



U.S. Department
Of Transportation

**Federal Highway
Administration**

Memorandum

6300 Georgetown Pike
McLean, Virginia 22101

Subject: **ACTION**: LTPP Directive TDP-38
Release of LTPP Traffic Analysis Software Version 1.4.1

Date: October 27, 2004

From: Debbie Walker *Debbie Walker*
Long Term Pavement Performance Team

Reply to
Attn of: HRDI-13

To: Dr. Frank Meyer, PM - LTPP North Atlantic Regional Contract
Dr. Frank Meyer, PM - LTPP North Central Regional Contract
Mr. Mark Gardner, PM - LTPP Southern Regional Contract
Mr. Kevin Senn, PM - LTPP Western Regional Contract

Attached is the Long Term Pavement Performance (LTPP) Program Directive TDP-38. This directive authorizes implementation of the LTPP Traffic Analysis Software (LTAS) version 1.4.1. Instructions for installing the software are included in Attachment 1 and a complete list of the changes to the software is included in Attachment 2. Please make sure that all personnel involved with the traffic data activities are aware of this new directive.

Should you have any questions or would like to discuss this directive, please do not hesitate to call me at 202-493-3068.

Attachments (3)

LONG TERM PAVEMENT PERFORMANCE PROGRAM DIRECTIVE



For the Technical Direction of the LTPP Program



Program Area:	Traffic	Directive Number:	TDP-38
Date:	October 4, 2004	Supersedes:	TDP-35
Subject:	<i>Release of LTPP Traffic Analysis Software Version 1.4.1</i>		

Purpose

This directive discusses the executable and supporting table updates made to the LTPP Traffic Analysis Software (LTAS). It also includes a list of all changes made to the software since the release of version 1.4.

Changes

This release addresses software functionality, Software Performance Reports (SPRs), miscellaneous items, and database modifications (see Attachment 2). One significant change to this version of the software was making Sheet 7 site-specific.

Distribution and Installation of New Software

The updated software is available via the Operations Center at www.ltp.org for immediate installation. The installation of the analysis software and support table elements to permit processing with the traffic data analysis software shall be completed by Friday, October 8, 2004. However, the new software will remain on the Operations Center website until Monday, October 18, 2004. Additional copies of the software needed after this date must be requested through LTPP Customer Service.

The attached table titled "Installing Traffic Analysis Software Version 1.4.1" lists the steps for installing the new release of the traffic analysis software (see Attachment 1). The installation information is also included with the software distribution. Changes in the way IMS computations handle expansions to annual estimates will result in all IMS computations being redone on installation to correct for previous over-estimates.

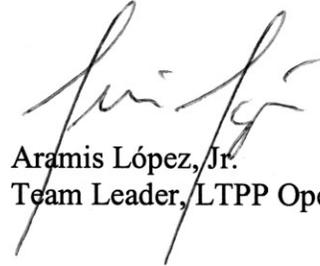
Manual Revisions

The major changes to Volume 1 are the transfer of the discussions on agency packets, backups, processing of old data and other traffic software to the traffic operations manual. In addition, the troubleshooting section is now part of a new volume, Volume 1A—Troubleshooting.

Revisions to the manual are posted on the Technical Support Services Contractor's (TSSC's) corporate FTP site until Monday, October 18, 2004. Additional copies of the manual needed after this date must be requested through LTPP Customer Service.

Prepared by: TSSC

Approved by:



Aramis López, Jr.
Team Leader, LTPP Operations

ATTACHMENT 1

The following table lists the steps for installing version 1.4.1 of the LTPP Traffic Analysis Software (LTAS).

Installing Traffic Analysis Software Version 1.4.1

Step	Action
1	Execute the script (as the DBA for the traffic instance) to update the codes in the TRAFFIC_CODES table. <i>sqlplus dbaname/dbapwd@trfprod @Traffic_Codes_Update_1_4_1.sql</i>
2	Execute the script (as the DBA for the traffic instance) to update the TRF_MONITOR_LTPP_LN table for the new fields CT_DAYS_RECEIVED and WT_DAYS_RECEIVED. <i>sqlplus dbaname/dbapwd@trfprod @LTPPLNUpdate.sql</i>
3	Rename the file Sheet7.tab to Sheet7.bat.
4	Execute the batch file at the command line (as the DBA for the traffic instance) to update the TRAFFIC_CLASS_CONVERT_MASTER and TRAFFIC_CLASS_CONVERT_DATA tables to contain the field SHRP_ID. This batch file will export the two tables for backup and execute the sql file Sheet7Update.sql. <i>Sheet7 dbname/dbapassword@trfProd</i>
5	Execute the script to update the TRAFFIC_DD table. <i>sqlplus dbaname/dbapwd@trfprod @Traffic_DD_Update_1_4_1.sql</i>
6	Replace the analysis.exe on the server. Use the updated analysis.exe located in the zip file Analysis_1_4_1.zip. Password is "version_1_4_1."
7	Replace the QC executable (TrafficAnalysisQC.exe) for the TRF_MONITOR tables on the server. Password is "version_1_4_1."

Installing Traffic Analysis Software Version 1.4.1

Step	Action																																						
8	<p>Setup and execute IMS data clean up.</p> <table border="1" data-bbox="386 327 1406 1661"> <thead> <tr> <th data-bbox="393 327 483 361">Step</th> <th data-bbox="483 327 1399 361">Action</th> </tr> </thead> <tbody> <tr> <td data-bbox="393 361 483 432">1</td> <td data-bbox="483 361 1399 432">Connect to the Analysis software (LTAS) after the new executables are installed.</td> </tr> <tr> <td data-bbox="393 432 483 466">2</td> <td data-bbox="483 432 1399 466">Select the DB Admin option to display the DB Admin screen.</td> </tr> <tr> <td data-bbox="393 466 483 537">3</td> <td data-bbox="483 466 1399 537">Select the “IMS Date” button in the Reset section of the DB Admin screen to display the Reset IMS Date screen.</td> </tr> <tr> <td data-bbox="393 537 483 571">4</td> <td data-bbox="483 537 1399 571">Set the State selection, SHRP ID, and Year fields to “ALL.”</td> </tr> <tr> <td data-bbox="393 571 483 772">5</td> <td data-bbox="483 571 1399 772"> <p>Select the “Process” button.</p> <p>This action will reset ALL entries in the TRAFFIC_ANALYSIS_TRACKER table to have an IMS_DATE of 01-JAN-1990 and a RECORD_STATUS value of “A.” All sites are now setup to have the IMS Computations recomputed for the upload.</p> </td> </tr> <tr> <td data-bbox="393 772 483 806">6</td> <td data-bbox="483 772 1399 806">Close the Reset IMS Date screen.</td> </tr> <tr> <td data-bbox="393 806 483 840">7</td> <td data-bbox="483 806 1399 840">Click the “Record Status” button under the Reset options.</td> </tr> <tr> <td data-bbox="393 840 483 911">8</td> <td data-bbox="483 840 1399 911">Continue with QC of Admin tables after Admin table record status reset completes.</td> </tr> <tr> <td data-bbox="393 911 483 982">9</td> <td data-bbox="483 911 1399 982">Select the “Perform QC” button from the DB Admin screen under QC DB Admin Tables to QC the TRAFFIC_ANALYSIS_TRACKER table.</td> </tr> <tr> <td data-bbox="393 982 483 1016">10</td> <td data-bbox="483 982 1399 1016">Review the report after QC of the DB Admin Tables.</td> </tr> <tr> <td data-bbox="393 1016 483 1087">11</td> <td data-bbox="483 1016 1399 1087">Run a Detail Report to identify corrections needed if all records in TRAFFIC_ANALYSIS_TRACKER and SHRP_INFO are not at “E.”</td> </tr> <tr> <td data-bbox="393 1087 483 1121">12</td> <td data-bbox="483 1087 1399 1121">Make table modifications as needed.</td> </tr> <tr> <td data-bbox="393 1121 483 1192">13</td> <td data-bbox="483 1121 1399 1192">Iterate data correction and QC until all records are at “E” in SHRP_INFO and at “C” or “E” in TRAFFIC_ANALYSIS_TRACKER.</td> </tr> <tr> <td data-bbox="393 1192 483 1226">14</td> <td data-bbox="483 1192 1399 1226">Exit the DB Admin Screen.</td> </tr> <tr> <td data-bbox="393 1226 483 1297">15</td> <td data-bbox="483 1226 1399 1297">Select the “Compute IMS” button in the Analysis Processing section to display the Compute IMS Data screen.</td> </tr> <tr> <td data-bbox="393 1297 483 1331">16</td> <td data-bbox="483 1297 1399 1331">Set the State and SHRP ID fields to “ALL.”</td> </tr> <tr> <td data-bbox="393 1331 483 1625">17</td> <td data-bbox="483 1331 1399 1625"> <p>Select the “Process” button.</p> <p>This action will recalculate the IMS entries (TRF_MONITOR_* tables) for all sites except those with shared site data. IMS computations are completed for all sites where the IMS_DATE is less than either the monthly class or the monthly weight dates.</p> <p>NOTE: Since reprocessing of all sites for a region can take up to four hours, you may want to execute this overnight.</p> </td> </tr> <tr> <td data-bbox="393 1625 483 1659">18</td> <td data-bbox="483 1625 1399 1659">Update any shared site data with the revised IMS computations.</td> </tr> </tbody> </table>	Step	Action	1	Connect to the Analysis software (LTAS) after the new executables are installed.	2	Select the DB Admin option to display the DB Admin screen.	3	Select the “IMS Date” button in the Reset section of the DB Admin screen to display the Reset IMS Date screen.	4	Set the State selection, SHRP ID, and Year fields to “ALL.”	5	<p>Select the “Process” button.</p> <p>This action will reset ALL entries in the TRAFFIC_ANALYSIS_TRACKER table to have an IMS_DATE of 01-JAN-1990 and a RECORD_STATUS value of “A.” All sites are now setup to have the IMS Computations recomputed for the upload.</p>	6	Close the Reset IMS Date screen.	7	Click the “Record Status” button under the Reset options.	8	Continue with QC of Admin tables after Admin table record status reset completes.	9	Select the “Perform QC” button from the DB Admin screen under QC DB Admin Tables to QC the TRAFFIC_ANALYSIS_TRACKER table.	10	Review the report after QC of the DB Admin Tables.	11	Run a Detail Report to identify corrections needed if all records in TRAFFIC_ANALYSIS_TRACKER and SHRP_INFO are not at “E.”	12	Make table modifications as needed.	13	Iterate data correction and QC until all records are at “E” in SHRP_INFO and at “C” or “E” in TRAFFIC_ANALYSIS_TRACKER.	14	Exit the DB Admin Screen.	15	Select the “Compute IMS” button in the Analysis Processing section to display the Compute IMS Data screen.	16	Set the State and SHRP ID fields to “ALL.”	17	<p>Select the “Process” button.</p> <p>This action will recalculate the IMS entries (TRF_MONITOR_* tables) for all sites except those with shared site data. IMS computations are completed for all sites where the IMS_DATE is less than either the monthly class or the monthly weight dates.</p> <p>NOTE: Since reprocessing of all sites for a region can take up to four hours, you may want to execute this overnight.</p>	18	Update any shared site data with the revised IMS computations.
Step	Action																																						
1	Connect to the Analysis software (LTAS) after the new executables are installed.																																						
2	Select the DB Admin option to display the DB Admin screen.																																						
3	Select the “IMS Date” button in the Reset section of the DB Admin screen to display the Reset IMS Date screen.																																						
4	Set the State selection, SHRP ID, and Year fields to “ALL.”																																						
5	<p>Select the “Process” button.</p> <p>This action will reset ALL entries in the TRAFFIC_ANALYSIS_TRACKER table to have an IMS_DATE of 01-JAN-1990 and a RECORD_STATUS value of “A.” All sites are now setup to have the IMS Computations recomputed for the upload.</p>																																						
6	Close the Reset IMS Date screen.																																						
7	Click the “Record Status” button under the Reset options.																																						
8	Continue with QC of Admin tables after Admin table record status reset completes.																																						
9	Select the “Perform QC” button from the DB Admin screen under QC DB Admin Tables to QC the TRAFFIC_ANALYSIS_TRACKER table.																																						
10	Review the report after QC of the DB Admin Tables.																																						
11	Run a Detail Report to identify corrections needed if all records in TRAFFIC_ANALYSIS_TRACKER and SHRP_INFO are not at “E.”																																						
12	Make table modifications as needed.																																						
13	Iterate data correction and QC until all records are at “E” in SHRP_INFO and at “C” or “E” in TRAFFIC_ANALYSIS_TRACKER.																																						
14	Exit the DB Admin Screen.																																						
15	Select the “Compute IMS” button in the Analysis Processing section to display the Compute IMS Data screen.																																						
16	Set the State and SHRP ID fields to “ALL.”																																						
17	<p>Select the “Process” button.</p> <p>This action will recalculate the IMS entries (TRF_MONITOR_* tables) for all sites except those with shared site data. IMS computations are completed for all sites where the IMS_DATE is less than either the monthly class or the monthly weight dates.</p> <p>NOTE: Since reprocessing of all sites for a region can take up to four hours, you may want to execute this overnight.</p>																																						
18	Update any shared site data with the revised IMS computations.																																						
<p>Note: Changes to the software are in the Analysis Software Version 1 4 1.doc file.</p>																																							

ATTACHMENT 2

List of Changes

Software Functionality (Analysis.exe)

- ◆ Added reset options to Database (DB) Administration screen
 - Reset record status of all DB Admin tables (using the button on DB Admin screen).
 - Reset IMS Date to 01-JAN-1990. The button on DB Admin screen provides another screen for selecting State, SHRP, and Year. The ALL option is allowed in these fields. Entries where UPLOAD_IMS_CL or UPLOAD_IMS_WT equal “C” are excluded from the reset to the IMS date.
- ◆ Modified Sheet 7 to allow site and date specific values. Modules impacted by this change include the following:
 - Sheet 7 entry and edit screen
 - Monthly processing
 - Monthly QC
 - Monthly QC Reporting
 - DB Admin QC
 - DB Admin QC Reporting
 - Sheet 7 Report on the Report screen selection
 - TRAFFIC_CLASS_CONVERT_MASTER and TRAFFIC_CLASS_CONVERT_DATA tables
- ◆ Updated processing in IMS Compute
 - Added and populated new fields, CT_DAYS_RECEIVED and WT_DAYS_RECEIVED to the TRF_MONITOR_LTPP_LN table.
 - Updated computations for populating TRF_MONITOR_LTPP_LN for field TRUCKS_LTPP_LN and table TRF_MONITOR_AXLE_DISTRIB bin fields.
- ◆ Traffic Analysis Tracker screen now accepts N, Y, and C
 - Set IMS_DATE to 01-01-1990
 - Set RECORD_STATUS to “A”
 - Deleted entries from TRF_MONITOR_* for the site-year
- ◆ Daily processing will now delete data from the TRF_MONITOR_* tables when a State, SHRP, and Year is processed.
- ◆ The data for State, SHRP, and Year are removed from the TRF_MONITOR_* tables when TRAFFIC_ANALYSIS_TRACKER fields UPLOAD_IMS_CL or UPLOAD_IMS_WT is changed from one value to another (N, Y, or C).

SPRs Addressed

- ◆ *SPR 3504*. Corrected reporting of TRAFFIC_ANALYSIS_TRACKER-E-107 and TRAFFIC_ANALYSIS_TRACKER-E-108 in the QC Admin Report.
- ◆ *SPR 3255 (1-118)*. Added ability to select site to Sheet 7 screen and tables.
- ◆ *SPR 3443 (4-466)*. Allowed Sheet 7 to be site specific.
- ◆ *SPR 3501 (4-478)*. Changed Sheet 7 to allow month and day instead of year based.
- ◆ *SPR 3513 TrafficAnalysisQC.exe*. Added new level D and E QC checks for CT_DAYS_RECEIVED and WT_DAYS_RECEIVED in TRF_MONITOR_LTPP_LN.

Miscellaneous Items

- ◆ Updated Sheet 16 report for change in diff_vol_fhwa_9 field size of three NUMBER(3) to four NUMBER(4) in the table “trf_calibration_avc.”
- ◆ Corrected Graph
 - The footnote on “13Bin Yearly, Year By Month by Day of Week” changed to “1347YMDow.”
- ◆ Changed Monthly Statistics Report
 - Removed state code “(nn)” from the heading.
 - Added SHRP ID value to the heading.
- ◆ Changed Month By Day of Week Report (Monthly Data)
 - Removed state code “(nn)” from the heading.
 - Modified report to print zero (0) in the “(counts)” reporting section.
- ◆ Updated Annual Summary Weight By Lane Report
 - Corrected row “Avg steering axle” in the “Class 9 Statistics” section to correctly report the values for average steering axle and not the month value.
 - Changed reporting in the “Class 9 Statistics” section for row “ESAL per veh – 9s” to report the data to the hundredths as stored in the database and not rounded to a whole number.
 - Corrected labeling on Annual Summary Weight by Lane Report for class 9s to be “< 20” instead of “> 20.”
- ◆ Updated Annual Estimate Statistics Report
 - Corrected formatting in LTPP Lane section when no class data is present.

Database Modifications

- ◆ Updated codes for “Reset” process modules in TRAFFIC_CODES table.
- ◆ Added SHRP_ID field to the Sheet 7 tables (TRAFFIC_CLASS_CONVERT_MASTER and TRAFFIC_CLASS_CONVERT_DATA).
- ◆ Updated TRAFFIC_DD to contain SHRP_ID for the Sheet 7 tables.
- ◆ Updated TRAFFIC_DD to contain CT_DAYS_RECEIVED and WT_DAYS_RECEIVED for the TRF_MONITOR_LTPP_LN table.
- ◆ Added CL_DAYS_COUNTED and WT_DAYS_COUNTED fields to TRF_MONITOR_LTPP_LN.
- ◆ Added TRAFFIC_PURGES table for future development.