



U.S. Department  
of Transportation

**Federal Highway  
Administration**

# Memorandum

6300 Georgetown Pike  
McLean, Virginia 22101

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Subject: **ACTION**: LTPP Directive I-96  
Dell Poweredge 4400 Server Setup Instructions and  
Upgrade of IMS to VR 2002.04

Date: October 15, 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-96 to implement the Dell Poweredge 4400 Server setup instructions and upgrade of IMS to VR 2002.04. 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:493-3153:10/15/02  
File: c:/mdeaney/directives/ims/I-96dir.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-96

**Date:** October 15, 2002 **Supersedes:** I-92

**Subject:** **Dell Poweredge 4400 Server Setup Instructions and Upgrade of IMS to VR 2002.04**

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This directive implements transition of IMS operations to the Dell Poweredge 4400 servers and upgrade of the IMS from version 3.1 to VR 2002.04.

The labeling scheme for IMS software is being changed to reflect when new software upgrade releases occur. The labeling reflects the Version Release (VR), the year (2002), and the month (04).

Part I server configuration instructions, part II software installation instructions, associated software change notice, and list of current workstation software are included as attachments to this document. The upgrade of the database software to version VR 2002.04 shall be completed by April 30, 2002. The LTPP provided software referenced in these instructions was sent directly from the TSSC to each RSC.

This release contains a listing of all of the changes made to the software since the last upgrade in November of 2001. The majority of the changes were related to miscellaneous SPRs resolved during this period. Most notable were the changes to FWD QC, SMP QC, TPROF QC, TRF QC, and TST QC.

Prepared by: TSSC

Approved by:

Aramis Lopez, Jr.  
LTPP Team Leader

# Attachment 1

## Part 1: LTPP Server Configuration

### Introduction

These instructions will allow each region to configure their new LTPP servers in the same way as the Central LTPP server. There is a section of miscellaneous information with items that you may need during the configuration process. The remaining sections include a note if a software installation package is needed for that section.

### Network Connections to LTPP Server

Setting up the new LTPP servers provided by the government on an independent, stand-alone network, which is not connected to other networks, is the preferred practice. The intention is to prevent unauthorized access to the information stored on the servers and introduction of viruses that propagate over network connections. If a contractor wishes to connect the LTPP servers to another network, they must:

1. Inform FHWA of their intent to do so.
2. Prior to switching full time database operations on the new servers, provide in writing to FHWA, plans for securing the servers from unauthorized access.
3. Add the approved security measures to quality control plans as appropriate.
4. Assume full responsibility for technical support for problems with operation of the LTPP servers caused by connections to other networks.

Installation and setup of the new servers on corporate networks may be performed during the initial set-up. However, prior to switching operations to the new servers, security plans must be submitted to FHWA.

### Miscellaneous Information

Windows UserName: LTPP (suggested)  
Organization: FHWA (suggested)  
Computer Name: RegionxIMS, where x is the region number (suggested)  
Product Key: Found on Windows 2000 server sticker on lower right side of CPU  
License Type: Per Server  
Client Licenses: 5  
Type of Setup: WorkGroup (suggested) {see note on I.A.9.)  
Workgroup Name: Regionx, where x is your region number (suggested) {or domain name or workgroup name of current LTPP IMS server)

### I Operating Environment Setup

Software necessary:

Adobe Acrobat Reader 4.0 or higher

ZIP utilities of choice (see suggested package below)

#### A Install Operating System

- 1 Assemble server (monitor, keyboard, mouse, CPU, UPS) and turn on.
- 2 Agree to Software License
- 3 Enter Windows UserName and Organization
- 4 Enter Product Key
- 5 Licensing Mode - Choose "per Server, 5 licenses"
- 6 Enter Computer name \_\_\_\_\_ and Administrator password (write down and put in a safe place) \_\_\_\_\_  
(Admin password)

- 7 Set Date, Time and Time Zone
- 8 Network Settings - can skip and enter later (don't enter any info for Intel PRO/100 Dual Port (4 entries), only for Intel 8255 adapter)
- 9 Workgroup or Domain Computer
 

You will probably want workgroup, but if your current IMS server is a domain controller, you may want to make it a member server (one or more servers already running on my network) of the domain for now. You can later promote this computer to domain controller when the old computer is taken off line for good, but Active Directory will be required. You will need a domain username and password that can join this computer to the domain - can do this later.)
- 10 Computer will reboot after this and says Windows 2000 is configuring your server. When done, Windows 2000 server will be started.
- 11 Stop and Disable the WWW Service (IIS - source of security problems with viruses and worms, we don't use this.)

**B Setup Operating System (Control Panel)**

- 1 Optional: Change screen resolution from 800x600x75 Hz 256 colors to 1024x768x75 Hz High Color (16 bit)
- 2 Use Network and Dial-up Connections control panel to change the Internet Protocol (TCP/IP) properties for the Intel 8255x-based PCI Ethernet Adapter (10/100) from DHCP to TCP/IP address \_\_\_\_\_ with a subnet mask of \_\_\_\_\_ and a default gateway of \_\_\_\_\_. Check "Show icon in taskbar when connected" check box. Acknowledge that there is not a WINS server listed, if a warning appears
- 3 Plug CAT 5 ethernet cable into top or built-in RJ-45 connector (Intel 8255x-based PCI Ethernet Adapter (10/100)) and into the LTPP hub.
- 4 Change Local Area Connection properties to display on the task bar when connected
- 5 Use ipconfig utility ("ipconfig" at command prompt) to check configuration. If you do not see the new address on the port, reboot the server. The new parameters should appear
- 6 Ping old server at IP address: \_\_\_\_\_ (or another computer connected to the network)
- 7 Using the System Control Panel, enter Computer Name \_\_\_\_\_ (ex. Region1IMS) and change the server workgroup from Workgroup to your regional workgroup (or domain): \_\_\_\_\_ (ex. Region1). Reboot the server
- 8 If you do not see the name of the old server \_\_\_\_\_ in the Network Places, perform a search for it. Log on as administrator and check for shared folders/drives
- 9 On new server, create a shared folder, D:\Transfer, with full privileges for everyone (check Full Control in Folder Properties/Permissions)
- 10 Move the host file (c:\winnt\system32\drivers\etc\hosts) from old server \_\_\_\_\_ to same directory on new server \_\_\_\_\_. Edit file to add IP addresses of new workstations, if desired. Reboot server

**C Install System Utilities**

- 1 Install Adobe Acrobat Reader 4.0 or higher (ex., AA5.0 url: <http://www.adobe.com/products/acrobat/readstep2.html>)
- 2 Install ZIP utilities of choice (ex. PowerDesk, <File manager with built in Zip and Viewer abilities> url: <http://www.ontrack.com/freesoftware> )

**II Install UPS**

Software necessary: PowerChute Plus for Windows NT/2000

**A Hook power and RS-232 cables to UPS**

**B Install PowerChute Plus for Windows NT/2000**

- 1 Select PowerChute Plus from list of available products
- 2 Select Typical install

- 3 Allow install to search for port
  - 4 Accept UPS Type and COM Port
  - 5 Enable PowerChute plus remote monitoring
  - 6 Finish install and reboot
- C** Start PowerChute Plus and "attach" new server
- 1 Default shutdown parameters are OK. The default appears to shutdown the server 5 minutes after the power fails
  - 2 With battery capacity at 100%, perform a runtime calibration. Should take about 30 minutes to get down to 20%
- III Install ARCserve**
- Software necessary:
- Windows 2000 Computer Management Utility (part of Win2K OS)
  - ARCserve 2000 Workgroup Edition (includes InoculateIT-virus protection)
  - Internet Browser (installed on a computer with internet connection)
- A** Create an ARCserve user and place it into the Administrators and Backup Operators group. This allows the Job Engine to run in the background.
- 1 Username: \_\_\_\_\_ (ex. ARCserve)
  - 2 Full name: \_\_\_\_\_ (ex. ARCserve backup utility)
  - 3 Description: \_\_\_\_\_ (ex. This account is for backups)
  - 4 Password: \_\_\_\_\_
  - 5 Uncheck "User must change" and check "Password never expires"
  - 6 From "Member of" screen, remove the "Users" group from ARCserve user. Add Administrators and Backup Operators groups
- B** Install ARCserve 2000 Workgroup Edition, Standard Setup
- 1 Username: \_\_\_\_\_ (ex. LTPP)
  - 2 Organization: \_\_\_\_\_ (ex. FHWA)
  - 3 Select the complete installation
  - 4 Accept defaults for everything else until asked for system account
  - 5 Enter the ARCserve user for the system account (created in step A) Click OK for Removable Storage Service to be restarted.
  - 6 Reboot server
  - 7 Run RegisterIT from CA Registration Program Group
    - a Get a Customer ID by Phone. (800) 338-6720 (option 1)
      - i Customer ID: \_\_\_\_\_
      - ii Zip Code: \_\_\_\_\_
      - iii Select ARCserve 2000 Workgroup Edition
        - Registration ID: \_\_\_\_\_
        - Registration Code: \_\_\_\_\_
        - Keycode: \_\_\_\_\_
      - iv Select ARCserve 2000 Disaster Recovery Option
        - Registration ID: \_\_\_\_\_
        - Registration Code: \_\_\_\_\_
        - Keycode: \_\_\_\_\_
      - v Select InoculateIT Workgroup Edition
        - Registration ID: \_\_\_\_\_
        - Registration Code: \_\_\_\_\_
        - Keycode: \_\_\_\_\_
- (NOTE: At a later time we will have instructions on installing latest Service Pack, after we can verify it works correctly.)
- C** Update virus definitions for InoculateIT, from ARCserve
- 1 Go to <http://support.ca.com/Download/virusiq.html>
  - 2 Get the latest InoculateIT 4.5x for Windows NT/2000 virus definition file. Ex. I10084i.exe
  - 3 Update the definitions (accept defaults) - execute I10084i.exe
- D** Set InoculateIT Properties

- 1 From Realtime Monitoring screen:
  - a Enable realtime scanning of incoming files
  - b Select "Rename and Move File" for action upon Virus Detection
- E Test tape drive and ARCserve by backing up and restoring a directory on new server

#### IV Install Oracle 9i (9.0.1)

Software necessary:

- Oracle 9.0.1 (3 CDs)
- Oracle 9.0.1 Documentation CD 1 (of 2 CDs)

##### A Install Database

- 1 Insert Oracle CD 1 of 3, which will start AutoRun. installation
  - 2 Click on Install/DeInstall Products
  - 3 On Welcome screen click <next>
  - 4 Set the destination
    - a Oracle home name OraHome90
    - b Path D:\oracle\ora90
  - 5 Click Next for Product List
  - 6 Select the Oracle9i Database 9.0.1.1.1 product to install, click <next>
  - 7 Select the Enterprise Edition, click <next>
  - 8 Select "Software only" for the database configuration, click <next>
  - 9 Review the summary to verify 216 products to be installed
  - 10 Click <Install>
  - 11 Note the location of the installation log file (bottom of screen):  
(C:\Program Files\Oracle\Inventory\Logs\InstallActions.log)
- 
- 12 Remove the Oracle Enterprise Edition Options components (not included in the license)
    - a Click on Installed Products, OraHome90, Oracle 9I Database 9.0.1.1.1 then check box next to Options
    - b Click <Remove>
    - c Click <Yes>
    - d Click <Close>
    - e Click <Exit>

##### B Copy Documentation

- 1 Copy the contents of DOC directory from the Documentation CD 1 to the documentation directory D:\oracle\ora90\doc. Do not replace README.htm if prompted to do so
- 2 Create a share for documentation directory called \_\_\_\_\_ (ex. "Oracle 9i Documentation"). Give Everyone read access

#### V Prepare to create LTPP Database

##### A Map drive on new server to the old server

- 1 Map drive D on new server to old server. This will be used to export data from the current database

##### B Export all data from current database

- 1 Use export scripts provided to export all LTPP RIMS tables to Oracle .dmp files
  - a Unzip ExpScriptsFor012002Migration.zip into the D:\Transfer directory on new server. The files will include a batch file (EXP\_TAB.bat) to export each module of data and a parameter file for each module that lists the tables to be exported.
  - b In a Command Prompt window on old server, change to the New Server:D:\Transfer directory
  - c Run "EXP\_TAB dbusername/dbapwd@servicename"

#### VI Create Database

In an effort to make instructions more consistent, we would like everyone to name their production database instance and service name "IMSPROD." If you prefer a different service name, you can define another name in the TNSNames.ora file.

**A Create necessary subdirectories (case is optional)**

- 1 Create the directory C:\LTPP\_Database\IMSProd
- 2 Create the directory D:\LTPP\_Database\IMSProd
- 3 Create the directory D:\LTPP\_Database\IMSProd\Trace
- 4 Create the directory D:\LTPP\_Database\IMSProd\Tablesapces
- 5 Create the directory D:\TempScripts
- 6 Copy all BldCreate.zip file from distribution files to the TempScripts directory
- 7 Unzip BldCreate.zip into the TempScripts directory

**B Modify Path**

- 1 From Control Panel/System/Advanced/Environment Variables:
  - a Select System/Variable/Path
  - b Edit value of Path
  - c Append the clause ";d:\oracle\ora90\bin"
  - d Add new System variable:
    - i Variable: ORACLE\_SID
    - ii Value: IMSProd
  - e <OKAY> all the way out

**C Set Privileges on D:\LTPP\_Database (on all subdirectories and files) for Admins to Full Control and Everyone to Read, List and Execute**

**D Create new database instance from Command Prompt from Win2K Admin login**

- 1 Copy the initial initimsprod.ora from the distribution files to D:\Oracle\ora90\database
- 2 Create a new instance from the command prompt, all on one line. (Note: This command also sets the sys password for the IMSPROD instance):

```
oradim -new -sid IMSPROD -intpwd _____ (sys pwd) -maxusers 50 -startmode auto -pfile "d:\oracle\ora90\database\initimsprod.ora"
```

**E Use Oracle-OraHome 90/Configuration and Migration Tools/Net Configuration Assistant to set up the listener**

- 1 Choose Listener Configuration
- 2 Choose Add
- 3 Leave the default listener name
- 4 Choose TCP protocol
- 5 Use port 1521
- 6 Don't configure another listener
- 7 Choose Naming Methods Configuration
- 8 Select Local Naming Method
- 9 Choose Local (Net Service Name Configuration)
- 10 Choose Add (>), then click <Next>
- 11 Choose Oracle 8 release 8.0 database or service
- 12 Enter "IMSPROD" as the SID
- 13 Choose TCP
- 14 Enter server TCP/IP address \_\_\_\_\_ for host name and keep port 1521
- 15 Don't perform a test
- 16 Set the Net Service Name as "IMSPROD"
- 17 Don't configure another net service name, click <Next>.
- 18 Finish

**F Create LTPP Database from the Command Prompt**

- 1 Change to the D:\TempScripts subdirectory
- 2 Start SQL\*Plus:

```
sqlplus /nolog
```

- 3 Connect from SQL prompt, with sysdba role. (Note: This is equivalent to logging in as Internal in the old system):  
*connect sys/\_\_\_\_\_ (sys pwd) as sysdba*
- 4 Run the create database script:  
*@BldCreateDatabase.sql*
- 5 Connect to System from the SQL prompt.  
*connect system/manager*
- 6 Run the create database script:  
*@D:\oracle\ora90\sqlplus\admin\pupbld.sql*
- 7 Run the create tablespaces script:  
*@BldCreateTablespaces.sql*
- 8 Change system password:  
*ALTER USER system IDENTIFIED BY \_\_\_\_\_ (new system pwd)*
- 9 Create DBA user (ex. LTPPDBA) and grant privileges to it:  
*create user \_\_\_\_\_ (dbausername)*  
*identified by \_\_\_\_\_ (dbapwd)*  
*default tablespace user\_data*  
*temporary tablespace Temporary\_ts;*  
*grant connect, resource, dba, sysdba to \_\_\_\_\_; (dbausername)*
- 10 Connect as the dba  
*connect dbausername/dbapwd*
- 11 Run the create tables script  
*@BldCreateTables.sql*
- 12 Run the create roles script  
*@BldCreateRoles.sql*

## VII Import Data

- A Use import scripts provided to import all LTPP RIMS tables from Oracle .dmp files
  - 1 Unzip ImpScriptsFor012002Migration.zip into the D:\Transfer directory on new server. These files will include the import batch file (IMP\_TAB.BAT) as well as eight .sql files that will disable and re-enable constraints.
  - 2 In Command Prompt on NEW server, change to the D:\Transfer directory
  - 3 Run "IMP\_TAB dbausername/dbapwd"

## Attachment 2

### Part II: LTPP IMS Client Software Setup

#### I Server

- A** Log onto the server as an Administrator.
- B** RIMS Application (Forms, Reports, Filters, and QC Programs)
  - 1 If an LTPP directory exists on drive D of the new server, rename the directory to LTPP\_OLD. This installation does not contain several programs that are now obsolete. Therefore, renaming the old directory allows us to have a fresh start.
  - 2 Run LTPPIMSClientSoftware.exe from the release CD to install the LTPP Client software. It is recommended that the software be installed in "D:\LTPP".
  - 3 Create a share named LTPPClient for the "D:\LTPP" directory. The default security for the share is for everyone to have full control. If security is an issue for the client software, modify this to allow only authorized users to have full control.
- C** Create Sequences
  - 1 Copy the DumpSequences.sql file from the release CD to a subdirectory on the old server (e.g., d:\install)
  - 2 From this subdirectory, from the command line, run SQLPLUS as the DBA for the old production instance. This will create the file BldCreateSequences.sql in the subdirectory you are in:
    - a Plus80 olddbusername/olddbapassword@oldinstance  
@DumpSequences.sql
    - b Exit
  - 3 Copy BldCreateSequences.sql to a temporary directory on the new server (e.g., d:\install)
  - 4 From the command line, run SQLPLUS as the DBA for IMSProd. This will create the appropriate sequences in the new database instance:
    - a SQLPlus newdbausername/newdbapassword@IMSProd  
@BldCreateSequences.sql
    - b Verify that there are no errors in the BldCreateSequences.lis file
    - c Exit (or continue with step 1.3, below)
- D** Data Extraction Server
  - 1 Create a data extraction user in IMSPROD:
    - a Start SQLPLUS as the DBA on IMSPROD
    - b Type "@BldGrantsAndSequences.sql"
    - c Type "GRANT connect, resource, de\_user TO deuser IDENTIFIED BY \_\_\_\_\_;" (deuser password)
    - d Exit
  - 2 Go to the following directory: "D:\LTPP\DEServer"
  - 3 Edit: "IMSProdDESERV.reg"
    - a Verify that the Application and AppDirectory paths are correct. They should be fine unless you did not use the directory d:\LTPP as suggested, above.
    - b Insert the DEUSER password in the AppParameters: DEUSER/(deuser password)@IMSPROD
    - c Save and exit the file
  - 4 Edit IMSProdDESERV.sql. Make sure that the output\_dir value points to the desired location. Save the file if changes made and exit the file
  - 5 Edit IMSProdDESERV.bat. Make sure that the srvany.exe path is correct. This should be fine unless you did not use the directory d:\LTPP as suggested, above.
  - 6 Run IMSProdDESERV.bat from the command line:
    - a IMSProdDESERV dbausername/dbapassword@IMSPROD > IMSProdDESERV.lis
    - b Verify that there are no errors listed in the IMSProdDESERV.lis file. Ignore the comment at end of \*.lis file to change the Account Name and Password for this service.

- 7 From the Services Control Panel, start the DEServerIMSPProd Service

**NOTE: IMS database must be imported from the old server before the next step will work.**

- E** Install IMS Traffic Datasheets
- 1 Copy create\_tablespaces\_sheets4-5-6-8-9.sql, create\_tbl\_sheets4-5-6-8-9.sql, mod\_db\_trf\_basic\_info.sql, TRFDataSheets.cmd, ArchiveTRF.cmd, ArchiveTRF.par and VR200204.sql from the distribution CD into a temporary directory on the new server (e.g., d:\install)
  - 2 Archive the existing TRF tables.
    - a From the command line run ArchiveTRF  
i ArvhiveTRF newdbausername/newdbapassword@IMSProd
    - b Copy TRFArchive.dmp and TRFArchive.log to permanent storage. Note that you may receive some "EXP-00091: Exporting questionable statistics." error messages. These are safe to ignore.
  - 3 From the command line, run TRFDataSheets.cmd
    - a TRFDataSheets newdbausername/newdbapassword@IMSProd
  - 4 Examine the log files to make sure that the objects were created. Ignore errors produced by dropping/deleting objects which do not exist.
  - 5 Load the Traffic data specific to your region.
    - a Copy your region's dump file from the distribution CD into a temporary directory on the new server (e.g., d:\install)
    - b From the command line, import your region's data. Substitute your region number for the "?".
      - i Imp newdbausername/newdbapassword@IMSProd  
file=TrfDataSheets?.dmp log= TrfDataSheets?.log tables=(\*)  
commit=y ignore=y
- F** Update the Data Dictionary and Codes
- 1 From the command line, export the current data dictionary
    - a Exp newdbausername/newdbapassword@IMSProd file=ltppdd.dmp  
log=ltppdd.log tables=(ltppdd)
  - 2 From the command line, run VR200204.sql
    - a Sqlplus newdbausername/newdbapassword@IMSProd @VR200204.sql
    - b Verify no errors in VR200204.lis

## II Client

- A** Log in as an Administrator on the workstation.  
**B** Oracle 9i Client

Note: These instructions are for the new LTPP workstation. You may have to adjust drive letters if installing on a different computer.

- 1 Using the "Oracle9i Client" CD, install the Oracle client software.
  - a Click "Install/DeInstall Products"
  - b Click "Next" on Welcome Screen
  - c Use "OraHome90" for the destination name and "C:\Oracle\Ora90" for the destination path
  - d Choose the Administrator or Runtime options as appropriate for the workstation
  - e On Summary screen click "Install"
  - f Exit
- 2 Oracle 9I Client install will Auto run Configuration tools
  - a On Oracle Net Configuration Assistant Welcome screen, click "No, I will create net service myself.", click "Next"
  - b Click "Oracle 8 Release 8.0 Database or Service", click "Next"
  - c Enter "IMSProd" for Database SID, click "Next"
  - d Choose "TCP" for Protocol, click "Next"
  - e For Host Name enter new LTPP server (ComputerName) or its IP address
  - f Use port 1521, click "Next"
  - g Click "No, Do Not Test"
  - h Net Service Name "IMSProd", click "Next"

- i "No, do not configure another service name, Click "Next"
  - j On Net Service Name Configuration Complete! Click "Next"
  - k On Oracle Net Configuration Complete, click "Finish"
  - l Click "Next" which gives End of Installation
  - m Click "Exit" and answer "Yes" to Do you really want to exit.
- 3 Copy "D:\Oracle\Ora90\Network\Admin\TNSNames.ora" from the server to "C:\Oracle\Ora90\Network\Admin" on the workstation.
- C** Forms and Reports Runtime
- 1 Insert the "Oracle Forms and Reports 6i" CD from the "Internet Developer Suite CD Pack v1.0.2.4.1 for Microsoft Windows" into the CD Drive. NOTE: The Oracle Installer should start automatically. If not, run setup.exe from the root directory of this CD
  - 2 On Oracle Installation Settings Screen, set the Oracle home name to "OraHomeForms6i" and set the location to "C:\Oracle\OraForms6i" then click OK. NOTE: It is necessary to create a new Oracle home because this is actually a version 8i tool
  - 3 Select the "Oracle Forms Server" radio button and click OK
  - 4 Select the "Typical" radio button and click OK
  - 5 Select the "Runtimes for client/server deployment" radio button and click OK
  - 6 Click OK on the "General Information" dialog that appears
  - 7 Click OK on the "System Support Files" dialog that appears
  - 8 Click OK on the "General Information" dialog that appears to confirm that the installation was successful
  - 9 Close the multiple windows that are open
  - 10 Run setup.exe from the root directory of the CD
  - 11 Select the OraHomeForms6i Oracle home and click OK
  - 12 Select the "Oracle Reports Server" radio button and click OK
  - 13 Select the "Custom" radio button and click OK
  - 14 Select "Reports Runtime 6.0.8.11.3" which is under the "Oracle Reports 6.0.8.11.3" group in the left hand window and click the INSTALL button
  - 15 Click OK on the "General Information" dialog that appears to confirm that the installation was successful, Click EXIT
  - 16 Click YES on the "Confirmation" dialog that appears
  - 17 Close the multiple windows that are open
  - 18 Copy C:\oracle\ora90\network\admin\tnsnames.ora to C:\oracle\OraForms6i\NET80\ADMIN\tnsnames.ora (replace existing file)
  - 19 Using the Oracle Home Selector (Start/Programs/Oracle Installation Products/Home Selector), set the primary Oracle home to OraHome90, click "Okay"
    - a Click "Yes" on Confirmation dialogue box
    - b Click "Okay" on Primary home successfully changed
- D** Forms and Reports 6i, Patch 9 Installation
- 1 Insert second CD provided (Oracle Forms and Reports 6I, Patch 9), which should automatically start the Oracle Installation wizard. If it does not, execute Setup.Exe in the root folder of the CD.
  - 2 On Oracle Installation Settings click "Okay"
  - 3 On Install Options, click "Typical", then click "Okay"
  - 4 On Install Successful, click "Okay"
  - 5 Close various windows left open.
- E** Forms, Reports, Filters, and QC Programs
- 1 Map the LTPPClient share on the server to drive L: on the workstation
  - 2 Using the "Advanced" tab of the system control panel, add ";L:\;L:\BIN;L:\QC;" to the system "Path" environment variable. (on WinNT Advanced tab is called Environment)
  - 3 If you want, create a ShortCut to RunRIMS.Bat in L:.
  - 4 Each Client machine must set SYSTEM OPTIONS (RIMS Main Menu, option 5) paths.
- F** Data Extraction Client
- 1 Run LTPPDataExtractionClient.exe from the release CD
    - a Accept the default installation subdirectory, click "Next"
    - b Edit the DE Client parameters by editing

```
C:\LTPPDEClient\ltppe.ini  
c Change LogId=DEUSER  
d Change UserId=DEUSER  
Change LastDestDir to appropriate drive and subdirectory.
```

## Attachment 3

### LTPP IMS Software Change Notice NO. 77

Version VR 2002.04

Superseding 3.1 Effective  
Date: April 9, 2002

1. AWS: Approved SQL script for AWS\_LINK entry form to allow revisions to AWS\_LINK records that were filtered into the table (SPR 3-713).
2. CODES: New laboratory codes added (SPRs 2-3035, 3-3033, 3-3037, S-3043). Modified one Lab Code (4-403).
3. DLR: Provided scripts to correct the calibration factor used during the processing of strain data (P-3072).
4. FWD: Modified FWD25.pc to allow time values to pass (SPR 4-375).
5. IMS: Modified the Data Extraction Client Application to run in the Oracle 9I environment (SPR S-3075).
6. MON: For MON\_DEFL\_LOC\_INFO, approved scripts to remove pavement temps (set to NULL) where air temps were recorded in both TAIR and TPAVT fields due to incorrect FWD25 settings after leaving DYNATEST repair facility (SPR 3-714).
7. RIMS: Menu form corrected to allow back out of a form and choose data entry sheet from list (SPR S-3026).
8. RHB: Modified RHB\_CAUSE\_INFO form so “none” is no longer an option and the default value is NULL (3-690).
9. SMP: Modified SMP\_E.pc to also check SMP\_ERESIST\_AUTO\_ABF based on section and SMP\_DATE column (SPR P-3083). Modified SMP\_C, D, and E to accept CP\_ONLY command line parameter (SPR S-3071). Modified SMP QC programs to QC all computed parameters tables when CP\_ONLY command line parameter is used (SPR S-3084).
10. T\_PROF: Modified TPROF.pc to reverse the MIN/MEAN/MAX comparisons and error message (SPR P-3046). Revised program to check for null values before performing level E checks (SPR P-3049). Revised TPROF.pc to include option to only run computed parameters tables (SPR S-3047).
11. TRF: Modified TRAFLOAD.pc to verify year portion of PROCESS\_DATE (SPR 1-93). Revised conversion script for TRF\_BASIC\_INFO to populate table and PAVE\_TYPE\_TRF field properly (SPR P-3045). Revised mod\_db\_trf\_basic\_info to match specifications in TRF\_BASIC\_INFO (SPR P-3066).
12. TST: Modified TST\_E.pc to correct thickness code error message (SPRs 3-656, 4-388), and not report all three HYDRO values as equal (SPR 4-387). Corrected TST\_SHEET\_PC06 form and TST\_TB02 to use VISUAL\_ACPC\_CODE view (SPR 3-710)

## Attachment 4

### LTPP IMS Current Versions of Workstation Software

2.0.1.6.0	Oracle Universal Installer
9.0.1.1.1	Oracle NT
9.0.1.1.1	Oracle Utilities
9.0.1.1.1	Required Support Files
9.0.1.1.1	Oracle Net Client
9.0.1.1.1	Oracle Net Assistant
9.0.1.0.1	SQL*Plus
9.0.1.0.1	Oracle Documentation
9.0.1.1.1	Oracle Call Interface
9.0.1.0.1	Oracle ODBC Driver
9.0.1.0.1	Oracle Enterprise Manager
6.0.8.12.1e	GUI COMMON Files
9.0.1.1.1	Oracle Utilities
6.0.8.17.1	Forms API
6.0.8.17.1	Forms Runtime
6.0.8.17.0	Reports Runtime
9.0.1.0.1	Assistant Common Files

## Attachment 5

### LTPP IMS Current Software Versions

<i>Software</i>	<i>Version</i>
Microsoft Windows 2000	Service Pak 2 (5.00.2195)
ORACLE7 Server	9.0.1.1.1
SQL*Plus	9.0.1.0.1
ORACLE Forms Runtime	6.0.8.17.1
ORACLE Reports Runtime	6.0.8.17.1
ORACLE7 Utilities	9.0.1.1.1
ORACLE Enterprise Manager	9.0.1.0.1
ArcServe 2000 WorkGroup Edition	7.0 [Build 1018]