Memorandum

U.S. Department
Of Transportation

**Federal Highway
Administration**

6300 Georgetown Pike
McLean, Virginia 22101

Subject: **ACTION**: LTPP Directive GO-48
AIMS Electronic Data Format, Submission Standards, and Dates

Date: April 15, 2009

From: Jane Jiang
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 GO-48: AIMS Electronic Data Format, Submission Standards, and Dates. This directive supersedes Directive GO-44 and provides instructions on the electronic format, file naming conventions, and directory structure for the submission of files included in the Ancillary Information Management System (AIMS) to the Long-Term Pavement Performance (LTPP) Customer Support Service Center. Please ensure that all personnel are aware of this new directive.

Items changed and responses to Regional Support Contractor (RSC) comments contained in this version of the directive:

- Fall 2010 upload date was changed to October 5, 2010. This is the first Tuesday in October. For this upload, monitoring data collected 60 days prior to the upload are supposed to be included. This is a change from the 40-day period previously specified.

- For the June 2011 upload, since this is an end of contract upload, all data collected under the RSC contract are specified to be included.

- While this was not a major change from the prior version of the directive since digitized video in other formats not specified in the directive were allowed with FHWA approval, HD video formats were specifically included under new formats requiring FHWA approval.

- The specifications for the AWS data were not changed as suggested. All data files are still specified to be loaded into one directory. If the file-naming convention specified in

AWS directives is followed, it should be possible to sort the files in sequential order by simply sorting on the file name. We also did not want to have other regions reformat their AWS data already loaded into AIMS.

- For the SMP data downloaded remotely, the *.ONS and *.MOB files created from the *.PLS download files were specified to be loaded into one directory for each site. If the file naming convention specified in the SMP directives was followed this should not result in duplicate file names. We recommend that although the Northern Regions did not fully follow the specified file-naming format, they make the file names consistent to themselves by adding year to the file name. If the regions wish they can also include the *.PLS files in the AIMS upload, but it is not required.

- The specifications for traffic data paper sheets was made more general to indicate one time submission of forms and forms which can be submitted multiple times without trying to list all of the forms in each category since there is variability in practice.

- For video, we did not add a category for video shot from the back of a pick-up truck. In some states it is illegal to ride in the back bed of a pick-up truck.

- The upload still requires a complete upload of all AIMS data. After we have cleared the backlog of AIMS data submission, which is due by the June 2011 upload, we will need to develop an update mechanism for these files.

- We did not require regions to include descriptions of why some files may be missing from the AIMS.

This should address all of the regional comments on the draft version of GO-48 previously distributed to the regions for comment.

Should you have any questions or would like to discuss this directive, please do not hesitate to contact me at 202-493-3149.

Attachments (1)

FHWA:HRDI-13:JJiang:mdeeney:493-3149:4/15/10
File: c:/mdeeney/directive/go/GO-48dir.doc
cc:
Jonathan Groeger
Directive Binder
LTPP Team
Official file
Chron

LONG TERM PAVEMENT PERFORMANCE PROGRAM DIRECTIVE

For the Technical Direction of the LTPP Program

Program Area:	General Operations	Directive Number:	GO-48
Date:	March 31, 2010	Supersedes:	GO-44
Subject:	AIMS Electronic Data Format, Submission Standards, and Dates		

This directive provides instructions on the electronic format, file naming conventions, and directory structure for the submission of files included in the Ancillary Information Management System (AIMS) from the Long-Term Pavement Performance (LTPP) Regional Support Contractors (RSC) to LTPP FHWA the Customer Support Center. The objective is to provide a central archive of electronic data files and electronic copies of paper data collection forms that were used to populate the LTPP Pavement Performance Database (PPDB), LTPP Traffic Analysis (LTAS) software, or contains ancillary data, images, video or other information not contained in the LTPP databases.

AIMS Upload Dates

The AIMS upload dates are:

- October 5, 2010
- June 10, 2011

Future upload dates beyond June 10, 2011 will be specified by the FHWA, as appropriate.

All uploads shall consist of a complete copy of AIMS files from each regional contractor, which includes changes to files previously submitted, new files created or acquired, and previously submitted files which have not been changed.

Data types covered in this directive and their completion dates are listed below.

Complete uploads of the following data types are to be submitted in the October 5, 2010 upload for data collected 60 days prior to the upload date**:**

- Electronic Falling Weight Deflectometer (FWD) data containing deflection-time history measurements
- Longitudinal profile data stored at 25-mm intervals (excludes DNC 690D data)

- Profile measurements at Weigh-In-Motion (WIM) sites in 25-mm intervals
- Transverse profile measurements
- ProQual archive files
- Digitally scanned hand-drawn distress maps from manual distress surveys
- Digital images from manual distress surveys
- Digital distress maps generated from photographic film

The backlog of all non-monitoring data types shall be submitted by the June 2011 upload. All monitoring data collected under the current LTPP RSC contracts shall be included in this upload.

Electronic AIMS File Standards

The following file standards specify required and preferred standards for electronic data files converted from paper, video, and photographic images.

Specifications for Scanned Paper Data Forms

Scanned paper data forms shall conform to the US National Archive (NARA) Standards for Expanding "Acceptable Transfer Requirements: Transfer Instructions for Permanent Electronic Records" at http://www.archives.gov/records-mgmt/initiatives/pdf-records.html. References to this standard can be found at http://www.archives.gov/records-mgmt/initiatives/scanned-textual.html.

For LTPP purposes, the following minimum specifications shall be used:

- Data forms shall be scanned at a minimum resolution of 300 pixels per inch (12 pixels per mm).
- All data forms in a defined category shall be combined into PDF files.
- Bitonal (Black and white) scanning is preferred provided a relatively small electronic file is produced.
- Image compression in the PDF creation process shall use lossless compression methods (JBIG2 Lossless).

The preferred practice is to scan paper data forms formatted primarily in portrait orientation in an up-right orientation when they are opened for viewing.

Specifications for Digitized Video

At the time the original version of this directive was prepared, NARA has not developed national standards for digitized video due to the rapidly evolving nature of digital video formats and the lack of any open, national or international consensus standards for the creation and preservation of digital video. Due to business requirements for smaller file sizes, the following file types and minimum standards shall be used.

MPEG1 – This is appropriate for older video obtained from Super-VHS video recorders. Minimum frame size is 320x240.

MPEG2 – This is the preferred video compression standard since it is compatible with modern DVD players and is recommended for video collected using digital cameras. Minimum frame size is 320x240. Data rates shall not exceed 7 Mbps.

Other digitized video formats, such as those produced by digital high definition cameras, can be submitted if approved by FHWA.

Still Digital Images

Still digital images obtained from digital cameras or scanned color photographs shall be submitted in Joint Photographic Expert Group (JPEG) JPEG File Interchange Format (JFIF) format (also known as JPG).

Minimum standards for JPG files include:

- 256 color
- Quality compression of greater than 50
- 300 pixels per inch (12 pixel per mm)

Images previously submitted to LTPP Customer Service not meeting these minimums do not have to be re-imaged unless directed by FHWA.

Details by Data/Format Type

The following sections provide details of AIMS file submission by data/format type depending on the nature of the raw data.

Automatic Weather Station (AWS) Data

For each AWS site the following directory structure shall be created:

AWS\STATE_CODE\AWS_ID

This directory shall contain all raw electronic data files downloaded from the AWS instrumentation, EDT files created by the AWSCheck software, and PPDB upload files created by the AWSCheck software. In those cases where multiple EDT files were created by regional contractors for an AWS site, a number shall be appended to the file name extension to make the file name unique. Preferred practice is to assign the appended number starting with 1 for the earliest file and increasing sequentially with time. For example:

04AAWSDAT.EDT1 - first EDT file for AWS site A in Arizona
04AAWSDAT.EDT2 – second EDT file for AWS site A in Arizona

For other files, the file naming convention shall be in accordance with directives existing at the time of data acquisition and/or file creation.

Deflection (DEF) - Falling Weight Deflectometer (FWD) Peak, Time History and Pavement Temperature Data

The electronic version of the following FWD files shall be stored in the AIMS. The file naming convention shall be in accordance with directives existing at the time of data acquisition and/or file creation.

- Version 10 "*.FWD" files, containing both peak deflection data and time history data
- Version 20 "*.FWD" files, containing both peak deflection data and time history data
- Version 25 "*.F25" files, containing peak deflection data only
- Version 25 "*.HXT" files, ASCII files containing converted binary encoded time history data
- FWDWin "*.DDX" files, ASCII files converted from MS Access containing peak and time-history data
- Highway agency FWD data collected on LTPP sections, regardless of format

In addition, the pavement temperature gradient measurements, recorded on paper data forms, performed during FWD measurements shall be scanned following the guidelines in this document and stored in the AIMS. The following file naming convention shall be used for these files:

DEF+STATE_CODE+SHRP_ID+SURVEY_DATE (YYYYMMDD).pdf

The following directory/subdirectory structure shall be used to store both the FWD measurement data and scanned paper pavement temperature gradient data:

DEF\STATE_CODE\STATE_CODE+SHRP_ID\SURVEY_DATE (YYYYMMDD)

e.g.:*DEF\48\480102\20040905*.

Deflection Calibration (DEFCAL) – Falling Weight Deflectometer Calibration Files

The following data files are included under this heading:

- Raw electronic data files generated during a relative calibration test on a FWD used to
- collect data for the LTPP program. The raw data files should be submitted in the native data collection format with file names in accordance with applicable directives existing at the time of the test.
- Electronic data files produced by the RelCal software containing the results of the relative calibration test results.
- Electronic data files produced by the *WinFWDCal* software in PDDX format used for calibrations following the AASHTO Recommended Standard of Practice R32-09. This includes FWDCalibrationRecord dd-mmm-yyyy.DDX and FWDCalibrationOutput dd-mmm-yyyy.DDX. Other electronic files used in this process, such as those produced by the FWD, should also be stored.
- Scanned output showing gain factors from results of a reference calibration test,

(certificate of calibration), available TSC (Temperature Sensor Checks) forms on a FWD used to collected data for the LTPP program. The files should be named: REFCAL_TEST_DATE (YYYYMMDD). pdf

The following directory structure shall be used:

DEFCAL\DEFL_UNIT_ID\4-digit Year\REF – for files associated with reference (annual) calibration. This includes both reference and relative calibration tests.
DEFCAL\DEFL_UNIT_ID\4-digit Year\REL – for files associated with relative (monthly) calibration.

Where DEFL_UNIT_ID is the FWD measurement unit identifier used in the MON_DEFL_MASTER table.

Examples

DEFCAL\8002-131\1994\REL\13020394.RC1

DEFCAL\8002-131\1994\REL\13020394.CS1

Note that these are examples of file names used during relative calibration. Other file names were used because of the number of attempts made to pass calibration.

DEFCAL\8002-131\1994\REF\SDX1926.GO1

DEFCAL\8002-131\1994\REF\ Load188.LO1

DEFCAL\8002-131\1994\REF\ Dyna131A.GO1

Note that these are examples of file names used during reference calibration. Other file name conventions were also used.

Pavement Distress Data (DIS)

This data type includes manual distress, transverse profile, automated distress, DiVA and manual distress photo database categories.

Manual Distress Surveys (MDS)[1]

This category includes the manual distress maps (MDM files), manual distress survey photos/ images (MDP files), and manual distress data (MDD files). The MDD files include all of the paper data collection forms for a linked manual distress survey[2] data set, which may include the following types of data depending on the type of test section: Manual distress survey summary

[1] The MDM directory specified in directive GO-41 shall be renamed MDS.
[2] Linked distress measurements are defined as those measurements with a common SURVEY_ID for a test section as contained in the MON_DIS_LINK table in the pavement performance database.

form (sheets 1, 2, 4, 5, 8, 9), rut depth measurements (sheet 3), faulting measurements (sheet 6), lane shoulder drop-off separation (sheets 7, 10), hand drawn distress maps, and transverse profile measurements with the Dipstick (sheets DS-7 and DS-8). The file directory storage structure for this data is:

DIS\ MDS\STATE_CODE\STATE_CODE+SHRP_ID\SURVEY_DATE (YYYYMMDD)

The appropriate file naming convention for manual distress maps scanned before issuance of this directive shall be in accordance with the relevant LTPP distress directives (e.g. D-17, D-31, D-44 or their successors). File names for digitized manual distress photographs shall be in accordance with the relevant LTPP distress directives (e.g. D-17, D-31, D-44 or their successors).

Manual distress survey data from sets digitized after issuance of this directive shall contain all paper data forms, including manual distress maps, in a single PDF file named using the following convention:

MDD+STATE_CODE+SHRP_ID+SURVEY_DATE (YYYYMMDD).pdf

For distress data sets where linked distress measurements in a data set were conducted on different days, the first measurement day in the data set shall be used in the file name.

Manual distress surveys scanned following the old TIFF protocol shall be replaced by a single PDF file following these guidelines by the August 3, 2010 upload.[1] If changes are made to previously scanned manual distress data causing re-scanning of the data packet, the new data packet shall be submitted in PDF format.

Examples:

DIS\MDS\24\240504\20040609\MDP240504A200401.jpg - Manual distress photograph-1 on section 24_0504 taken on June 9, 2004.

DIS\MDS\24\240504\20040609\MDD24050420040609.pdf – File containing an image of all manual distress data forms from the manual distress survey performed on June 9, 2004 in PDF format.

Automated Photographic Distress Surveys (ADS)

This category includes distress maps interpreted from the automated distress survey images (ADS files) and digitized images from the 35-mm photographic distress film (ADP files).

The directory structure for each subcategory is as follows. The file names should be in accordance with the relevant LTPP distress directives (e.g. D-17, D-31, D-44 or their successors).

DIS\ADS\STATE_CODE\STATE_CODE+SHRP_ID\SURVEY_DATE (YYYYMMDD)

[1] The TIFF files can be combined into a single PDF using Adobe Acrobat. It is not necessary to remove previously scanned TIFF files.

e.g.: *DIS\ADS\24\241006\20010229*

DiVA and Distress Photo Database

The Distress Review MS Access file from the DiVA output and the Distress Photo Survey MS Access metadata database table shall be stored in the DIS root directory.

ProQual Transverse Profile Data Files (TPF)

The transverse profile (TPF) archival data file produced by the ProQual software shall be stored using the following directory structure:

DIS\TPF\STATE_CODE\STATE_CODE+SHRP_ID\SURVEY_DATE (YYYYMMDD)

The file name convention produced by ProQual shall be used for these files.

e.g.: *DIS\TPF\01\012106\19921222*

Note that scanned paper data forms containing transverse profile measurements using the Dipstick are included in the MDD files defined under manual distress data.

Profile (PRF) – Longitudinal and Weigh In Motion (WIM) Sites

Separate folders shall be used for each profile subcategory; longitudinal profile (LPF) and WIM site profile (WSP). Where applicable, data files created during the archival process using the ProQual software shall be placed in the corresponding directories in accordance with Directive P-37 or its successor. Specific directions and subdirectory structures for each subcategory follow.

Longitudinal Profile (LPF)

Longitudinal profile that has been collected with both high-speed road profilers and Dipsticks shall be submitted for the AIMS upload. The following directory structures and subfolders shall be used.

PRF\LPF\STATE_CODE\STATE_CODE+SHRP_ID\SURVEY_DATE (YYYYMMDD),
e.g.:*LPF\01\012106\19921222*

PRF\LPF\STATE_CODE\STATE_CODE+SHRP_ID\SURVEY_DATE (YYYYMMDD)\ERD.

When possible, RSCs shall convert raw profiles to the *.ERD format and place these files in the ERD directory subfolder.

e.g.:*LPF\01\012106\19921222\ERD*

File names for data from road profilers shall be in accordance with applicable directives at the time the data was collected.

The following directory structure and file name convention shall be used for longitudinal profile measurements with a Dipstick scanned from the paper data collection forms:

PRF\LPF\STATE_CODE\STATE_CODE+SHRP_ID\SURVEY_DATE (YYYYMMDD)\ *File_name*

Where:

File_name = PRF+STATE_CODE+SHRP_ID+"_"SURVEY_DATE (YYYYMMDD).pdf

PRF\LPF\10\101450\20030308\PRF101450_20000308.pdf – longitudinal Dipstick data for section 101450 from 03/08/2000

WIM Site Profile (WSP)

For the WIM site profile (WSP) subcategory, the following directory structures and subfolders shall be used for raw data and data in ERD format collected following the guidelines for profile measurements at WIM sites as contained in LTPP Directive P-30 and subsequent modifications:

PRF\WSP\STATE_CODE\SSEELW\SURVEY_DATE (YYYYMMDD)\ *filename.ext* – for raw profile data files produced by the field measurement device, associated section files, and other files produced by the ProQual software. The files shall be named in accordance with the LTPP file-naming convention in force at the time of data collection.

PRF\WSP\STATE_CODE\SSEELW\SURVEY_DATE (YYYYMMDD)\ERD*filename.erd* – for longitudinal profile data converted to ERD format.

Where
SS - State Code
EE - Experiment #
L - Lane designation, 'O' is outer, and 'I' is inner.
W - Wheel path, 'L', 'R', 'C' for left, right and center respectively.

e.g. PRF\WSP\36\3608OL \20020913\ERD

For longitudinal profile measurements at WIM sites that were not performed in compliance with Directive P-30 and subsequent successors, the WSP data shall be stored in the following folder structure:

PRF\WSP\STATE_CODE\STATE_CODE+SHRP_ID\SURVEY_DATE (YYYYMMDD)\

This folder should contain the electronic data files produced by the field measurement device, other associated electronic data files, and ERD files if they were previously created. The files shall be named in accordance with LTPP file naming conventions at the time of their creation.

Seasonal Monitoring Program (SMP)

For each SMP site the following directory structure shall be created for data collected at the site on a specific survey day:

SMP\STATE_CODE\STATE_CODE+SHRP_ID\SURVEY_DATE(YYYYMMDD)

This directory shall contain the raw onsite (*.ONS) and mobile (*.MOB) data files downloaded onsite in the field from the SMP instrumentation and scanned paper data forms collected on the survey date. File names for the scanned paper data forms shall use the following convention:

File_name=SMP+STATE_CODE+SHRP_ID+"_"+SURVEY_DATE.pdf

EDT files created by the SMPCheck software, PPDB upload files created by the SMPCheck software, and *.PLS[1] files created by the OnsPlus software or *.ONS/*.MOB files created from *.PLS files shall be stored in the following directory structure.

SMP\STATE_CODE\ STATE_CODE+SHRP_ID\

In those cases where multiple EDT files were created by regional contractors for a SMP site, a number shall be appended to the file name extension to make the file name unique following the practice for similar AWS EDT files. Upload file names shall be in accordance with the file naming convention produced by the SMPCheck software. *.PLS, *.ONS and *.MOB file names shall be in accordance with the file naming convention in-place at the time of file creation.

Traffic Data

Traffic data includes electronic traffic data files and scanned paper data forms.

Electronic Traffic Data Files

This category includes all ASCII data files output by the LTPP Traffic QC (LTQC), the LTPP Traffic Analysis (LTAS) or IRD Analyze software. A site may require use of multiple sub-directory structures. The sub-directory structure created by the LTPP traffic software below the regional level will be retained. IRD Analyze monitored data files in either binary or vendor specific record format will be added using additional folders for data types defined in the LTAS subdirectory structure.

The name of the main folder and sub folder for monitored traffic data electronic is TRF\MON. The state abbreviation at the next folder level in the current LTPP traffic database structures shall be replaced by state code. Files other than the flat files (binary files in Levels 1, 2, 3, or 5 from processing in SAS or LTQC or *.pst files) shall be included in the submission. Summary.dat files (LTQC output) shall be excluded to limit the amount of space used.

[1] *.PLS files were instrumentation measurements downloaded remotely from some SMP sites. These files contained a combination of *.ONS and *.MOB files similar to those collected during field visits to sites with no remote telemetry installed. The *.PLS files were renamed to *.ONS and *.MOB for input into the SMPCheck program.

The following are examples from the LTAS, SAS, and LTQC directory structures.

LTAS directory structure – TRF\MON\STATE_CODE\STATE_CODE+SHRP_ID\YEAR\data folders by type (AVC, WIM, IRD, ASCII)
e.g.: TRF\MON\22\220100\2008\ASCII

SAS directory structure - TRF\MON\STATE_CODE\STATE_CODE+SHRP_ID\LEV4\YEAR

e.g.: TRF\MON\32\321021\LEV4\1990

LTQC directory structure –
TRF\MON\STATE_CODE\STATE_CODE+SHRP_ID\LEV4\DATA\YEAR\data folders by type (AVC4, WIM7, VOL3, DATA)

e.g.: TRF\MON\36\364018\LEV4\DATA\1998\AVC4

Scanned Paper Data Forms

For traffic data sheets for which only one submission was required or received such as data sheets 1-9, 11, 14, and 15, one PDF file shall be created containing all of these data sheets with the following name:

File_name = TRF+STATE_CODE+SHRP_ID.pdf

For traffic data collection forms which change over time, such as sheets 10, 12, 13, 16, and others collected by or submitted to the RSC, one PDF file shall be created containing these sheets grouped by the year the data sheet applies too, using the following name:

File_name = TRF+STATE_CODE+SHRP_ID+"_"YEAR (YYYY).pdf

These files shall be stored in the following directory structure:

TRF\STATE_CODE\STATE_CODE+SHRP_ID\ *File_name.pdf*

Other Scanned Paper Data Forms

This data type includes images of digitally scanned paper data forms for non-rejected LTPP test sections. All scanned images of data forms for a particular Data Type (DT) for a section or project shall be combined into PDF files following the specifications in this directive. Files with unique file names containing similar data types with other electronic data can be stored in the same low level directory. The following file directory and file naming conventions shall be used for inventory, material, rehabilitation, maintenance, friction, and Specific Pavement Studies (SPS). The files shall be stored in the same structure as other corresponding electronic data with matching DT as specified below.

DT\STATE_CODE\STATE_CODE+SHRP_ID*File_name.pdf*

Where

DT = INV for inventory data (including global positioning measurements)
MAT\TST for material test data (one MAT directory with two subdirectories)
MAT\SAMP for material sampling data (one MAT directory with two subdirectories)
RHB for rehabilitation data
MNT for maintenance data
FRIC for friction monitoring data
SPS for general SPS project data, SHRP_ID=PROJECT_ID

For INV, RHB, and MNT data the following file naming convention shall be used:

File_name = *DT*+STATE_CODE+SHRP_ID.pdf

For SPS data the following file name convention shall be used:

File_name = SPS+ "#"+STATE_CODE+SHRP_ID.pdf – for test section specific data
File_name = SPS+ "#"+STATE_CODE+PROJECT_ID.pdf – for general project data

Where # is the SPS experiment number assigned to the project site.

For Mat\TST the following file naming convention shall be used:

File_name = TST+"_"+L05+"_"+STATE_CODE+SHRP_ID.pdf – for lab data sheets L05, L05A and L05B. All data sheets for a test section are included in one file.

File_name = TST+STATE_CODE+SHRP_ID+"_" + Field Set.pdf – for all other lab data sheets. All data sheets for the same field set are stored in the same file.

For MAT\SAMP data forms the following file naming convention shall be used:

File_name = TST+STATE_CODE+SHRP_ID+"_" + Field Set.pdf – All data sheets for the same field set are stored in the same file.

For FRIC data, the following file name convention shall be used:

File_name = FRIC+STATE_CODE+SHRP_ID+"_"SURVEY_DATE (YYYYMMDD).pdf

Examples:

INV\10\101450\INV101450.pdf – Inventory data for section 10_1450. One PDF file is made for each test section or SPS project.
SPS\10\100100\SPS100102.pdf – SPS1 construction data for section 10_0102.
FRIC\48\483855\FRIC483855_19951207.pdf – All friction data for section 48_3855 from 12/7/1995.
MAT\TST\10\101450\TST_L05_101450L05.pdf – All lab data sheets L05, L05A, and L05B for section 101450.
MAT\TST\10\101450\TST101450_1.pdf – Lab data sheets for section 101450, for field set No.1.

MAT\SAMP\34\340801\SAMP340801_1.pdf – sampling on section 340801, field set No. 1.

Digitized Test Section Videos (DSV)

This data type includes digitized video of test sections. All digitized video shall conform to the guidelines contained in this document. The digitized video shall be stored in the following directory structure.

DSV\STATE_CODE\STATE_CODE+SHRP_ID\VT\VIDEO_DATE (YYYYMMDD)*file_name*

Where

VT = GEN for initial walking video of test section or other video at other dates and by other means not included in the following categories
DIS for video taken during a manual distress survey
PROF for video taken through the windshield of a profiler

e.g. DSV\48\481077\GEN\19891202

File_Name = VT+STATE_CODE_SHRP_ID+"_"+VIDEO_DATE.*fe*

Where
VT = Video type defined above
fe = File extension type appropriate to the type of file format, i.e. mpg,

e.g. DSV\GEN\48\481077\GEN481077_19891202.mpg

Required Data Change Updates

When changes are made to distress maps or distress forms that were already scanned, the changes need to be reflected in the corresponding scanned-in distress maps or distress forms in the next AIMS submittal.

When changes are made to data in the database contained on scanned paper data forms, preferred practice is to annotate the changes on the paper data form and update the electronic scanned records contained in the AIMS submittals.

Submittal Format

Two copies of each submittal shall be submitted; one to the LTPP Customer Support Center and one to the FHWA LTPP database manager.

Submittals shall be made using external hard disk-based media using a format specified by FHWA. The current standard is USB drives. Multiple drives may be submitted depending on the amount of storage space required. Data groups should not be divided across different data storage media. Data shall be grouped into the categories defined in this directive.

Electronic files shall be submitted with the read only and hidden file attributes turned off. Submittals shall only include the files specified in this directive and be free of extraneous auto generated files generated by the operating system such as Thumds.bd files.

The following naming convention shall be used when submitting a USB drive. This name shall appear when viewing the drive through the MS Windows operating system. The name electronically burned into the disk media on each disk shall include

Region_SubmittalDate, where:

Region: A two-letter abbreviation used to specify the regional contractor; North Atlantic Region (NA), North Central Region (NC), Southern Region (SR), and Western Region (WR).

Submittal Date: Use a "YYYYMMDD" format

Example: NA_20080630

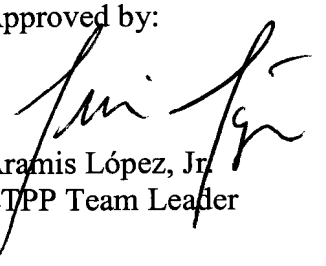
The following information, at a minimum, shall be included on the physical label of the USB drive:

- FHWA/LTPP
- Descriptive Title. (e.g. 2008 RSC AIMS Data Submittal)
- Region – 2-letter (e.g. SR)
- Submittal date, in text using YYYYMMDD format; e.g. 20080630

Questions concerning this directive should be addressed to the FHWA LTPP Team member responsible for IMS operations, with a copy to the LTPP TSSC.

Prepared by: TSSC/FHWA

Approved by:



Aramis López, Jr.
LTPP Team Leader