

*Guidelines for the Preservation of High-Traffic-Volume Roadways (R26)*

Preservation Analysis Tool: User Instructions

**Introduction:**

The following set of instructions are provided to assist the user with the use of the R26 Preservation Analysis Tool.  The purpose of these instructions is to facilitate the use of the Tool by someone who is familiar with the R26 Guidelines (SHRP2 publication S2-R26-RR-2, Guidelines for the Preservation of High-Traffic-Volume Roadways). The Tool itself can be used to apply the decision process described in those Guidelines, thereby helping to identify treatments that can be used for pavement preservation under a variety of conditions.  However, the functionality of this Tool does not extend beyond the content of the SHRP2 publication.

**Instructions:**

* This is not a “compiled” software program.  While it has been designed to have the look and feel of a traditional piece of software, it is a tool that runs within Microsoft Excel, and is built on Excel’s built-in Visual Basic for Applications (VBA) programming language.  Note: VBA is the language in which all Excel “macros” are written.
* For the tool to operate, in Excel you will likely need to go to File, Options, Trust Center, Trust Center Settings, Macro Settings, and change the setting to “Disable all macros with notification.”  Then when opening the tool workbook, make sure you click the “Enable Macros” button when it appears at the top of the workbook.
* Use of this tool requires that the user is familiar with the content.  It is very difficult to “hopscotch” around the tool without entering realistic inputs.
* The tool is comprised of four “modules”, as described below:
  + The first module is “Applicable Performance Measures.”  This module defines the performance measures that are used in subsequent analyses of preservation for rigid, flexible, and composite pavements.  When all desired performance measures are selected, click [Back] to return to the main screen.
  + The “Treatment Toolkit Setup and Management” module defines the treatments that are to be considered.  These treatments are presented for rigid, flexible, and composite pavements.  To facilitate the use of the tool to evaluate examples, several toolkit lists are already defined and distributed with this version of the tool.  New and customized toolkits are created by using the [Edit Toolkit Details] button.  When all desired treatments are selected, click [Back] to return to the main screen.
  + The “Project Analysis” module is where the decision process is applied.  An example project is provided for each of the three pavement types.  The user can also create their own project with the [Edit Section Details] button.  As noted in this module, to run an analysis on a section, select the section from the Section List to the left of the screen and click the [Next] button.  Then select the toolkit (treatment list) that you wish to associate with the pavement section of interest and click [Next] again.  You can then specify how you want to analyze the subject pavement section, as follows—(1) evaluate the suitability of the section for preservation and, if found suitable, evaluate which preservation treatment is best, and (2) accept that the section is suitable for preservation and evaluate which preservation treatment is best.  In each analysis option, details about the existing pavement condition and the needs/constraints of the section must be entered, and a series of choices must be made about how to further analyze the section.  Each analysis screen can be edited and then applied by clicking [Next].
  + The “Resources” button provides links to appropriate project resources.