Long-Term Pavement Performance

Information Management System
Accessing LTPP Data with Microsoft Access

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INTRODUCTION

Data from the LTPP Program has been distributed to the public for more than 10 years. In the early 1990's, data was provided in ASCII or Excel files, and much work was required to get the data into a usable format. Microsoft Access® became a popular tool for analyzing the LTPP data by the late 1990's. By 2001, most data requestors wanted data in Access® format. The LTPP Standard Data Release (SDR) is now distributed using InfoPave (www.infopave.fhwa.dot.gov) . This site includes a section (https://infopave.fhwa.dot.gov/Data/StandardDataRelease/) where the current and past versions of the SDR saved in Access® are available.

The LTPP tables are grouped into modules based on their data content (see module listing sheet in Appendix A). For example, all of the tables containing materials testing results are in the Material_Test module. Each module is stored in a separate database file. Some data tables are so large that extraction and storage in Access® creates difficulties in data analysis and selection. Beginning with SDR 30, the data in tables: MON_DEFL_Drop_Data, MON_HSS_Profile_Elevation_25, MON_HSS_Profile_Elevation_150, MON_HSS_Texture_Segment, DD_Ax and DD_GVW are only available Microsoft SQL format.

EXTRACTING COMPRESSED FILES

The database files in the SDR have been compressed to save space. These can be unzipped by double-clicking on each module file. The screen in Figure 1 will be displayed when the user double-clicks on the Administration.zip file.

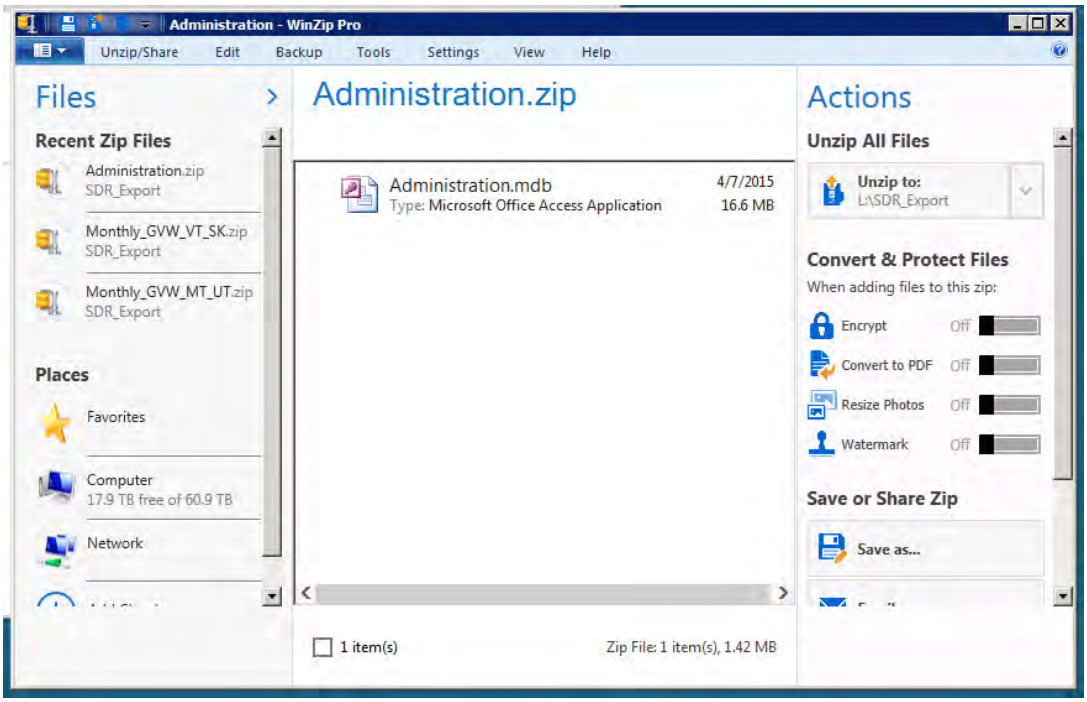

Figure 1. Screenshot. Winzip v.19.0 Window showing contents of Administration.zip.

At this point, the database contents can be viewed by double-clicking on the database file (Administration.mdb), or the database file can be extracted and saved to the hard-drive. Saving these files is recommended because once the database file is saved to rewritable media, the database can be customized to the user's needs.

Saving LTPP Database Files

To extract LTPP data from the SDR, follow the steps listed below. In this example Winzip v.19.0 is being used.

Check for necessary amount of space. Uncompressed, all data modules from the SDR fill approximately 140 GB of data. Individual data modules can be extracted and saved if less space is available or some modules are not needed.

Create a folder in which to save the database files.

Click on the arrow to the right of Unzip to: located in the upper right section of Figure 1.

Click on the down arrow in the "Extract to:" box to choose the folder into which the database file will be saved. In this example, a folder titled "L:\workstation\C_drive\LTPPinfo" was specified.

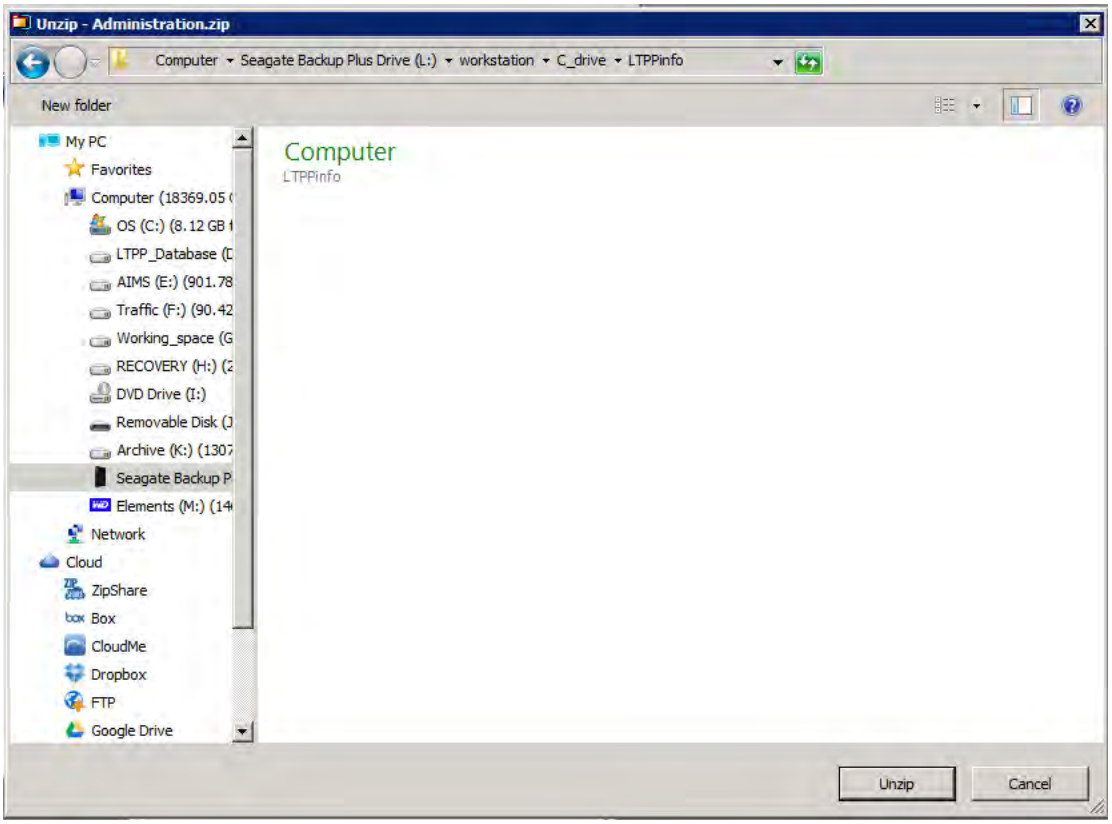

Figure 2. Screenshot. Verifying extraction location of file.

Click the "Unzip" button to save the file to the specified location.

OPENING A MICROSOFT ACCESS® DATABASE[1]

There are several ways to open a database file in Access®. The easiest is to double-click on the file (*.mdb) in Windows Explorer. The database will open in Access®, displaying a list of tables as shown in Figure 3.

Alternately, the user can begin by starting Access® from the Start/Programs Menu in Explorer and following these steps:

The initial Access® screen will prompt the user to create a new database file or open an existing file. Click "OK" to open an existing file.

The Open file window is displayed. Click the "Look In:" pull down menu and select the folder (directory) in which the database files are stored. All files matching the "Files of type" filter at the bottom of the window are listed (see Figure 3).

Select a database and click on the "Open" button. A list of the tables in the selected database will appear (see Figure 4).

Otherwise, if Access® is already running, the File>Open menu item or Open button can be used to open a new file.

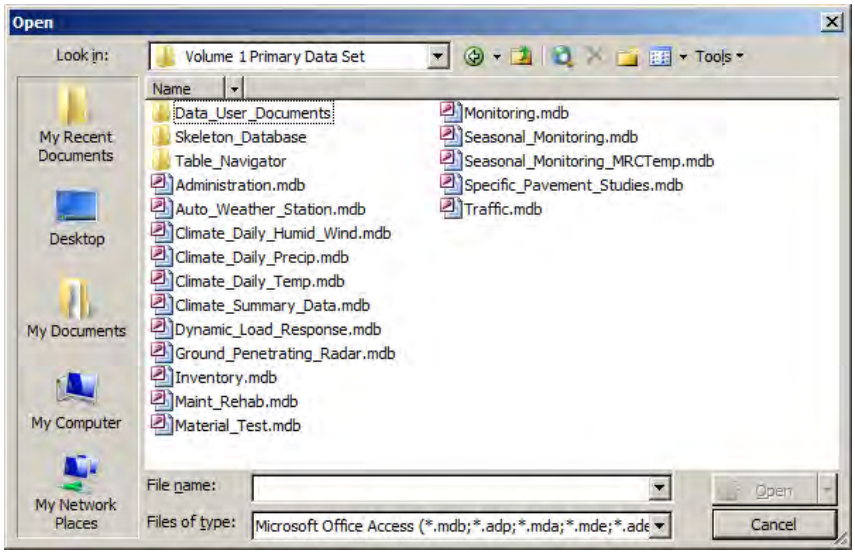

Figure 3. Screenshot. Open file window with unzipped database files.

[1] The database screenshots in this document were created in MS Access® 2003.

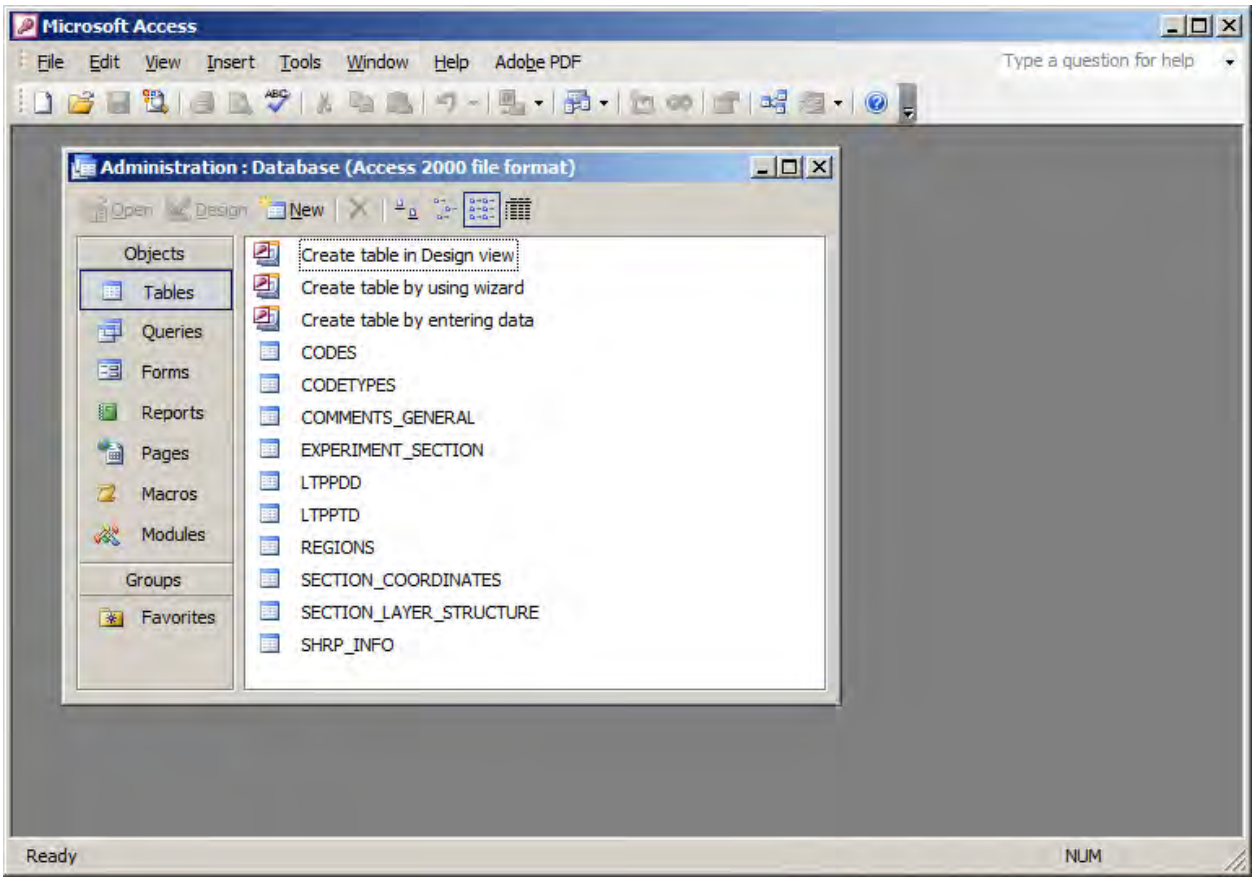

Figure 4. Screenshot. Tables in the Administration module.

The tables contained in the Administration module are shown in Figure 4. This screen provides options to open a table to view the data and to view/change the design of a table. Clicking on the "Open" button after selecting the EXPERIMENT_SECTION table shows the data in the EXPERIMENT_SECTION table (see Figure 5).

Database tables contain data organized in rows (records) and columns (fields or elements). All elements in a single row of data are related and are kept together. Each element is identified by the column header or field name. As the user tabs through the elements, a description for each element is displayed at the bottom of the screen. In Figure 5, there is a description for the STATE_CODE element at the bottom of the screen. The current record number and the total number of records contained in the table are in the lower left corner of the table screen.

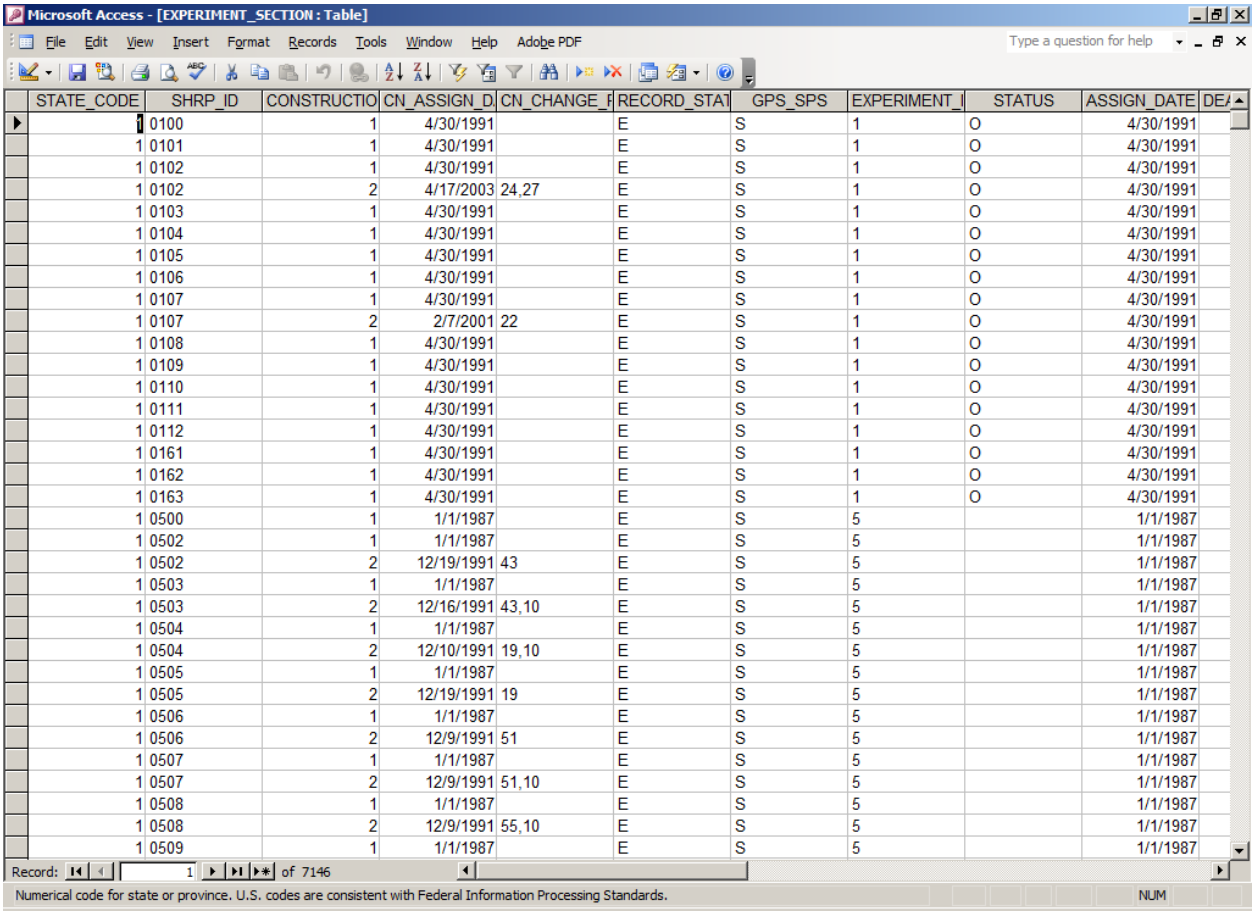

Figure 5. Screenshot. Contents of EXPERIMENT_SECTION table.

THE EXPERIMENT_SECTION TABLE AND KEY FIELDS

The EXPERIMENT_SECTION table (Figure 5) contains at least one row or record for each highway section in the LTPP Program. This table is considered the master table for the entire database. Each record has data related to the section identified by the STATE_CODE and SHRP_ID fields (columns).

Most tables in the LTPP database have the STATE_CODE and SHRP_ID fields. These two fields are always "key" fields. In other words, these two fields are required, along with other "key" fields, to identify a single row or record in a table. This group of key fields is also called the "primary key."

Primary Key

Access® defines the primary key as the fields that hold data that uniquely identifies each record in a table. Access® automatically creates an index on the primary key of a table and uses it to find records and to create joins between tables. The primary key index requires an entry in each primary key field and allows no duplicates. The order of the fields in a multiple field primary key determines the default sort order for the table.

The key fields in a table can be identified in the design view of the table. The design view is displayed when a table is selected or open and the Design View Button is clicked. The design view of the EXPERIMENT_SECTION table is shown in Figure 6.

The design view shows all of the fields that make up the table, the data type of each field, and a description of each field. Each field that is part of the key has the key symbol in the far left column.

The contents of the table are displayed by clicking on the Datasheet button .

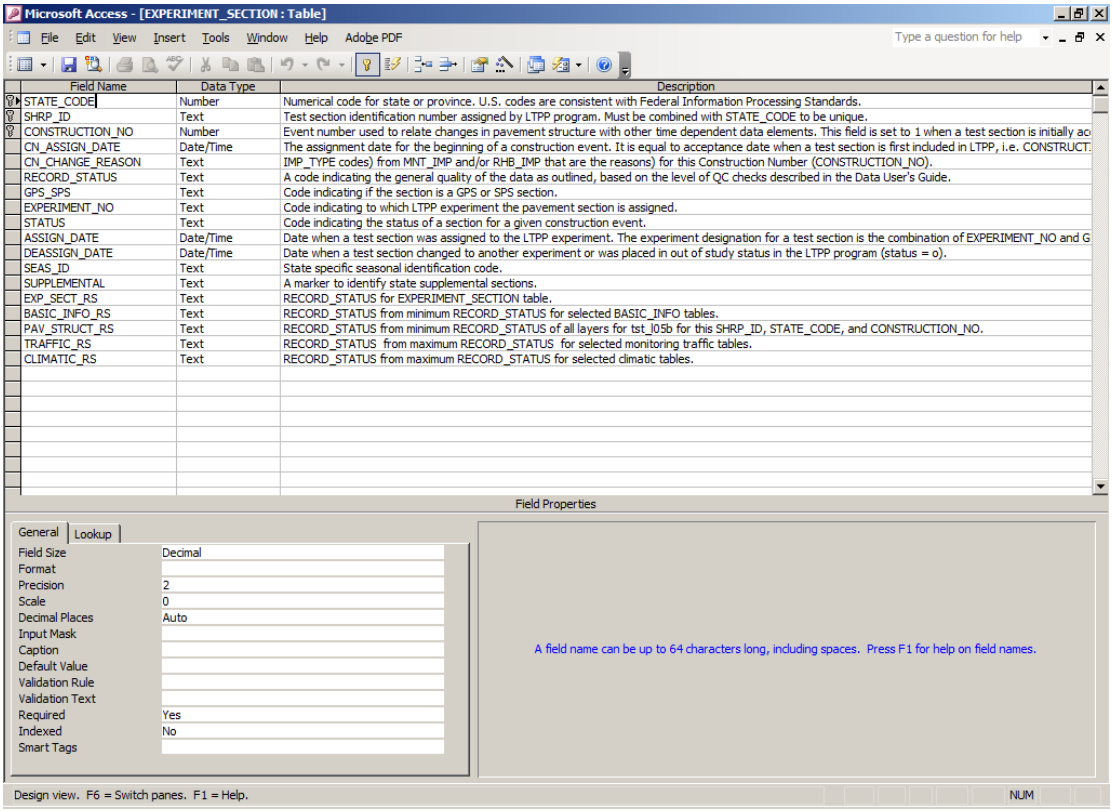

Figure 6. Screenshot. Design view of EXPERIMENT_SECTION Table.

MANIPULATING DATA WITH ACCESS®

Whenever a table is opened in Access®, a toolbar similar to the following is displayed.

Figure 7. Screenshot. Toolbar in Microsoft Access®.

Sorting Data

Several of the buttons in the toolbar can be used to manipulate data in a table. For example, to sort records, select one or more fields in the table (click on the field name(s) at the top of each column) and then click on the Sort Ascending or Sort Descending button. Each column used for sorting will be highlighted, as shown in Figure 8. All of the records will be sorted based first on the values in the leftmost selected column and then on selected columns to the right. When sorting by multiple columns, the columns must be adjacent to each other. Click and drag column headers to reorder columns. In the example below, the EXPERIMENT_SECTION table will be sorted by the STATE_CODE column and then the SHRP_ID column. Sorting can take some time, depending on the size of the table.

Microsoft Access - [EXPERIMENT_SECTION : Table]

File Edit View Insert Format Records Tools Window Help Adobe PDF

Type a question for help

STATE_CODE	SHRP_ID	CONSTRUCTIO	CN_ASSIGN_D	CN_CHANGE_I	RECORD_STAT	GPS_SPS	EXPERIMENT_I	STATUS	ASSIGN_DATE	DEA
1	0100	1	4/30/1991		E	S	1	O	4/30/1991	
1	0101	1	4/30/1991		E	S	1	O	4/30/1991	
1	0102	1	4/30/1991		E	S	1	O	4/30/1991	
1	0102	2	4/17/2003	24,27	E	S	1	O	4/30/1991	
1	0103	1	4/30/1991		E	S	1	O	4/30/1991	
1	0104	1	4/30/1991		E	S	1	O	4/30/1991	
1	0105	1	4/30/1991		E	S	1	O	4/30/1991	
1	0106	1	4/30/1991		E	S	1	O	4/30/1991	
1	0107	1	4/30/1991		E	S	1	O	4/30/1991	
1	0107	2	2/7/2001	22	E	S	1	O	4/30/1991	
1	0108	1	4/30/1991		E	S	1	O	4/30/1991	
1	0109	1	4/30/1991		E	S	1	O	4/30/1991	
1	0110	1	4/30/1991		E	S	1	O	4/30/1991	
1	0111	1	4/30/1991		E	S	1	O	4/30/1991	
1	0112	1	4/30/1991		E	S	1	O	4/30/1991	
1	0161	1	4/30/1991		E	S	1	O	4/30/1991	
1	0162	1	4/30/1991		E	S	1	O	4/30/1991	
1	0163	1	4/30/1991		E	S	1	O	4/30/1991	
1	0500	1	1/1/1987		E	S	5		1/1/1987	
1	0502	1	1/1/1987		E	S	5		1/1/1987	
1	0502	2	12/19/1991	43	E	S	5		1/1/1987	
1	0503	1	1/1/1987		E	S	5		1/1/1987	
1	0503	2	12/16/1991	43,10	E	S	5		1/1/1987	
1	0504	1	1/1/1987		E	S	5		1/1/1987	
1	0504	2	12/10/1991	19,10	E	S	5		1/1/1987	
1	0505	1	1/1/1987		E	S	5		1/1/1987	
1	0505	2	12/19/1991	19	E	S	5		1/1/1987	
1	0506	1	1/1/1987		E	S	5		1/1/1987	
1	0506	2	12/9/1991	51	E	S	5		1/1/1987	
1	0507	1	1/1/1987		E	S	5		1/1/1987	
1	0507	2	12/9/1991	51,10	E	S	5		1/1/1987	
1	0508	1	1/1/1987		E	S	5		1/1/1987	
1	0508	2	12/9/1991	55,10	E	S	5		1/1/1987	
1	0509	1	1/1/1987		E	S	5		1/1/1987	

Record: 1 of 7146

Numerical code for state or province. U.S. codes are consistent with Federal Information Processing Standards.

NUM

Figure 8. Screenshot. Sorting EXPERIMENT_SECTION by STATE_CODE and SHRP_ID fields

Filtering Data

Rows of data can be filtered according to specific data values. Filtering will allow the user to view specific rows of data while hiding the remainder of the data. The table can be filtered either by selection or by form. To filter by selection, find a data value of interest in a column (such as STATE_CODE = 1) and highlight the data value with the cursor. Go to the toolbar and click , filter by selection. The table will then display only those rows that contain that data value in that column. In this case, only the rows with a "1" in the STATE_CODE field will be displayed. The user will notice that the number of records at the bottom of the screen is modified to show only the number of rows displayed with the filter applied. To remove the filter and have all records displayed again, click on the filter on/off button .

To filter by form, click on the Filter by Form button to display a form that accepts a value for each field in the table. One or more fields can have values specified on this form. Wildcards can be used on the form to get related or similar values in a particular field. For example, if "like '01*'" is entered in the SHRP_ID field, all records with the first two digits of the SHRP_ID equal to "01" will be displayed.

Syntax Errors

Access will often correct syntax errors when criteria are specified. For example, in the filter form, if the user types "01*" for a value, Access interprets it as "like '01*'".

CREATING A CUSTOMIZED LTPP DATABASE

A database of selected LTPP tables can be useful because only tables of interest can be pulled together, saved together, and manipulated together, without using unnecessary hard-drive space. To create a new database in Access, select File > Open or click on the button. Select "Blank Database." The File New Database Screen will appear to allow the user to create a new database file (Figure 9).

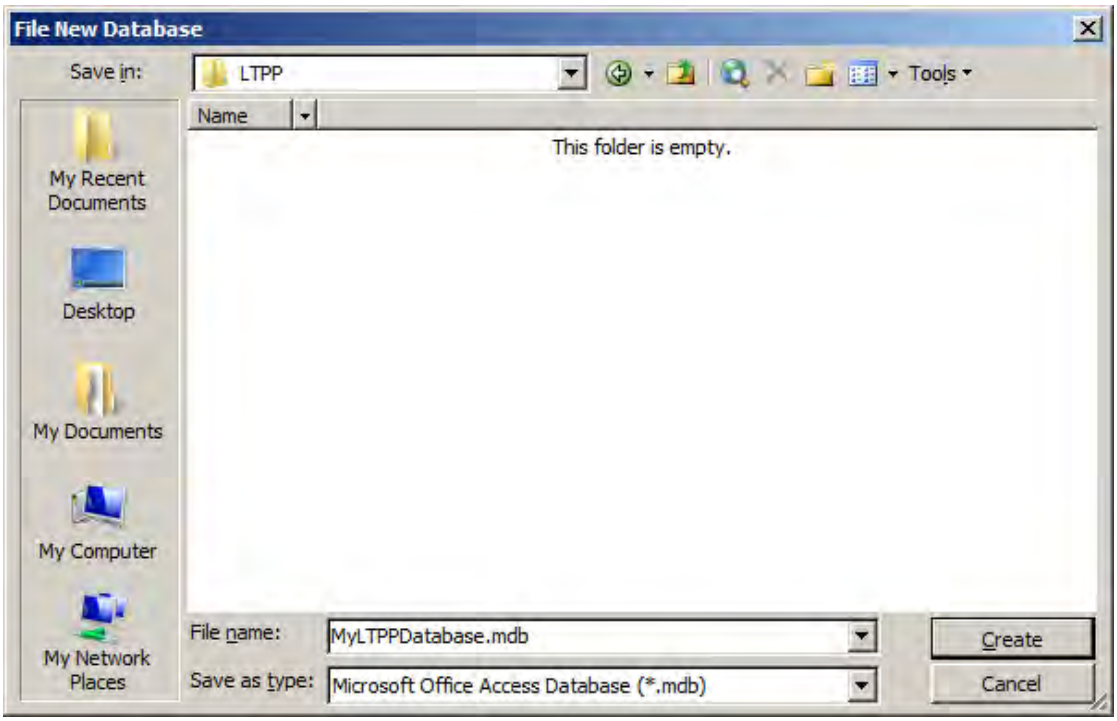

Figure 9. Screenshot. Screen to specify filename for new database.

Click on the "Save In:" pull-down box to select the directory to which you want to save the new database file. Type a descriptive name for the new file in the "File Name:" pull down box. Figure 8 shows an example of creating the database "MyLTPPDatabase" in the "LTPP" directory. Click the "Create" button, and the Database Screen will be displayed (Figure 10).

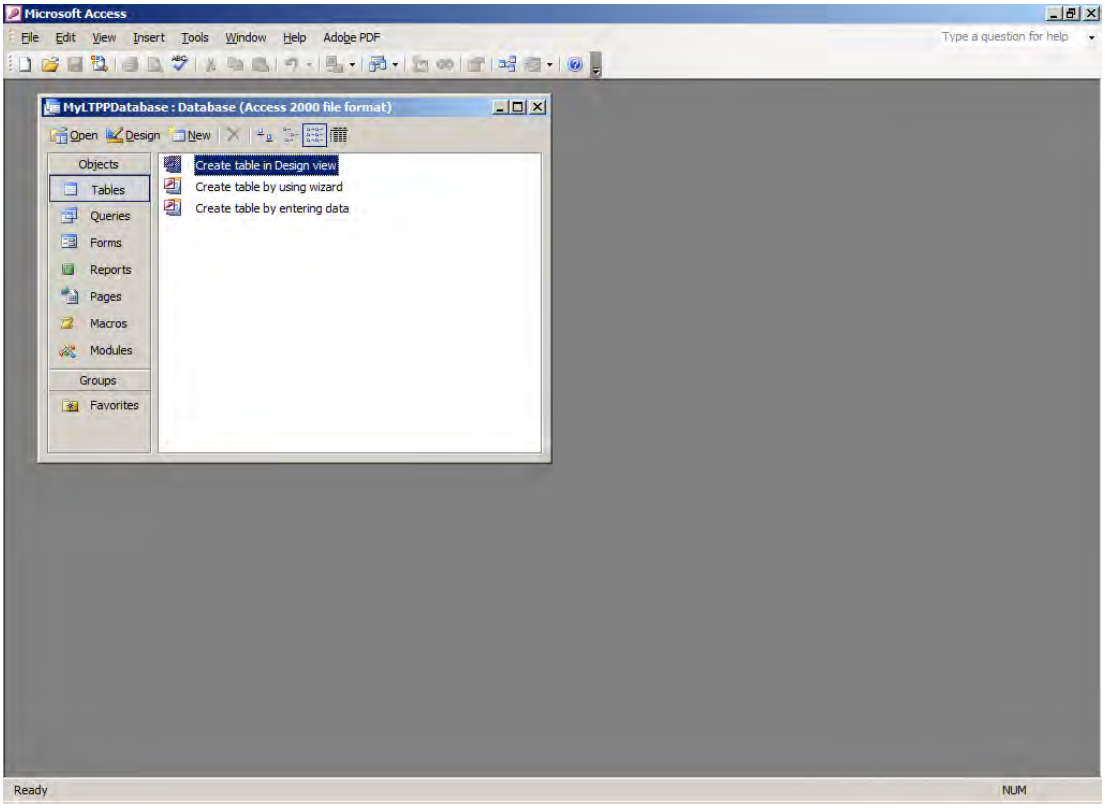

Figure 10. Screenshot. Database Screen.

Next, select File > Get External Data > Import from the main menu. Click on the "Look in:" drop down box and select the directory to which you have saved your LTPP database files. At this point, you should see a list of database files similar to the one in Figure 11.

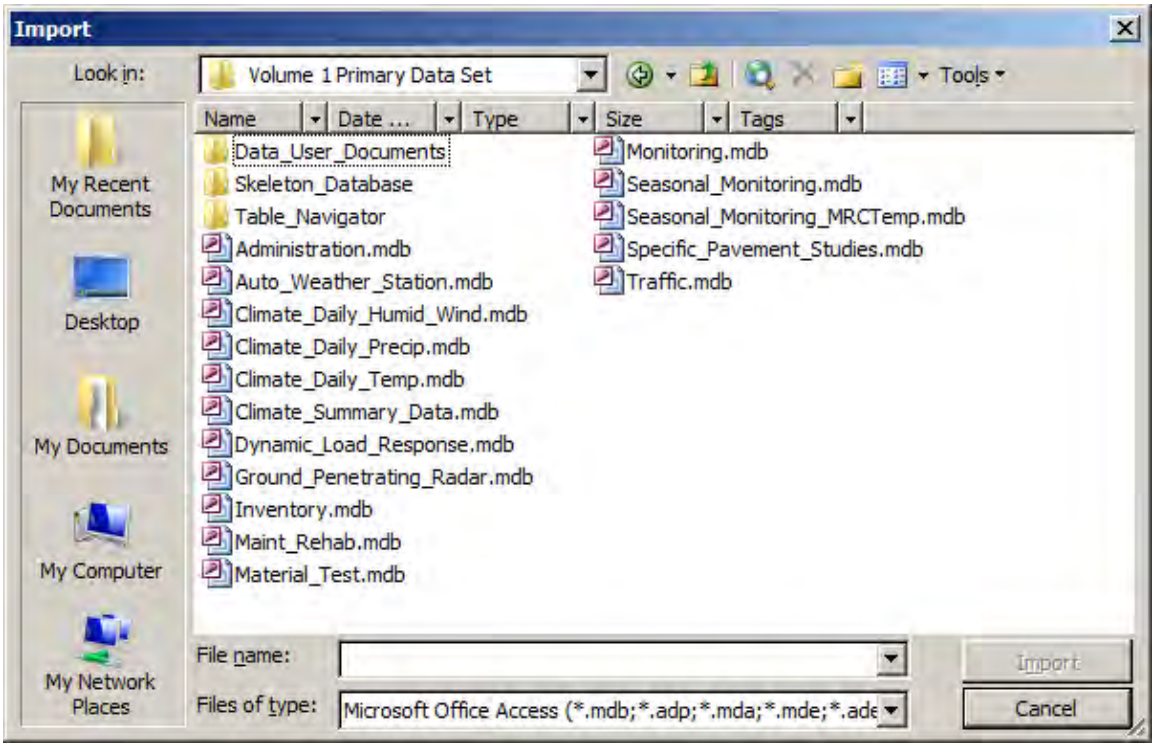

Figure 11. Screenshot. Import window with LTPP database files listed.

You can select an entire database to import by clicking on a database file in the list and clicking the "Import" button. Or, you can import individual tables by double-clicking on a database file to display a list of tables included in that database. Double-clicking on the Monitoring.mdb file will display the tables shown in Figure 12. Select one or more tables (or queries or forms, etc.) from the list and click ok. This will import the selected objects into the MyLTPPDatabase.mdb file. Repeat these steps for all desired tables.

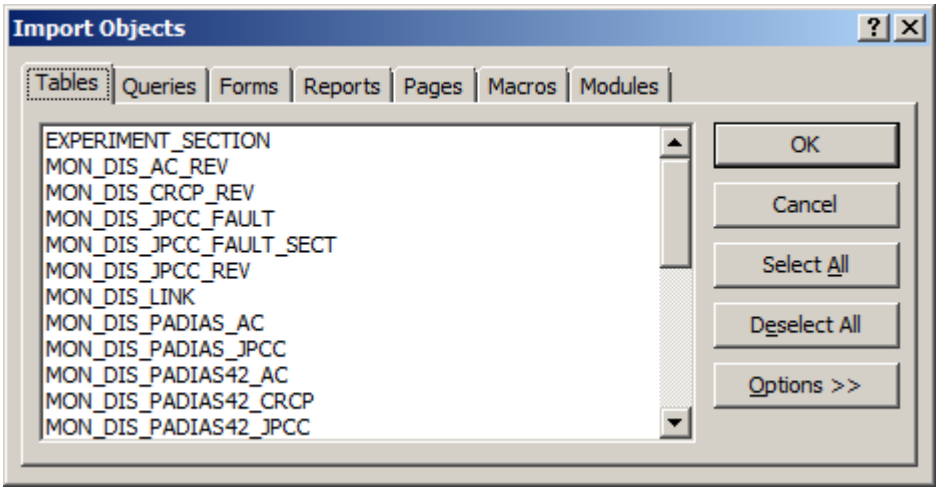

Figure 12. Screenshot. Tables in the Monitoring Database.

ADDING TABLES TO AN EXISTING DATABASE

The procedure for adding tables to an existing database is identical to the procedure for creating your own database, described above, except for the first step. Before importing any tables, open an existing database with any of the methods described in the "Opening an Access® Database" section. Then import additional tables as described in "Creating a Customized LTPP Database."

For example, a user wants to import the CODES table from the Administration.mdb database to the Material_Test.mdb database. To import this table into the Material_Test.mdb database file stored on your hard-drive, follow the steps listed below.

Through Explorer, find the directory in which the Material_Test.mdb file is stored on your hard-drive (e.g., C:\LTPP).

Double-click on the Material_Test.mdb file to open it in Access®. The tables in Figure 13 will be displayed.

Select File > Get External Data > Import from the main menu. Click on the "Look in:" drop down box and select the directory to which you have saved the Administration.mdb file.

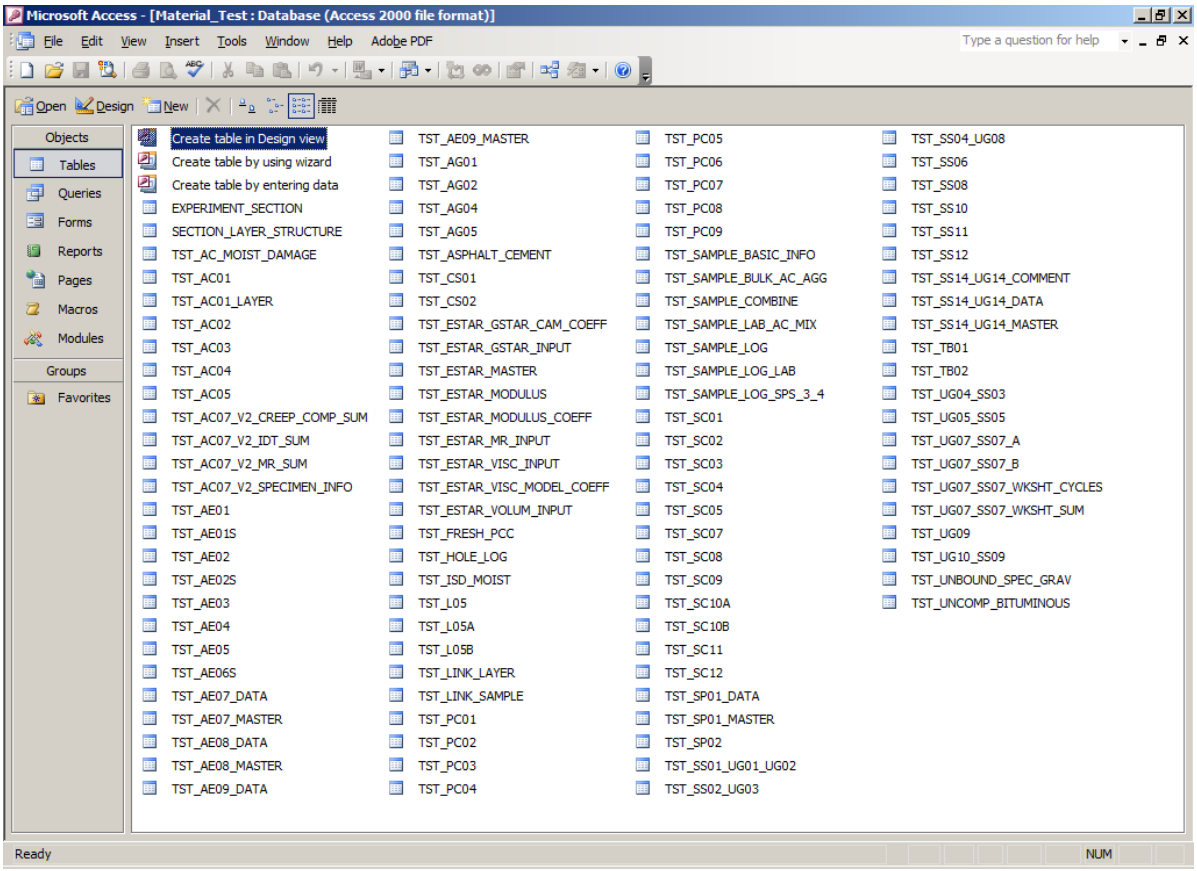

Figure 13. Screenshot. Tables in Material_Test.mdb.

Double-click on the Administration.mdb file. Select CODES from the table list and click OK (see Figure 14).

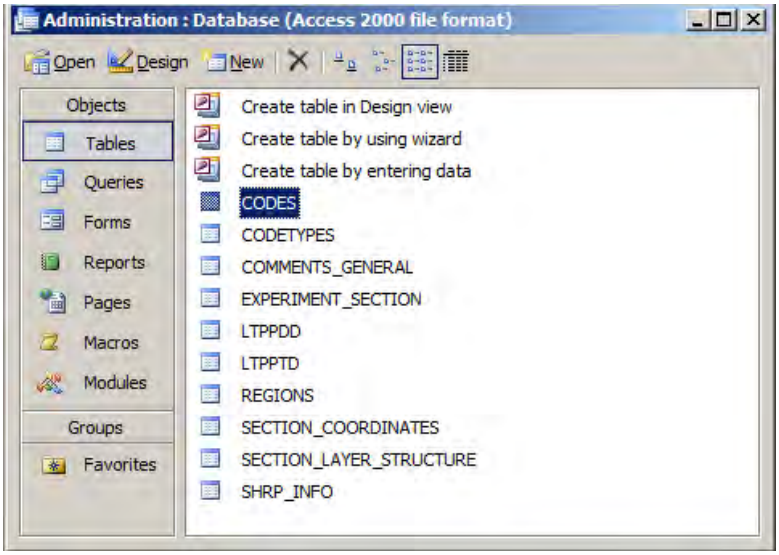

Figure 14. Screenshot. Import of CODES table.

CODES is imported into the Material_Test.mdb file and is listed with the other tables as shown in Figure 15.

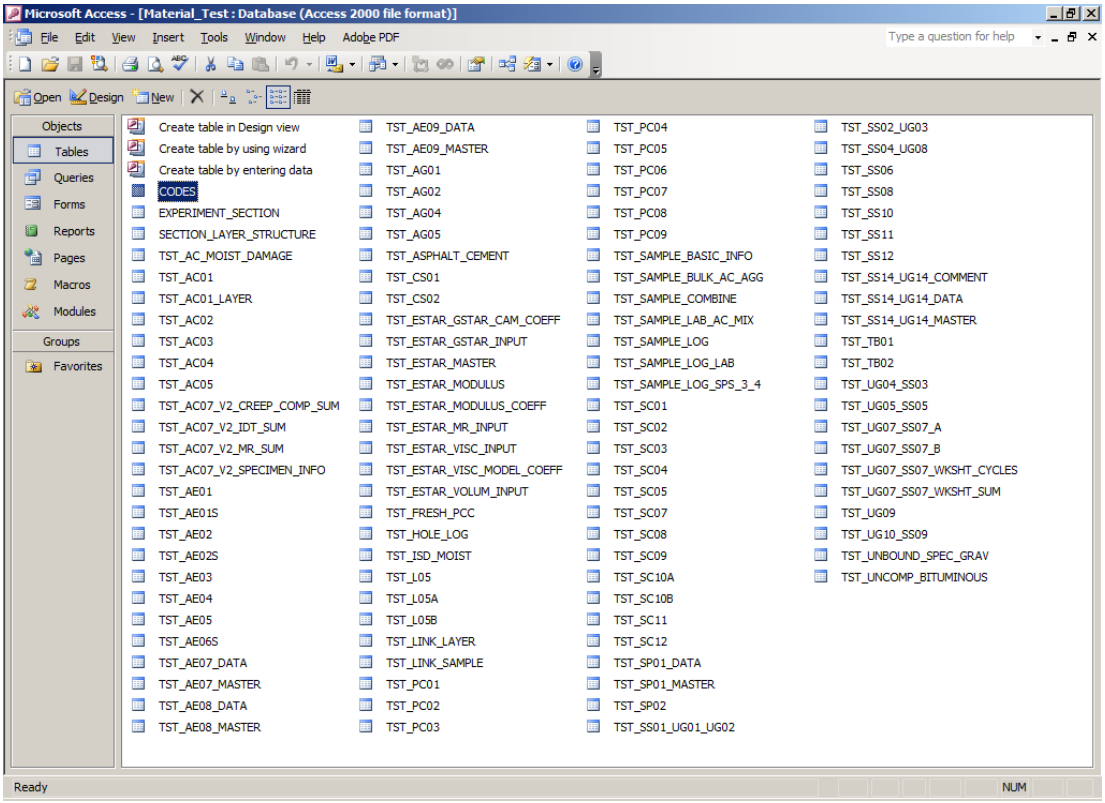

Figure 15. Screenshot. CODES in the Material_Test database.

DATABASE OBJECTS IN ACCESS®

An "object" in Access® is any of the things listed under the Object heading in Figure 16. Tables are objects; reports are objects; queries and forms are objects. Clicking on each object type in the object list will display a list of that object type contained in the current database file. The LTPP SDR only contains table objects. However, users of the LTPP data are encouraged to create their own queries and reports to support analysis of the data.

SIMPLE QUERIES

Query	You use queries to view, change, and analyze data in different ways. You can also use them as the source of records for forms, reports, and data access pages. The most common type of query is a select query. A select query retrieves data from one or more tables by using criteria you specify and then displays it in the order you want.

A query is a question asked of a database. It can combine data from one or more tables or even other queries. This section will discuss single-object queries.

Create a Single-Object Query

The simplest and most common type of query is similar in result to the filters discussed in the Filtering Data section. A SELECT query creates a subset of data that matches certain criteria specified by the user. For example, you could select all of the data in the EXPERIMENT_SECTION table for highway sections located in Alabama (STATE_CODE = 1). The results of this query would be identical to the records displayed by the filter we used in our earlier example.

Listed below are the steps required to create the subset of data records in EXPERIMENT_SECTION for Alabama highway sections.

Using the Material_Test.mdb data file, click on "Queries" from the Object list in the database screen (Figure 16). Any queries you have created and saved will be listed.

The first two items in the list are query-building options. Double-click the "Create Query in Design View" option, which is the recommended option.

The Show Table window is displayed and allows the user to select one or more tables (or queries) on which to base a new query. Select EXPERIMENT_SECTION and click the "Add" button. Close the window.

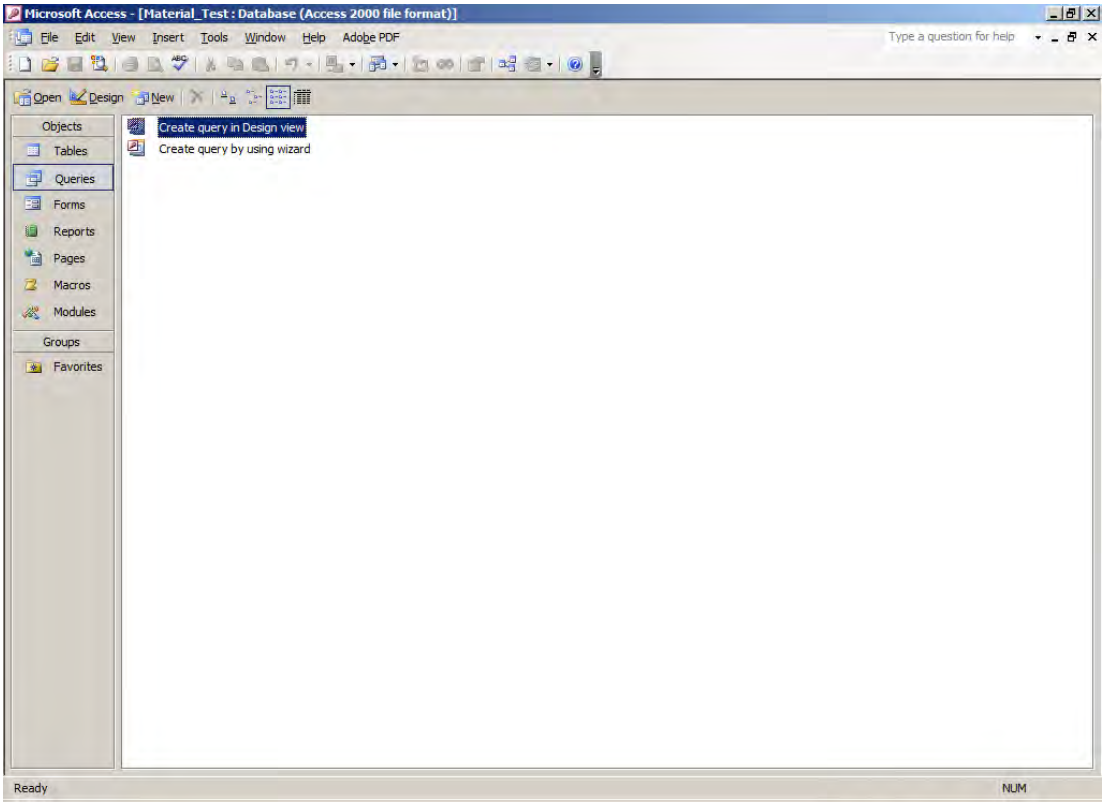

Figure 16. Screenshot. Queries in Material_Test.

Figure 17 shows the design view of a query based on the EXPERIMENT_SECTION table. The windows can be enlarged to display table and fieldnames completely. The "*" represents all fields in the table.

Highlight all fields listed under EXPERIMENT_SECTION except the "*" and drag them onto the grid. Alternately, drag the "*" onto the grid as well as the STATE_CODE field; unclick the Show check box on the STATE_CODE field, so it doesn't display twice.

Type a "1" in the Criteria row in the STATE_CODE column of the grid.

Preview the records selected by the query by clicking on the datasheet view button in the toolbar. All records with a "1" in the STATE_CODE field should be displayed. Click on the design view button to return to the design grid.

The SQL view of the query is displayed by selecting View > SQL View from the main menu. Users familiar with SQL can make changes to the query in this window.

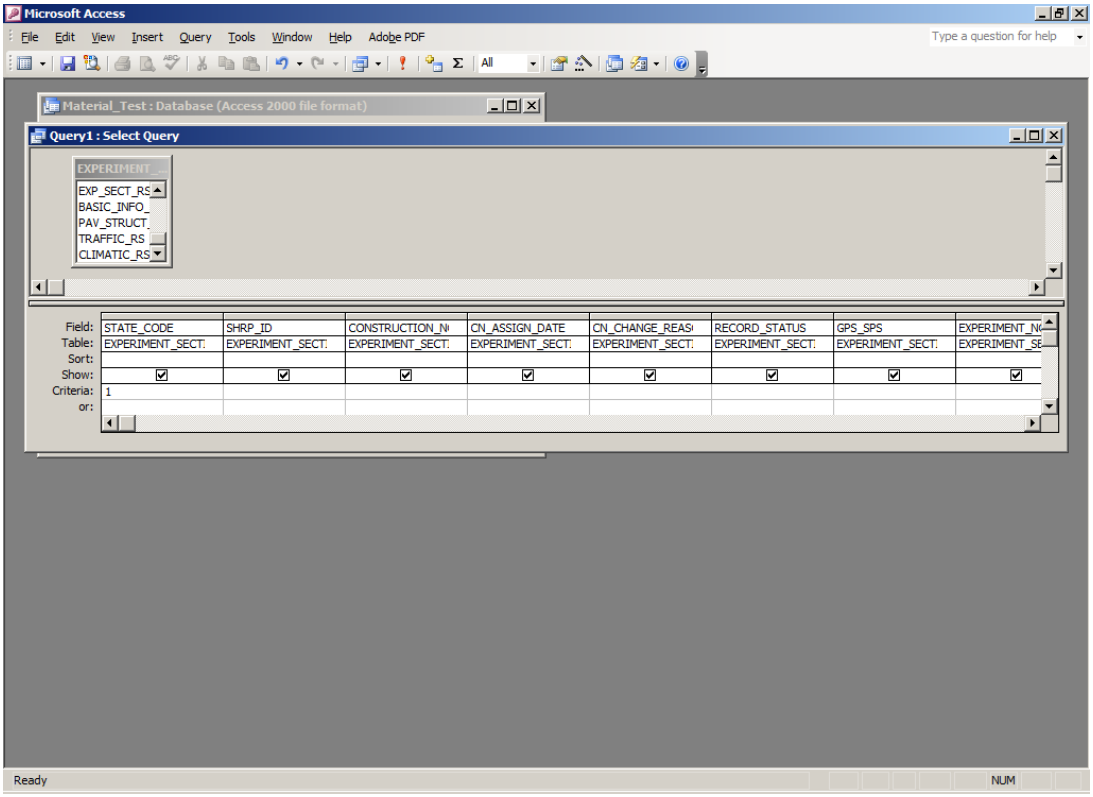

Figure 17. Screenshot. Query design view window.

Click the Run button on the toolbar to run the query. This will again display the datasheet view of the selected records.

If the query requires additional changes, return to the design view to change criteria, fields displayed, or table relationships.

Once the results are satisfactory, save the query by clicking on the Save button . Give the query a descriptive name and click OK.

COMPLEX QUERIES

Queries that are based on more than one object (table or query) can be very long and complex. In the beginning, it is best to allow Access® to build the query rather than using the SQL View to manually enter fieldnames and selection criteria. Successful query development is dependent on the user's understanding of table relationships and table joining.

Table Relationships

MS Access® is a relational database package. In other words, rather than storing all related data in one table, which would be very large and cumbersome, data is divided into discreet chunks that can be linked together when necessary. For example, in a product database, suppliers and products should be stored in two different tables. Otherwise, the supplier

information would be repeated for each of its products, wasting a lot of space. Fields such as SUPPLIER_ID and PRODUCT_ID could be used to link suppliers and products across tables.

In Access®, links (also relationships or joins) between tables can be defined from the Database screen by clicking the Relationships Button. The Show Table Window will be displayed (see Figure 18), or the Show Table Button can be clicked to select tables for which relationships will be defined. Once tables are selected, close the Show Table Window. Click and drag fields from one table list to the matching field in another table list to begin defining the relationship between the two tables. The Edit Relationships Window is displayed and the remainder of the relationship should be defined in this window. See more information in Access® about the different types of relationships (joins) that can be defined.

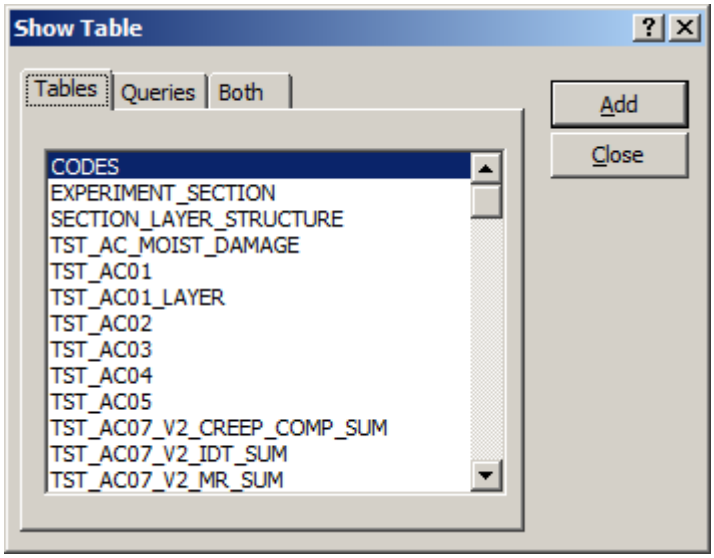

Figure 18. Screenshot. Show table window.

Table relationships can also be defined in the Query Design View Window. This is easy to do by clicking and dragging a field from one table list to the matching field in another table list. Lines will appear between the matching fields to indicate the relationship (see Figure 19). Join type can be defined by double-clicking on each join line.

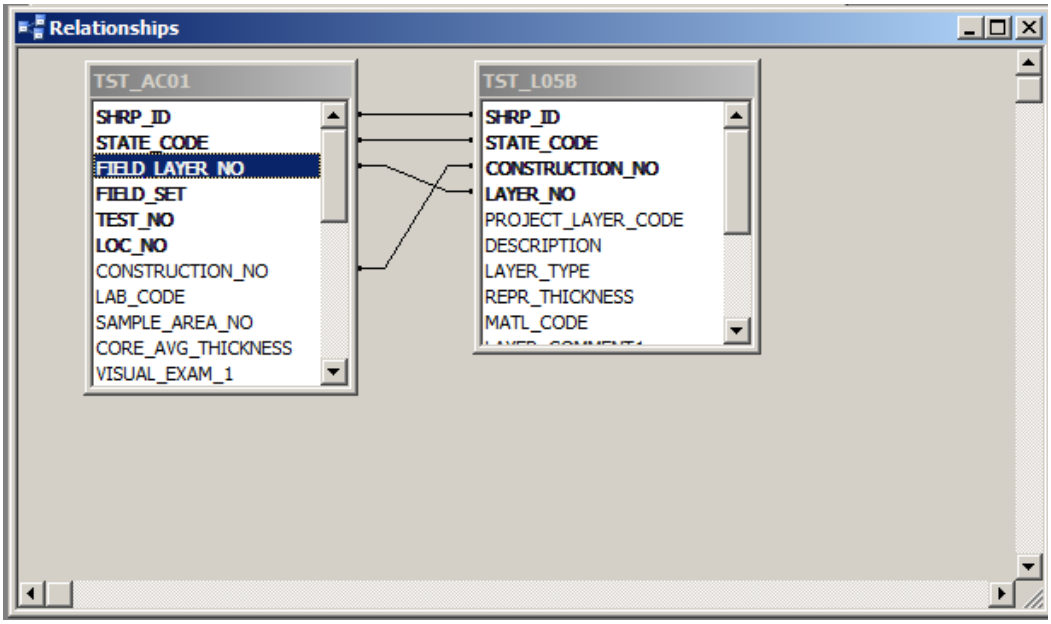

Figure 19. Screenshot. Relationship between TST_AC01 and TST_L05B

Note: Each field in the relationship between two tables must be defined with the same type of join or the following error message will be displayed when the query is executed:

Figure 20. Screenshot. Error message on join.

Joining Tables

Joining tables is done in a query to select and display related data from two or more tables (or queries). If table relationships are defined correctly, Access® will generate the join statements when the query is generated. In the product database example, mentioned above, a query to list all suppliers that carry a particular product would require the Products and Suppliers tables to be joined. Before designing the query to select and display the product/supplier data, the relationship between the tables must be defined.

Advanced users may use the SQL View in the Query Design Window to write their own queries. Join statements must be written properly to ensure reasonable and accurate results.

Cartesian Product	It is critical that relationships between tables be defined completely. If tables in a query aren't joined to one another, either directly or indirectly, Access doesn't know which records are associated with which, so it displays every combination of records (called a "cross-product" or "Cartesian product") between the two tables. Therefore, if each table had 10 records in it, the query's results will contain 100 records (10X10). It also means the query might take a long time to run and would likely produce less meaningful results.

Joining LTPP Tables

In the LTPP database, joining tables is important for creating subsets of data to be analyzed. For example, a study of concrete highways overlaid with asphalt might require the annual number of KESALs along with other information. The LTPP GPS 7A and 7B Experiments include asphalt overlaid PCC sections. Experiment information for each section is found in the EXPERIMENT_SECTION table. Annual KESALs can be found in the TRF_MON_EST_ESAL table in the ANL_KESAL_LTPP_LN_YR field.

The EXPERIMENT_SECTION and TRF_MON_EST_ESAL tables can be joined to get KESALs for only the GPS7A and GPS7B sections. The Traffic.mdb database file contains both of these tables, so it can be used as the starting point. Before creating a query to get the required data, a relationship between the two tables must be defined (Figure 21). Listed below are the steps required to define the relationship between these two tables.

Open the Traffic.mdb database file in Access.

Click on the Relationships Button , select the EXPERIMENT_SECTION and TRF_MON_EST_ESAL tables in the Show Table Window, and click “Add.” Close the Show Table Window.

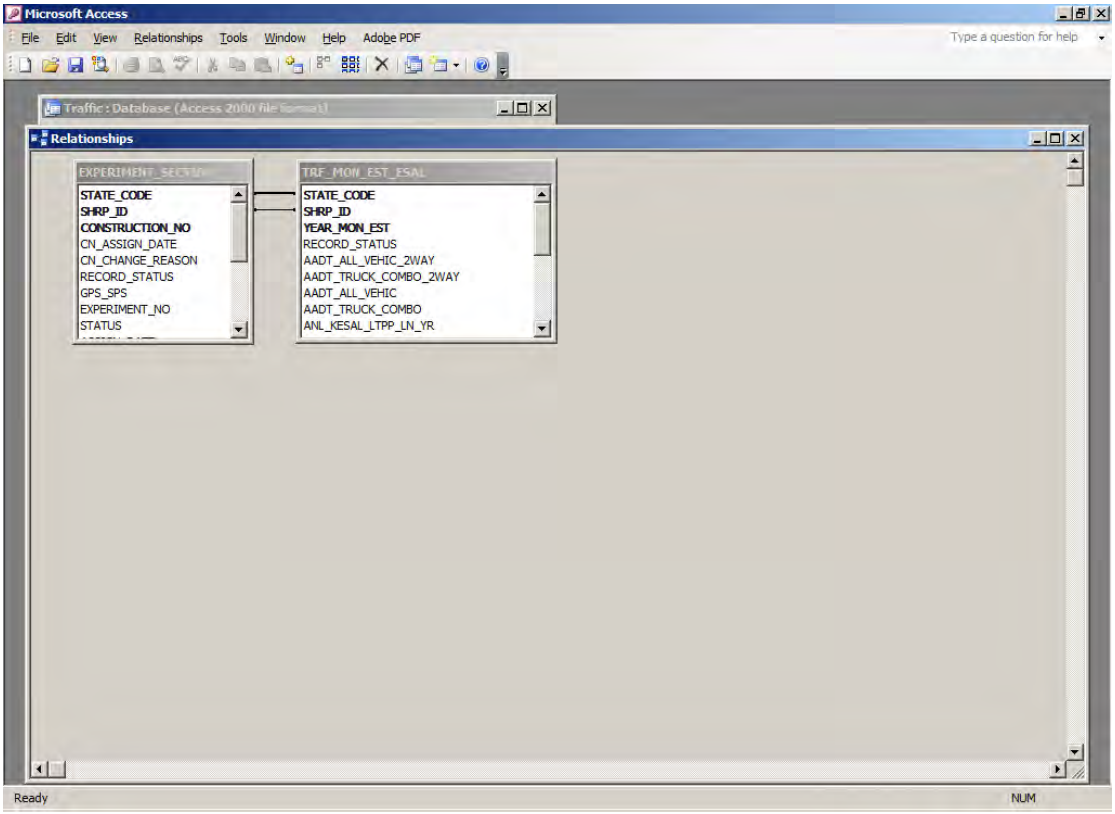

Figure 21. Screenshot. EXPERIMENT_SECTION and TRF_MON_EST_ESAL with join lines.

All related fields (key and non-key) should be included in the table relationship. (Key fields are bolded in the table lists.) Click and drag the STATE_CODE field from the EXPERIMENT_SECTION table over to the STATE_CODE in the TRF_MON_EST_ESAL table. The Edit Relationships Window will be displayed with the STATE_CODE portion of the join shown (Figure 22).

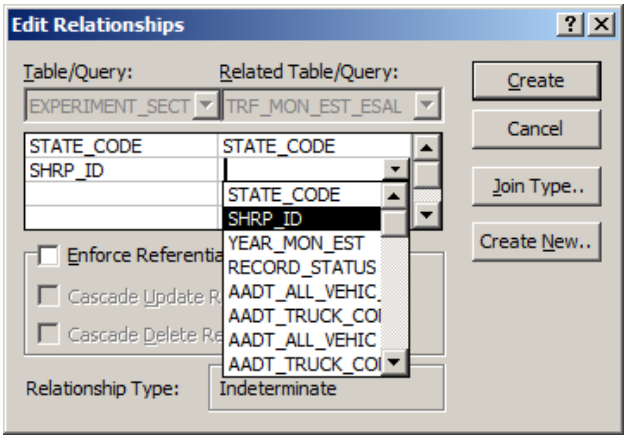

Figure 22. Screenshot. Edit relationship for EXPERIMENT_SECTION, TRF_MON_EST_ESAL.

The SHRP_ID fields in the two tables are related and must be included in the join. Therefore, click in the second cell in the grid under EXPERIMENT_SECTION, click the down arrow, and select SHRP_ID from the list.

Select SHRP_ID in the second cell under TRF_MON_EST_ESAL.

Click the "Create" button. Notice that the keys CONSTRUCTION_NO and YEAR_MON_EST have not been included in the join. Both of these fields are date references, but they cannot be matched up directly.

Save and close the Relationships Window.

Create a Multi-Object Query

Once relationships have been defined, a query can be generated through the Query Design View Window by following the steps below.

In the Database Window, click on "Queries" in the "Objects" list.

Double-click "Create query in Design view" in the query list. The Query Design View Window will be displayed with the Show Table Window (Figure 18) on top.

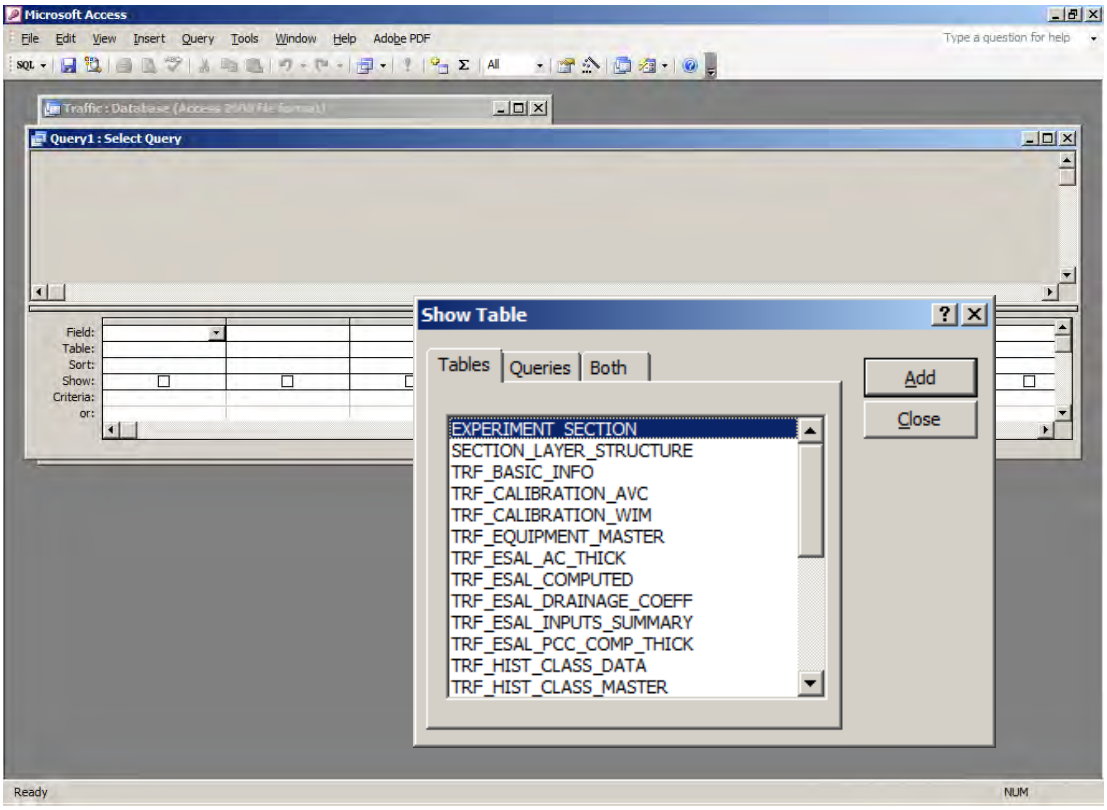

Figure 23. Screenshot. Create query in design view.

Select and add EXPERIMENT_SECTION and TRF_MON_EST_ESAL.

The user must decide at this point which fields from each object to include in the query results. All fields that are needed for specifying query criteria must be included, along with any fields that could be useful to analysis. The field list should generally include all key fields except for duplicates. Fields can be added or removed as necessary. In this example, the following fields will be included (notice the table.field notation):

EXPERIMENT_SECTION.STATE_CODE
EXPERIMENT_SECTION.SHRP_ID
EXPERIMENT_SECTION.CONSTRUCTION_NO
EXPERIMENT_SECTION.GPS_SPS
EXPERIMENT_SECTION.EXPERIMENT_NO
TRF_MON_EST_ESAL.YEAR_MON_EST
TRF_MON_EST_ESAL.ANL_KESAL_LTPP_LN_YR

Select each field listed above and drag it onto the query design grid (Figure 24).

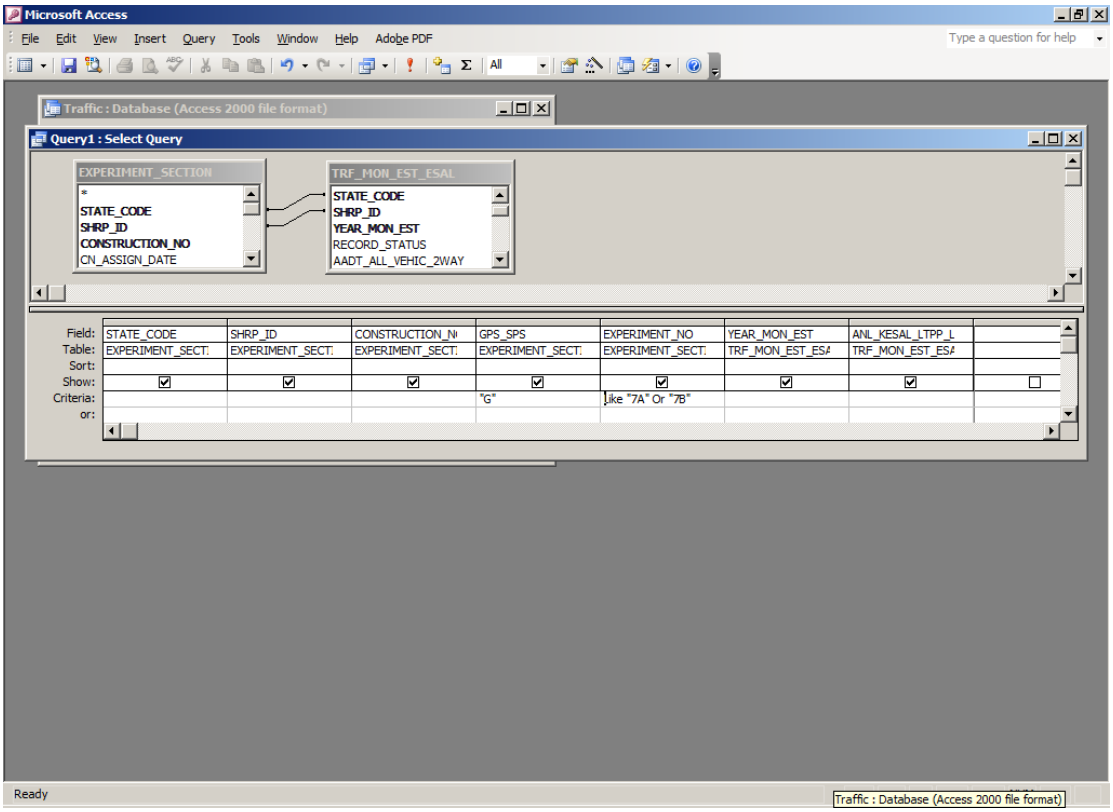

Figure 24. Screenshot. Design view of KESAL query.

In the Criteria row on the grid, specify the following values:

- GPS_SPS “G”
- EXPERIMENT_NO Like “7A” or “7B”

Click the Datasheet View Button for a preview of the selected records. Notice that there are records that are exact duplicates except for the CONSTRUCTION_NO field.

To see one record for each available KESAL value per year per section, remove CONSTRUCTION_NO from the query design grid (select column and press Delete) and set the UniqueValues property to "Yes" in the query's property sheet. To display the query's property sheet, select the query by clicking anywhere in query Design view outside the design grid and the field lists; click the Properties button on the toolbar.

Unique Values Property = Yes

If the query's results include more than one field, the combination of
If the query's results include more than one field, the combination of
values from all fields must be unique for a given record to be included in the results.

Preview the records.

Click the Save icon , give the query a descriptive name, and click OK.

Close the query window.

Once the Query is created, it will be added to the Queries Object list. Double-clicking on the name of the query will run the query and display the results on the screen.

MORE INFORMATION

For more information about the LTPP data or LTPP program, contact LTPPInfo at the LTPP Customer Support Service Center:

LTPP Customer Support Service Center
Phone: (202) 493-3035
Fax: (202) 493-3161
Email: ltppinfo@dot.gov

APPENDIX A – SDR 30 MODULE LISTING

Listed below are the contents of SDR 30.0 in 2 volumes. Each individual zip file expands to a Microsoft Access 2000® database with the same name. Zip files containing multiple databases will include databases with similar names including SHRP IDs. The zip file name indicates the type of data in the database.

Volume 1: Primary Data Set

Folder: Data_User_Documents
Folder: Skeleton_Database
Folder: Table_Navigator
Administration.zip
Auto_Weather_Station.zip
Climate_Daily_Humid.zip
Climate_Daily_Precip.zip (2 databases)
Climate_Daily_Temp.zip (2 databases)
Climate_Daily_Wind.zip
Climate_Summary_Data.zip
Data_Compilation_Views.zip
Dynamic_Load_Response.zip
FWD_Data_Without_Drop_Data.zip
Ground_Penetrating_Radar.zip
Inventory.zip
Maint_Rehab.zip
Material_Test.zip
Monitoring.zip
Seasonal_Monitoring.zip
Seasonal_Monitoring_MRCTemp.zip
Specific_Pavement_Studies.zip
Traffic.zip
TRF_MEPDG_Ax_Dist_AL_IL.zip
TRF_MEPDG_Ax_Dist_IN_MA.zip
TRF_MEPDG_Ax_Dist_MI_MS.zip
TRF_MEPDG_Ax_Dist_MO_NY.zip
TRF_MEPDG_Ax_Dist_NC_TX.zip
TRF_MEPDG_Ax_Dist_UT_WA.zip
TRF_MEPDG_Ax_Dist_WV_SK.zip

Volume 2: LTAS Tables (Traffic support)

Annual_Traffic_AL_MS.zip
Annual_Traffic_MO_SK.zip
Daily_Count_ERR_AL_ID.zip
Daily_Count_ERR_IL_MO.zip
Daily_Count_ERR_MT_TN.zip
Daily_Count_ERR_TX_SK.zip
Hourly_Class_Counts_AL_MT.zip
Hourly_Class_Counts_NE_SK.zip
LTAS_Administration.zip
LTAS_Skeleton.zip
Monthly_Axle_AL_AR.zip
Monthly_Axle_CA.zip (2 databases)
Monthly_Axle_CO_IL.zip
Monthly_Axle_IN_KY.zip
Monthly_Axle_LA_MS.zip
Monthly_Axle_MO_NH.zip
Monthly_Axle_NJ_OH.zip
Monthly_Axle_OK_VA.zip
Monthly_Axle_WA.zip (2 databases)
Monthly_Axle_WV_SK.zip
Monthly_Count.zip
Monthly_GVW_AL_CO.zip
Monthly_GVW_CT_MO.zip
Monthly_GVW_MT_UT.zip
Monthly_GVW_VT_SK.zi