress Guidelines, Appendix B of the Pavement Manual.

The guidelines for using micro-surfacing with warranty are essentially the same as the preventive maintenance guidelines for conventional micro-surfacing. With warranty, however, it is more important that proper pavements be selected and the existing pavement is properly prepared, otherwise the warranty could be voided.

The pay item descriptions are:

Item 881 Micro-Surfacing with Warranty, Single Course

Item 881 Micro-Surfacing with Warranty, Multiple Course

Supplemental Specification 882
Chip Seal With Warranty

This Item requires the Contractor to provide a 2 year warranty. The following items apply:

1. Must be used on all preventive maintenance projects that qualify for chip sealing, as defined in the Pavement Preventive Maintenance Program Guidelines.
2. Restricted to two-lane routes, with less than 2500 ADT.
3. Projects which do not qualify for preventive maintenance are not eligible for a warranty.

It is very important that pavements be selected in accordance with the Pavement Preventive Maintenance Guidelines, otherwise the warranty could be voided.

The pay item descriptions are:

Item 882 Single Chip Seal with Warranty

Item 882 Double Chip Seal with Warranty

Supplemental Specification 886 Hot In-Place Recycling with Warranty

This Item requires the Contractor to provide a 3 year warranty. It may be used on multi-lane or two-lane facilities. There are no traffic volume restrictions.

The following items apply:

1. This Item can be used on minor rehabilitation projects which do not require a structural overlay (see Pavement Design and Rehabilitation Manual).
2. This Item can be used as a preventive maintenance treatment where the project qualifies for any of the preventive maintenance applications as defined in the Pavement Preventive Maintenance Programs Guidelines.
3. May not be used on urban routes with forced stop conditions along the mainline.

Projects which do not qualify for preventive maintenance nor have been designed in accordance with the minor rehabilitation requirements, are not eligible for a warranty.

High stress locations are not candidates for Hot In-Place Recycling and must be treated in accordance with High Stress Guidelines, Appendix B of the Pavement Manual

Hot in-place recycling is not an appropriate treatment on pavements with an existing surface course consisting of an Item 404 or Item 448 type 1 mix if the current truck traffic calls for a heavy traffic volume mix design.

The pay item description is: **Item 886 Hot In-Place Recycling with Warranty**