Memorandum

U.S. Department
of Transportation

**Federal Highway
Administration**

6300 Georgetown Pike
McLean, Virginia 22101

Subject: **ACTION**: LTPP Directive I-102
LTPP Data Release Policy

Date: November 19, 2002

From: Eric Weaver
Long Term Pavement Performance Team

Reply to
Attn of: HRDI-13

To: Dr. Frank Meyer, PM - LTPP North Atlantic Regional Contract
Mr. Tom Wilson, PM - LTPP North Central Regional Contract
Mr. Mark Gardner, PM - LTPP Southern Regional Contract
Dr. Sirous Alavi, PM - LTPP Western Regional Contract
Dr. Gonzalo Rada, PM - LTPP Technical Support Services Contract

Attached is the Long Term Pavement Performance (LTPP) Program IMS Directive I-102 to implement the new LTPP Data Release Policy. Please make sure that all office personnel involved in the LTPP IMS are aware of this new directive.

If you have any questions concerning this transmittal, please do not hesitate to call me at 202-493-3153.

Attachment

FHWA:HRDI-13:EWeaver:mad:493-3153:11/19/02
File: c:/mdeeney/directives/ims/I-102dir.doc
cc:
Directive Binder
LTPP Team
Official file
Chron

LONG TERM PAVEMENT PERFORMANCE PROGRAM DIRECTIVE

For the Technical Direction of the LTPP Program

Program Area:	IMS	Directive Number:	I-102
Date:	November 19, 2002	Supersedes:	GOD-2, GO-11, GO-12, I-25, I-25A.1
Subject:	LTPP Data Release Policy		

Background

The Long Term Pavement Performance (LTPP) program has collected a large quantity of data and information on the performance of selected in-service pavement test sections in North America. In order to accomplish program objectives, a primary mission of LTPP is to provide access to this data and information to contractors, highway agency personnel, and others interested in analysis of the data to advance pavement engineering, pavement management and related technologies.

Policy

The following principles shall be followed for release of LTPP data and information:

- LTPP data and information are distributed under the sponsorship of the United States Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its content or use.

- Understanding LTPP data collection procedures, principles and practices is the responsibility of data users who interpret and draw conclusions based on LTPP data and information.

- While LTPP strives to provide data and information at no cost to the data user, program-funding limitations may limit the level of effort spent on user requests.
  + Extractions from the LTPP database are provided free of charge to data users who request data in standard data release formats.
  + Custom extractions from the database may be requested.
  + Delivery of data in raw data collection formats, access to internal documents, and access to other LTPP off-line information will be assessed on a case-by-case basis.

+ Some LTPP publications are available for free download from the LTPP homepage.
+ LTPP documents published by the Strategic Highway Research Program, FHWA, and those from NTIS, are available from those organizations in accordance with their policies.

- All requests for LTPP data and information should be made to the LTPP customer service center. Current contact information is posted on the LTPP Internet Web page.

Data Quality

LTPP data are obtained from a variety of sources. Since LTPP has limited influence on some data collected for the program, LTPP established a rudimentary system of checks on the data stored in the database.

An automated series of checks are run to evaluate the completeness, reasonableness, and structure of entries in the database. Levels using a hierarchical alpha code starting with A and ending at E designate the checks. The results of these checks are contained in the RECORD_STATUS field. The three major types of data quality checks are:

- 'C' Level Checks: These are checks on required fields to identify critical fields, which contain a null value. In some cases, these checks are supplanted by non-null restrictions placed on critical fields during the table design that prevent a record from being created if a value for that field is not available.

- 'D' Level Checks: These are range checks on the reasonableness of values entered in a field. For example, the range checks for deflection data from the center sensor on a Falling Weight Deflectometer (FWD) is 5 µm to 2032 µm.

- 'E' Level Checks: These termed intra-modular and intra-field checks. This category contains a wide range of checks. The common property of these checks is that they compare the value in one field of a table to the value in another field that may or may not be in the same table. For example, an 'E' level check is used to see if pavement layer temperature gradient data exists for each FWD data set. In addition, 'E' level checks are used to enforce referential integrity between parent and child tables.

These QC checks are performed sequentially – 'D' level checks are applied to records passing 'C' level checks, and 'E' level checks are applied to records passing 'D' level checks. A and B levels are the starting point. If a record fails a check, its record status remains at the next lower status. For example, records failing a level 'D' check have a status of 'C'. A procedure exists to manually upgrade record status, if a record failing a check has been examined and found acceptable.

Records with a level E status can mean the following:

- Records have passed all of the current data checks.
- Records may have failed some data checks, but were manually upgraded after inspection and/or correction.
- Records may contain errors that were not detected by the current data QC checks.

The quality control checks applied to LTPP data are limited. It is not possible to inspect all of the data for all types of potential anomalies. As the program evolves and improvements are made to the data quality checks, level E data included in previously releases may be reclassified.

Records with a record status less than E can be interpreted as:

- Completed the QC process, but left at a lower level of record status.
- Not completed the QC process.
- Not currently subjected to the QC process by policy.

Data users assume the responsibility for conclusions based on interpretation of data collected by the LTPP program. Level E data should not be considered more reliable than non-level E data. Likewise, non-level E data should not be considered less reliable than level E data. The record status for non-level E data can be used as a relative indicator of potential issues that might exist for these data. As the LTPP program continues to evolve, users can expect changes to be made to LTPP data and record status in order to improve their use in analysis.

The standard release includes data at all quality levels. LTPP Customer service should be contacted for information about which specific data is included in the current standard release.

Technical Support

To properly interpret and use LTPP data, users need to understand the experimental structure of the LTPP program, the relational structure of the LTPP database, and details on how LTPP data were collected. In recognition of the fact that LTPP is a very technical research-oriented program, a technical support function for data users was established.

LTPP technical support functions include:

- Answers to technical questions via e-mail. Data users can submit questions to LTPPINFO via a link provided on the LTPP homepage.
- Feedback mechanism from data users. LTPP has established a Data Analysis / Operations Feedback Report (DAOFR) process that allows data users to submit formal

questions and comments from their interpretation of LTPP data. DAOFR, responses, and potential corrective actions are posted on the LTPP homepage.

- Development of custom data extractions or SQL scripts for focused data analysis objectives.

Provision of technical support is limited due to program funding constraints. Limitations on technical support may be imposed based on the level of effort needed to fulfill the request.

Prepared by: TSSC Team

Approved by:

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