

DGN Libraries

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Based on excerpts from the
MicroStation V8 Power User manual
developed by ProSoft.

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Introduction

DGN Libraries are design files containing one or more definitions of levels, text styles, dimension styles, and/or multi-line styles. Each of these is a component of the DGN Library and they can all be in one file or in separate files. Separate files would be helpful when dealing with different CAD standards such as those of the company versus those of the client.

DGN Libraries are designed to make CAD standards more portable. They are actually DGN-format files, and can be edited as standard design files.

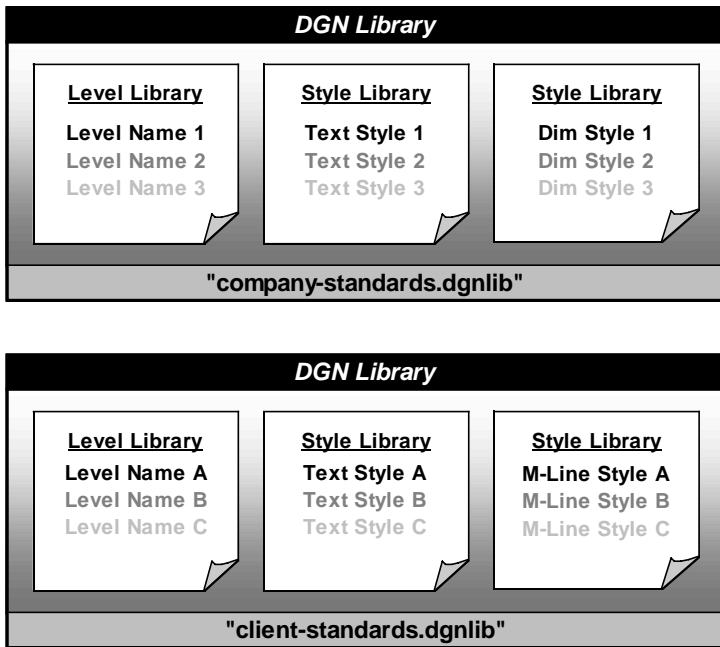
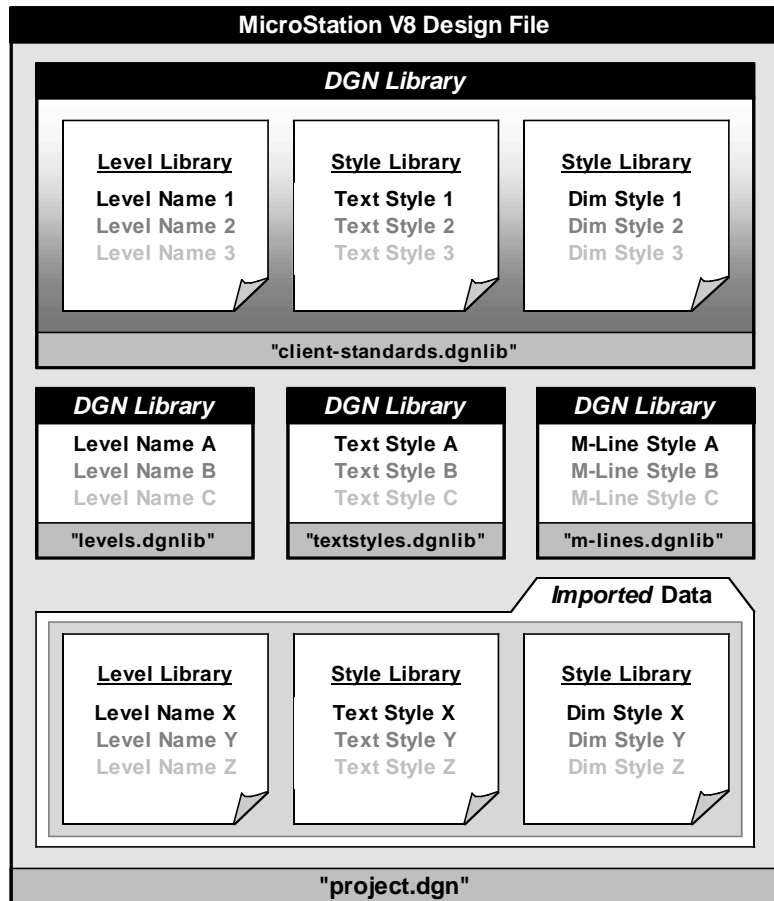


Figure 1-1
Company and Client DGN Library
Examples

DGN Libraries

A design file can have **multiple** attached DGN Library files, each with any combination of level libraries, text styles, dimension styles, and multi-line styles. Level libraries can be attached manually or via workspace configuration. Text, Dimension, and Multi-line style libraries can be attached via workspace configuration **ONLY**. All DGN Libraries can also be imported directly into a design file.

Figure 1-2
Project DGN Library Example



Import Versus Attach

When working with DGN Libraries, it is important to distinguish between import and attach. Import is to **copy** into - keeping it separate from the source. Attach is to **reference** in - keeping it linked to the source. If DGN Libraries are **attached**, they can be updated or synchronized with their source. Attached information is not actually in the design file until it is used.

There are three ways to make text, dimension, and multi-line styles available during a design session in MicroStation V8.

1. Create styles in your active design file.
2. Import styles into your active design file.
3. Attach styles via DGN and DGNLIB files defined by your workspace configuration. The workspace configuration variable used to specify which style and level libraries will be linked is **MS_DGNLIBLIST**. To detach these DGN Libraries, disable or remove the configuration variable.

There are four ways to make level libraries available during a design session in MicroStation V8.

1. Create levels in your active design file.
2. Import level libraries into your active design file.
3. Attach level libraries via CSV, DGN, DGNLIB, and DWG files defined by your workspace configuration. The workspace configuration variable used to specify which style and level libraries will be linked is **MS_DGNLIBLIST**. To detach these DGN Libraries, disable or remove the configuration variable.
4. Manually attach level libraries into the design file. Choose **Levels > Library > Attach** from the Level Manager dialog box. Only level libraries that are manually attached can be manually detached.



When you import levels, the levels do not retain a link to the source file, so updates to the level structure in the level library are not automatically reflected in your working design files.

Importing Levels

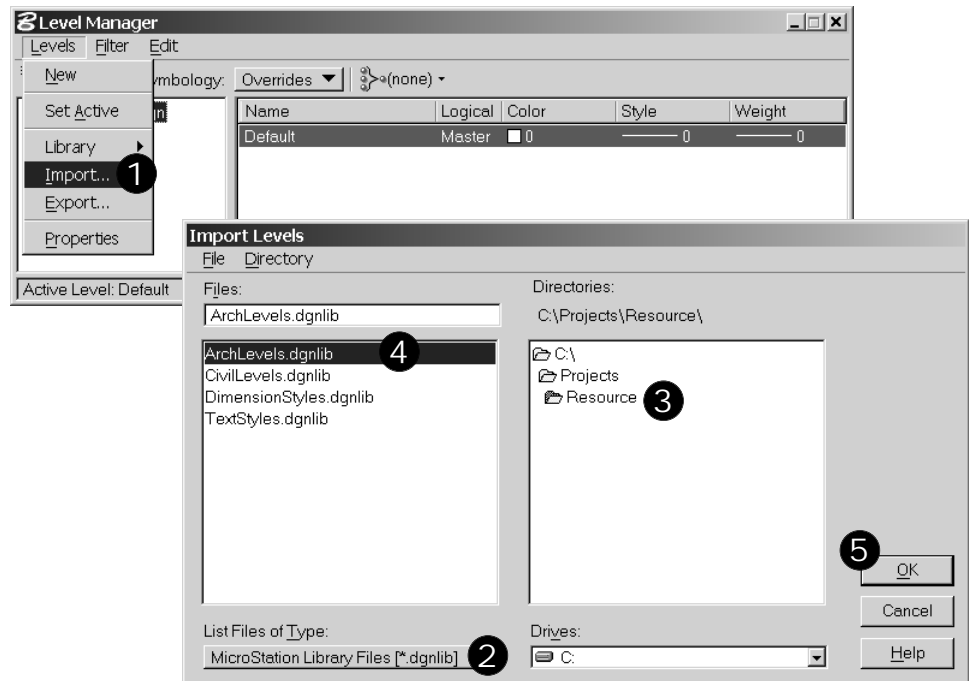
Instead of creating levels from scratch in each design file, you can use the Level Manager dialog box to import levels from a level library file. To import levels into your active design file, choose **Levels > Import** from the menu bar in the Level Manager dialog box or enter **level library import** in the Key-in window. The Import Levels dialog box appears, from which you can select the source file containing the levels you wish to import. The source file can be a comma-delimited CSV file, a MicroStation V7 level table file (LVL), an AutoCAD drawing file (DWG), a MicroStation design file (DGN) or a DGN library, which is simply a design file saved with a DGNLIB file extension that stores a predefined set of levels and level filters.



To import levels:

1. Choose **Levels > Import** from the menu bar in the Level Manager dialog box. The Import Levels dialog box appears.
2. Set the **List Files of Type** option menu to the file format of the level library containing the levels you wish to import. Note: If you wish to import levels from a MicroStation V7 level library file (LVL), set this option to **All Library Files**.
3. Navigate to the directory where the level library is stored.
4. Select the level library.
5. Click the **OK** button to import the levels.

Figure 1-3
Importing Levels from a Level Library



Exporting Levels

If your active design file contains a level structure you intend to use in other drawings, you can export the levels to a level library file. To export the levels, choose **Levels > Export** from the menu bar in the Level Manager dialog box or enter **level library export** in the Key-in window. The Export Levels dialog box appears, in which you can specify the destination file to which the levels will be exported. The destination file can be a comma-delimited CSV file, an AutoCAD drawing file (DWG), a MicroStation design file (DGN) or a DGN library (DGNLIB). Once you have exported the levels, you can import them into other design files using the procedure described previously.



To export levels:

1. Choose **Levels > Export** from the menu bar in the Level Manager dialog box. The Export Levels dialog box appears.
2. Set the **List Files of Type** option menu to the desired file format for the level library you are creating.
3. Navigate to the directory where you wish to store the new level library.
4. Enter a name for the level library.
5. Click the **OK** button to export the levels.

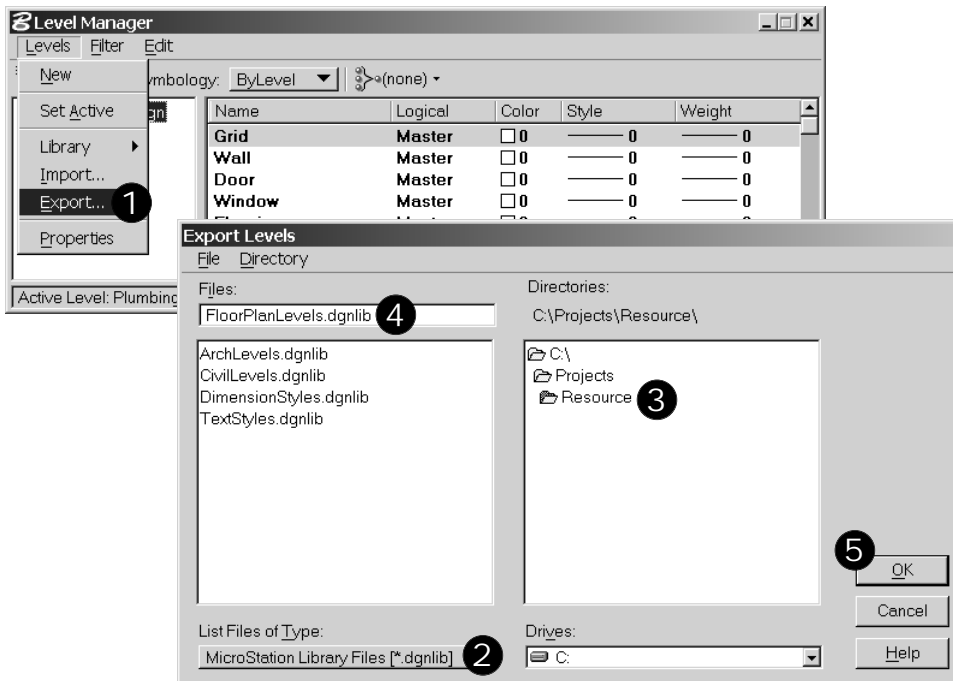


Figure 1-4
Exporting Levels to a Level Library



Attached levels cannot be deleted. Although an attached level shows up in the list of selectable levels along with any levels created in the active design file, it is not actually part of the active file until you draw an element on it, at which time it is copied into the active file.



You can modify the properties of attached levels, but the changes only affect the active design file, not the source level library. By default, levels that are attached display with the library name in brackets. To hide this library name and brackets set the configuration variable **MS_HIDE_LIBRARY_SOURCE_NAMES** to 1.

Attaching Level Libraries Manually

As an alternative to creating levels from scratch or importing them, you can attach them from a level library. This approach allows you to maintain a dynamic level structure that is linked to the attached level library. If levels are added to or removed from the level library, the changes are automatically reflected in the working files each time they are opened.

A level library can be a comma-delimited CSV file, a MicroStation V7 level table file (LVL), an AutoCAD drawing file (DWG), a MicroStation design file (DGN) or a DGN library, which is simply a design file saved with a .DGNLIB file extension that stores a predefined set of levels and level filters.

To attach a level library, choose **Levels > Library > Attach** from the menu bar in the Level Manager dialog box, or enter **level library attach** in the Key-in window. The Attach Level Library dialog box appears, from which you can select the level library you wish to attach. After you select a level library, the levels it contains are available for use in the active design file.

In the **Name** column of the Level Manager dialog box, the source level library is displayed in parentheses next to the name of attached levels.

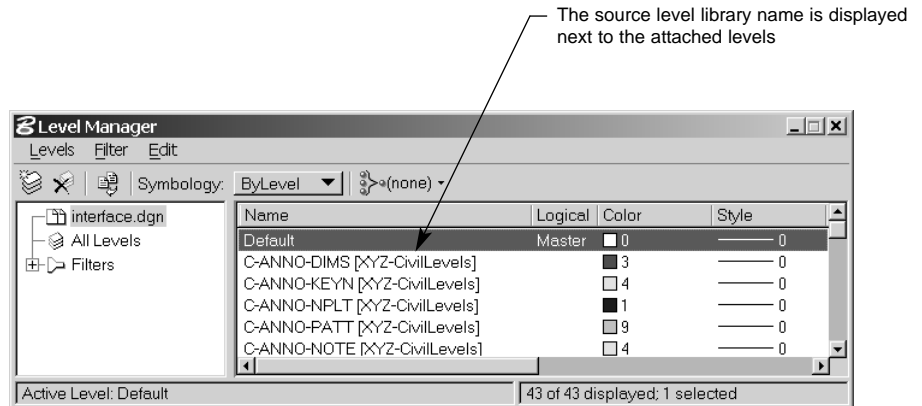


Figure 1-5
Attached Levels in the Level Manager Dialog Box



To attach a level library:

1. Choose **Levels > Library > Attach** from the menu bar in the Level Manager dialog box. The Attach Level Library dialog box appears.
2. Set the **List Files of Type** option menu to the file format of the level library you wish to attach. Note: If you wish to attach a MicroStation V7 level library file (LVL), set this option to **All Library Files**.
3. Navigate to the directory where the level library is stored.
4. Select the level library.
5. Click the **OK** button to attach the level library.

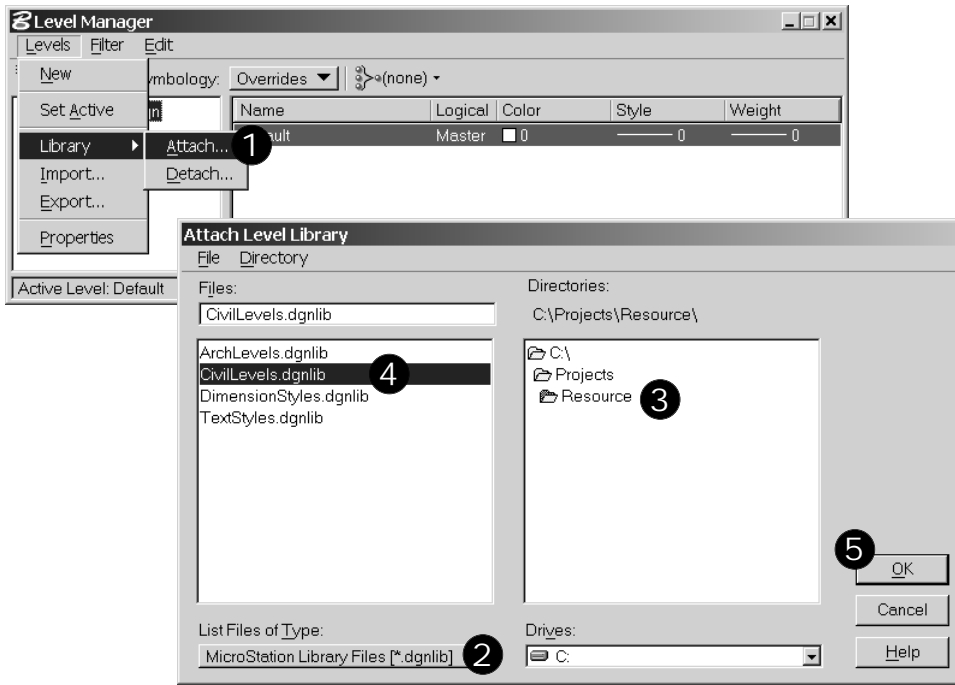


Figure 1-6
Attaching Levels from a Level Library

Detaching Level Libraries Manually

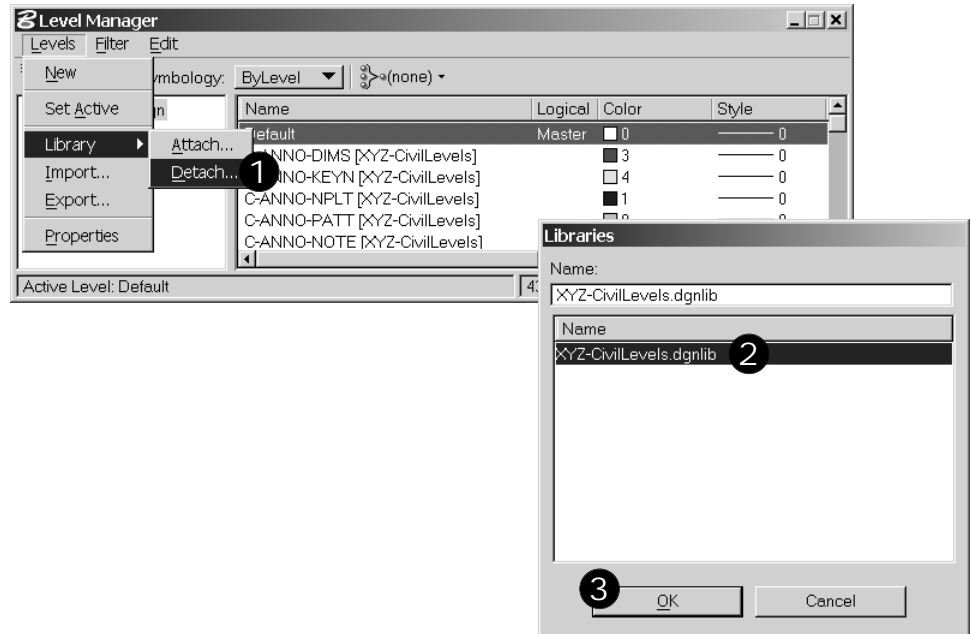
You can detach a level library by choosing **Levels > Library > Detach** from the menu bar in the Level Manager dialog box or by entering **level library detach** in the Key-in window. The Libraries dialog box appears with a list of attached level libraries. You can specify the level library you wish to detach from this list.



To detach a level library:

1. Choose **Levels > Library > Detach** from the menu bar in the Level Manager dialog box. The Libraries dialog box appears.
2. Select the level library you wish to detach from the list in the dialog box.
3. Click the **OK** button to detach the level library.

Figure 1-7
Detaching a Level Library



Importing Text Styles

Rather than create text styles from scratch, you can import existing text styles from other design files and DGN libraries. When you use this option, all text styles in the source file are imported into the active design file.



To import text styles:

1. Open the Text Styles dialog box (**Element > Text Styles**).
2. Choose **File > Import** from the menu bar in the dialog box. The Text Style Import dialog box appears.
3. Navigate to the storage directory of the source design file or DGN library that contains the text styles you wish to import.
4. Select the source file.
5. Click the **OK** button to import the text styles.

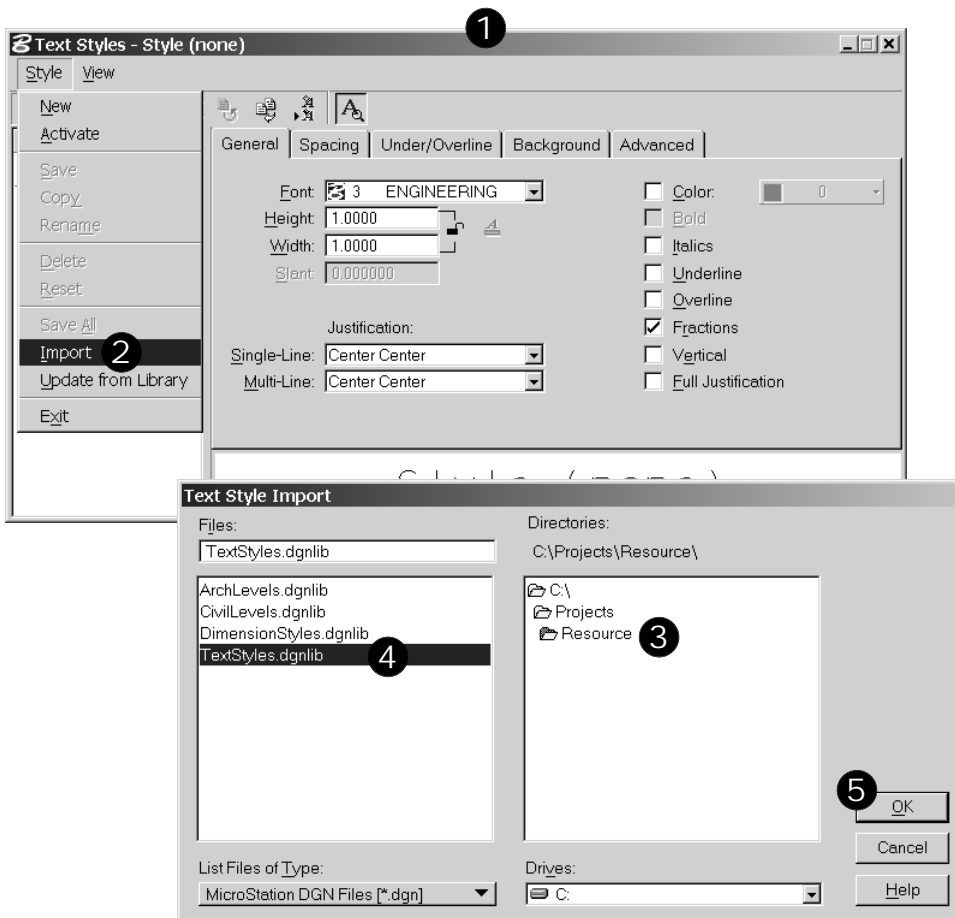


Figure 1-8
Importing a Text Style

Importing Dimension Styles

Rather than create dimension styles from scratch, you can import existing dimension styles from other design files and DGN libraries. When you use this feature, all dimension styles in the source file are imported into the active design file.

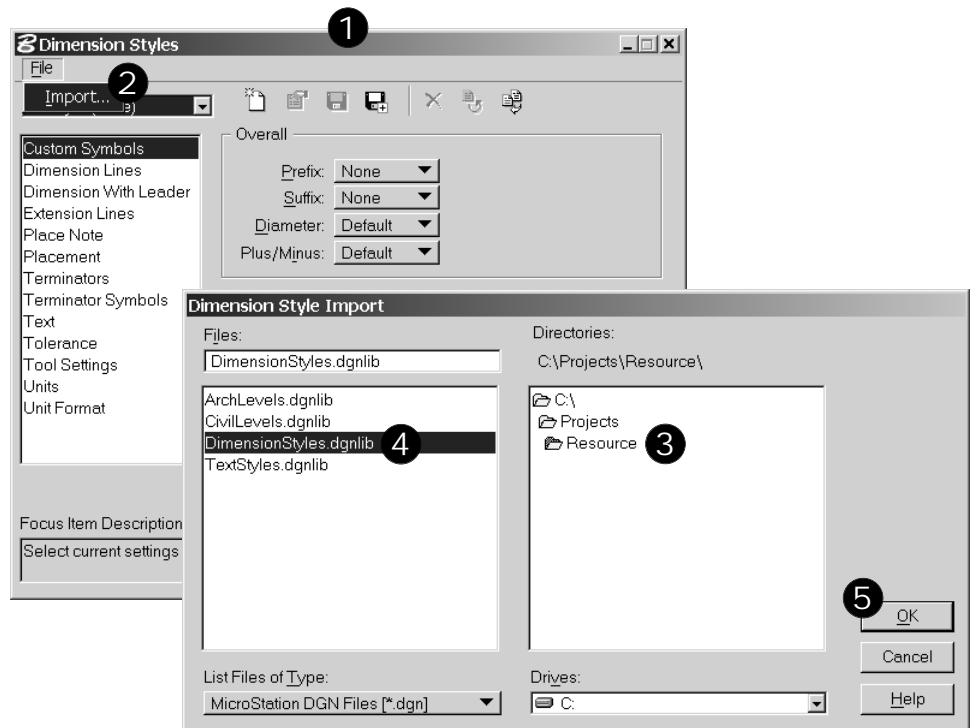
To import dimension styles, choose **File > Import** from the menu bar in the Dimension Styles dialog box (**Element > Dimension Styles**). The Dimension Style Import dialog box appears, from which you can select the design file or DGN library that contains the dimension styles you wish to import.



To import dimension styles:

1. Open the Dimension Styles dialog box (**Element > Dimension Styles**).
2. Choose **File > Import** from the menu bar in the dialog box. The Dimension Style Import dialog box appears.
3. Navigate to the storage directory of the source design file or DGN library that contains the dimension styles you wish to import.
4. Select the source file.
5. Click the **OK** button to import the dimension styles.

Figure 1-9
Importing a Dimension Style



Importing Multi-line Styles

Rather than create multi-line styles from scratch, you can import existing multi-line styles from other design files and DGN libraries. When you use this feature, all multi-line styles in the source file are imported into the active design file.

To import multi-line styles, choose **Styles > Import** from the menu bar in the Multi-line Styles dialog box (**Element > Multi-line Styles**). The Multi-line Style Import dialog box appears, from which you can select the design file or DGN library that contains the multi-line styles you wish to import.



To import multi-line styles:

1. Open the Multi-line Styles dialog box (**Element > Multi-line Styles**).
2. Choose **Style > Import** from the menu bar in the dialog box. The Multi-line Style Import dialog box appears.
3. Navigate to the storage directory of the source design file or DGN library that contains the dimension styles you wish to import.
4. Select the source file.
5. Click the **OK** button to import the multi-line styles.

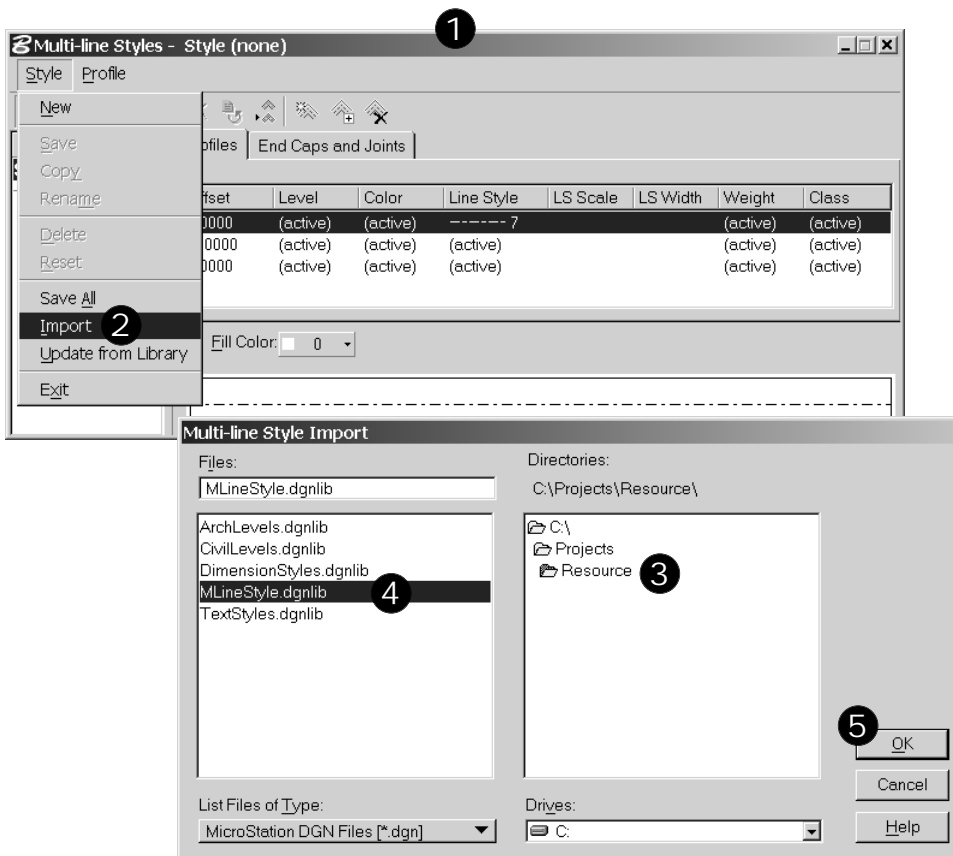


Figure 1-10
Importing a Multi-line Style

Attaching DGN Libraries Automatically

You have just reviewed that a level library can be manually attached. All DGN Library types can also be attached automatically via the configuration variable **MS_DGNLIBLIST**. Various DGN Libraries can be attached at various levels (Site, Project, User, etc.).

For example, assume you have DGN Libraries set up for multi-line, text and dimension styles for your company in a file called **XYZ-styles.dgnlib**. A client standard also dictates level settings in a DGN Library called **Client-levels.dgnlib**. Typically these should not be modified by users and therefore can be attached via a site configuration file (CFG) and project configuration file (PCF) respectively. In a text editor, you can edit these files to add the DGN Library configurations as shown below.

Site Configuration:

```
MS_DGNLIBLIST = $_USTN_SITE)dgnlib/XYZ-styles.dgnlib
```

Project Configuration:

```
MS_DGNLIBLIST > $_USTN_PROJECTDATA)dgnlib/Client-levels.dgnlib
```

DGNLIB Key-in Commands

The following key-in commands can be used to control the use of DGN Libraries. Enter these commands in the Key-in window or command prompt.

DGNLIB UPDATE ALL

Used to update all elements in the active design file that use attached DGNLIB files to define levels, dimension styles, or text styles.

DGNLIB UPDATE LEVELS [all | bylevelsymbology | custom | overridesymbology]

Used to update elements in the active design file that use attached DGNLIB files to define levels, based on the key-in command issued.

DGNLIB UPDATE DIMSTYLES

Used to update all elements in the active design file that use attached DGNLIB files to define dimension styles.

DGNLIB UPDATE TEXTSTYLES

Used to update all elements in the active design file that use attached DGNLIB files to define text styles.

DGNLIB UPDATE MLINESTYLES

Used to update all elements in the active design file that use attached DGNLIB files to define multi-line styles.