LONG TERM PAVEMENT PERFORMANCE PROGRAM DIRECTIVE

For The Technical Direction Of The LTPP Program

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Subject:	Policy for Classification of Rehabilitated Test Sections		

The Long-Term Pavement Performance (LTPP) program's policy on classification of rehabilitated test sections are contained in the document **"Long-Term Pavement Performance, *Guidelines for Classification of Rehabilitated Test Sections*"**, Federal Highway Administration, June 1998. These guidelines shall be followed beginning on the issuance date of this directive.

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Long-Term Pavement Performance

Guidelines for Classification of Rehabilitated Test Sections

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Federal Highway Administration

Long-Term Pavement Performance

Serving your need for durable pavements

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Introduction

This document presents guidelines and procedures to be followed for classification of rehabilitated test sections in the Long-Term Pavement Performance (LTPP) program.

Experimental Designations for Rehabilitated Pavement Structures

When LTPP test sections are rehabilitated in accordance with current LTPP policy, they will be classified into one of the GPS experiments as defined in this document.

The following general suffixes are used for rehabilitated test sections classified into either GPS-6 or GPS-7 experiments:

Suffix A — Designates pavement structures which were rehabilitated with a single asphalt concrete overlay prior to the start of the LTPP program and monitoring. The overlay must consist of conventional hot-mix asphalt with no modifiers and no structural milling or modifications performed prior to overlay placement. (No new test sections shall be accepted in this classification.)

Suffix B — Designates pavement structures receiving a first asphalt concrete overlay using conventional hot-mix asphalt with no modifiers and no structural milling or modifications. The condition of the pavement prior to overlay was monitored by the LTPP program.

Suffix C — Designates pavements receiving an overlay (any number) that uses modified asphalts (including hot recycle, rubberized- wet process, and asphalt additives) in the hot-mix asphalt without any structural milling or modification. The condition of the pavement prior to overlay was monitored by the LTPP program.

Suffix D — Designates a previously overlaid pavement which receives another asphalt concrete overlay using conventional hot-mix asphalt with no modifiers and no structural milling or modifications. The condition of the pavement prior to overlay was monitored by the LTPP program.

Suffix F — Designates an existing PCC pavement structure which was subjected to a crack and seat or break and seat treatment in combination with placement of any type of hot-mix asphalt overlay.

Suffix R — Designates an existing PCC pavement structure which was rehabilitated by Concrete Pavement Restoration (CPR) treatments without application

of an overlay.

Suffix S — Designates pavement structures in which the existing asphalt concrete structural layer is modified by structural milling or application of fabric, etc. in combination with placement of any type of hot-mix asphalt overlay.

The terms structural milling and asphalt modifiers are defined as:

Structural Milling — For test section classification purposes, structural milling is considered to be cold milling of asphalt concrete greater than 25-mm in depth. Milling depths less than 25-mm, for purposes of rut level-up or to remove weathered asphaltic concrete from the surface, are not considered structural milling.

Asphalt Modifiers — Asphalt modifiers are materials used to alter the properties of the asphalt cement or asphalt mixture, such as polymers, crumb rubber, sulfur, glass, etc.

Classification of Rehabilitated Test Sections

When an agreement between the participating highway agency and LTPP program has been reached to continue monitoring a rehabilitated test section, the rehabilitated pavement structure shall be classified in accordance with the experimental designation shown in Table 1. Details of these classifications are provided in the following portions of this document based on the test section's current LTPP classification and pavement structure type.

Rehabilitation of GPS-l, GPS-2, SPS-l, SPS-8(AC), or SPS-9 (new construction) Test Sections

Existing test sections in this category are either new construction, reconstructed, or asphalt concrete pavement structures in their first performance cycle which have not previously been rehabilitated. This includes test sections in the SPS-8 experiment that are constructed with an asphalt concrete surface layer and SPS-9 test sections which are either newly constructed, or reconstructed at the start of the LTPP monitoring period.

Test sections rehabilitated with a conventional hot-mix asphalt overlay with no structural milling or modifications will be classified in GPS-6B.

Test sections rehabilitated with a hot-mix asphalt overlay containing asphalt modifiers with no structural milling or modifications will be classified in GPS-6C.

Test sections rehabilitated with structural milling or use of geotextile and subsequent placement of a conventional or modified hot-mix asphalt overlay will be classified in GPS-6S.

Table I. Classification of rehabilitated LTPP test sections.

Existing Class and Pavement Type	**Pretreatment**	**Overlay**	**New Class**
AC *GPS-1* *GPS-2* *SPS-1* *SPS-3* *SPS-8 (AC)* *SPS-9 (New)*	None, or Maintenance and Repair	Conventional AC	GPS-6B
		Modified AC	GPS-6C
	Structural Milling, Fabric	Any AC	GPS-6S
	None, Maintenance and Repair, or Structural Milling	JPCP	GPS-3
		JRCP	GPS-4
		CRCP	GPS-5
PCC *GPS-3* *GPS-4* *GPS-5* *SPS-2* *SPS-4* *SPS-8 (PCC)*	CPR	None	GPS-7R
	None, or CPR	Conventional AC	GPS-7B
		Modified AC	GPS-7C
	Fracture	Any AC	GPS-7F
	Debonding Layer	JPCP, JRCP, CRCP	GPS-9
AC over AC *GPS-6* *SPS-5* *SPS-9 (Overlay)*	None, or Maintenance and Repair	Conventional AC	GPS-6D
		Modified AC	GPS-6C
	Structural Milling, Fabric	Any AC	GPS-6S
AC over PCC *SPS-7* *SPS-6*	None	Conventional AC	GPS-7D
		Modified AC	GPS-7C
	Structural Milling, CPR, and/or Fabric	Any AC	GPS-7S
	None, Milling + Debonding Layer	PCC	GPS-9

GPS-1 or GPS-2 test sections rehabilitated with a portland cement concrete (PCC) overlay shall be classified into the new PCC pavement GPS experiments depending on the type of overlay:

Jointed plain concrete overlay	-	GPS-3
Jointed reinforced concrete overlay	-	GPS-4
Continuously reinforced concrete overlay	-	GPS-5

Rehabilitation of GPS-3, GPS-4, GPS-5, GPS-7R, SPS-2, SPS-6 (non-overlay) and SPS-8 (PCC) Test Sections

Existing test sections in this category are either new construction or reconstructed PCC test sections which have not previously been rehabilitated with application of an overlay. This includes PCC test sections in the SPS-8 experiment.

Test sections rehabilitated with a conventional hot-mix asphalt overlay and any combination of restoration treatments contained in the SPS-6 Construction Guidelines (Ref. 3) will be classified in GPS-7B.

Test sections rehabilitated with a hot-mix asphalt overlay containing asphalt modifiers and any combination of restoration treatments contained in the SPS-6 Construction Guidelines (Ref. 3) will be classified in GPS-7C.

Test sections subjected to a fracture pretreatment, such as crack and seat, break and seat, or rubblization, in combination with placement of any type of hot-mix asphalt overlay will be classified in GPS-7F.

Test sections rehabilitated by Concrete Pavement Restoration (CPR) treatments without application of an overlay will be classified in GPS- 7R. The decision on classification of treatments into this category will depend upon the extent and nature of the CPR treatments applied. In general, the applied treatments must exceed what might be considered routine maintenance to be classified as CPR.

Rehabilitation of GPS-6, SPS-5, and SPS-9 (overlay) Test Sections

Test sections in this category are asphalt concrete pavement structures which have been previously rehabilitated with an asphalt concrete overlay.

Test sections rehabilitated with a second conventional hot-mix asphalt overlay with no structural milling or modifications will be classified in GPS-6D.

Test sections rehabilitated with a second hot-mix asphalt overlay containing asphalt modifiers with no structural milling or modifications will be classified in GPS-6C.

Test sections rehabilitated with structural milling or use of geotextile and subsequent placement of a second overlay composed of conventional or modified hot-mix asphalt will be classified in GPS-6S.

Rehabilitation of GPS-7 or SPS-6 Overlay Test Sections

Test sections in this category are rehabilitated PCC pavement structures which have previously been overlaid with a layer of hot-mix asphalt.

Test sections rehabilitated with a second conventional hot-mix asphalt overlay with no structural milling or modifications will be classified in GPS-7D.

Test sections rehabilitated with a second hot-mix asphalt overlay that contains asphalt modifiers with no structural milling or modifications will be classified in GPS-7C.

Test sections rehabilitated with structural milling or use of geotextile and subsequent placement of a second overlay composed of conventional or modified hot-mix asphalt will be classified in GPS-7S.

Test sections rehabilitated by complete removal of the existing hot-mix asphalt overlay, then application of crack and seat or break and seat treatment to the underlying PCC layer and placement of any type of hot-mix asphalt overlay will be classified in GPS-7F.

Test sections rehabilitated by the application of an unbound PCC overlay will be classified in GPS-9.

Rehabilitation of GPS-9 Test Sections

GPS-9 test sections which are rehabilitated will not be considered for continued monitoring under the LTPP program.

Rehabilitated Test Section Reclassification Procedures

When an agency either notifies LTPP that a test section rehabilitation is planned or rehabilitates a test section without previous notification, the responsible Regional Coordination Office Contractor must coordinate with the highway agency to get form RI-1, Cause for Rehabilitation, completed in accordance with LTPP guidelines.

If the proposed rehabilitation treatment conforms with current LTPP policy on monitoring continuation of rehabilitated test sections, the responsible Regional Coordination Office Contractor must coordinate with the highway agency to get form RI-2, Monitoring Continuation Request, completed and signed by a highway agency official. The procedures and instructions contained in the issuing directive for this form shall be followed to obtain approval for continuation of monitoring on the rehabilitated test section.

After the Regional Coordination Office Contractor has been notified in writing that a rehabilitated test section has been approved for continued monitoring, IMS Form 1, Test Section Status Change Request, shall be completed and submitted in accordance with the instruction and procedures contained in its issuing directive. The experiment designations presented in this directive shall be followed for the proposed new experiment designation submitted on IMS Form 1.