CHAPTER 2

GENERAL PURPOSE COMMANDS
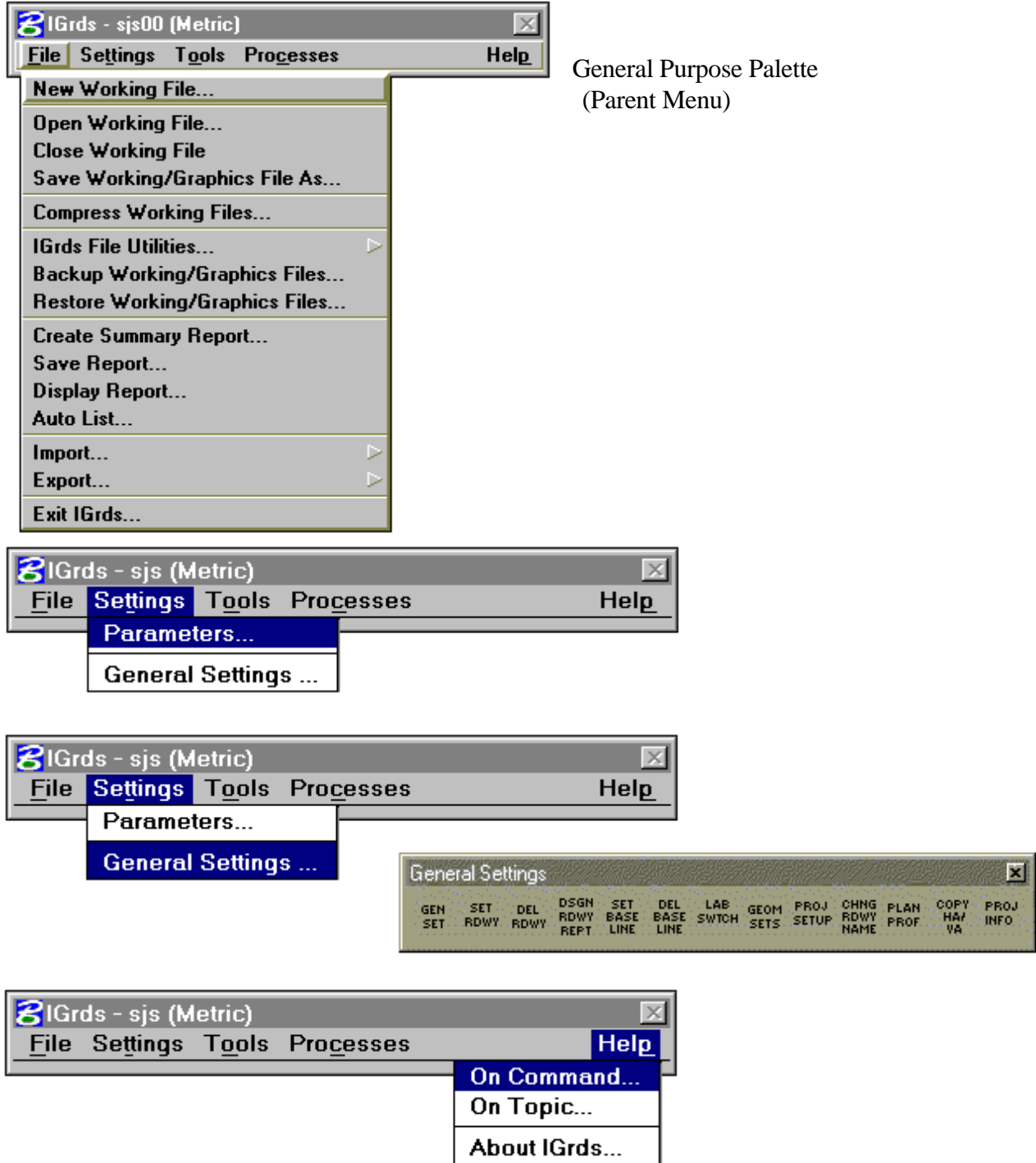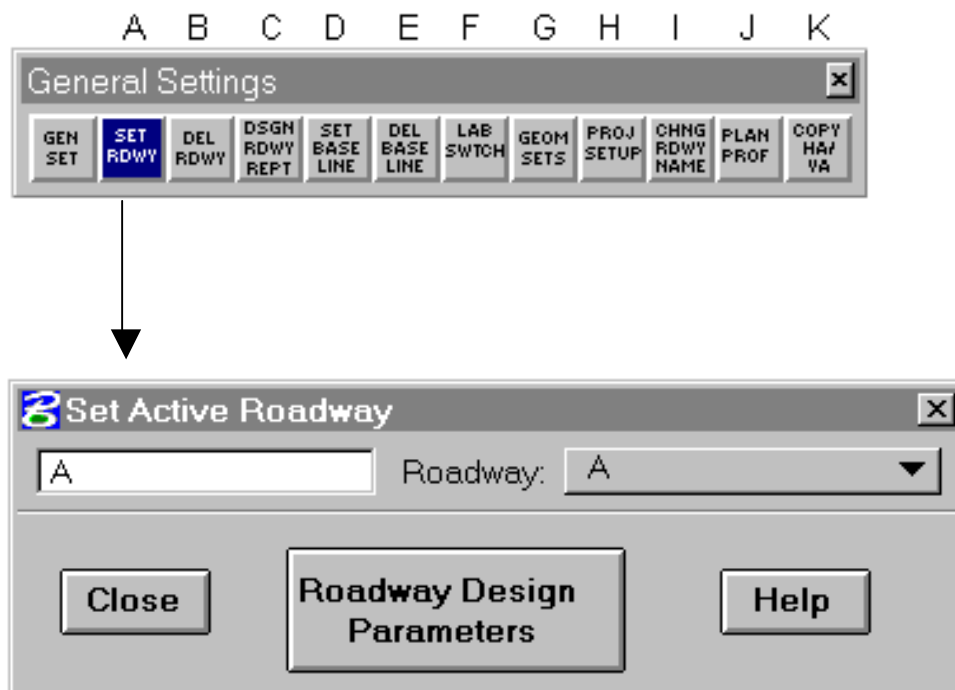
General Purpose Palette
(Parent Menu)

Figure 2-1
General IGrds Settings

A1

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INTRODUCTION

This chapter discusses three groups of IGrds functions which are not directly related to specific IGrds Palette Commands or Processes. In general, they provide support to other IGrds functions. The groups which are selected from the top menu are:

File Operations

The File Operations control the initiation and ending of IGrds sessions as well as any other file related operations.

Settings

The Settings functions provide for review and modification of :

° IGrds graphic parameter
° General Settings

Help

The Help functions provide unformatted displays about.

° Commands
° Topics
° IGrds

These three groups of functions are discussed in more detail in the above order in the remainder of this chapter.

File Operations

Menu selections within the File menu are used to create, open, close, and save working files; to execute IGrds file utilities; perform file backup and restoration; to create the summary report; to display and save reports; to input and export shape files; and to exit from the IGrds process. Most of these selections pop up dialog boxes that solicit user information, then execute the process.

The following pages show File pull down selections and dialog boxes they produce.
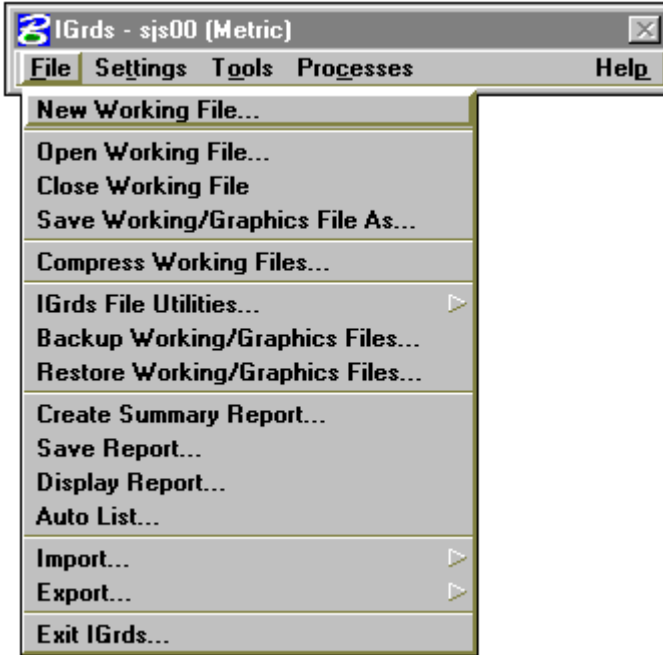
The **New Working File ...** menu selection pops up a dialog box that is used to create new IGrds working files as shown here.
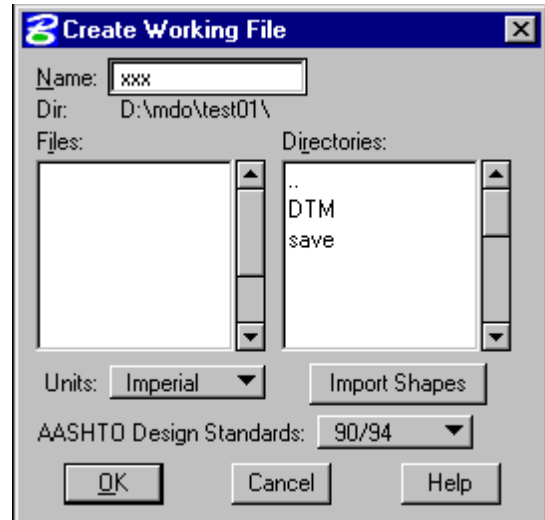
After the dialog box appears, check the directory listed under the **Name** text box. If a different directory is desired go to the **Directories** list box and scroll to the desired directory. Double click on the desired directory and that directory will be listed under the **Name** text box. Enter the name of the new working file in the **Name** text box without extensions. Then go to the **Units** option buttons and use either the Imperial or Metric option button if desired. When the **Import Shapes** push button is clicked, it pops up a dialog box that is used to import shapes (templates, sideslopes, and medians) into the working files that will be created. This is the same as the **Import** command under **File**, which is explained on page 2-17.
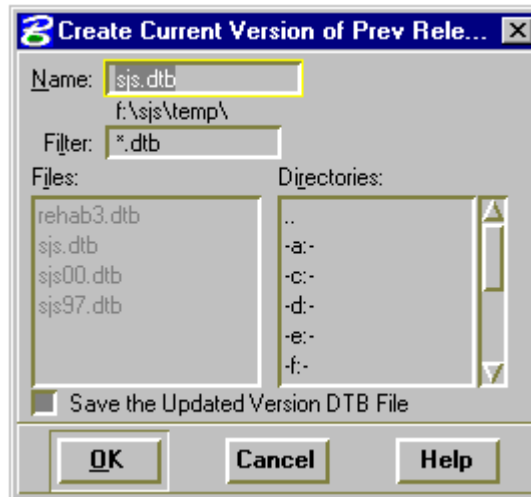
The **AASHTO Design Standards** option button allows the user to select the particular standards to use for the new working files. The 90/94 option uses design standards from the 1990 or 1994 "Green Book" and the 2001 option uses standards from the 2001 edition. The design criteria table (ha.tbl) contains the standards for horizontal and vertical alignment related data in both Metric and Imperial units. The table is partitioned into two divisions, one for the 1990 and 1994 standards and the other for the 2001 standards. For a more detailed description on specific design data and the affects of the standards, see the Concepts Manual.

When the **OK** push button is clicked, IGrds creates the appropriate blank working files with appropriate file extensions. If the "new" name is the same as an existing IGrds working file, the user is prompted whether to overwrite the existing file. As mentioned above, the process is executed by clicking the **OK** push button or striking the enter key, since the **OK** push button is the default action. When a working file is created, the name of the created working file is added to the banner of the IGrds top level window, thusly:

IGrds [current working file name]

If an IGrds working file is already open, then this file is closed before the new working file is created and opened. The user may cancel the process without creating new working files by clicking the **Cancel** push button. Both of these push buttons dismiss the dialog box. The process of creating IGrds working files is very analogous to creating a MicroStation design file.
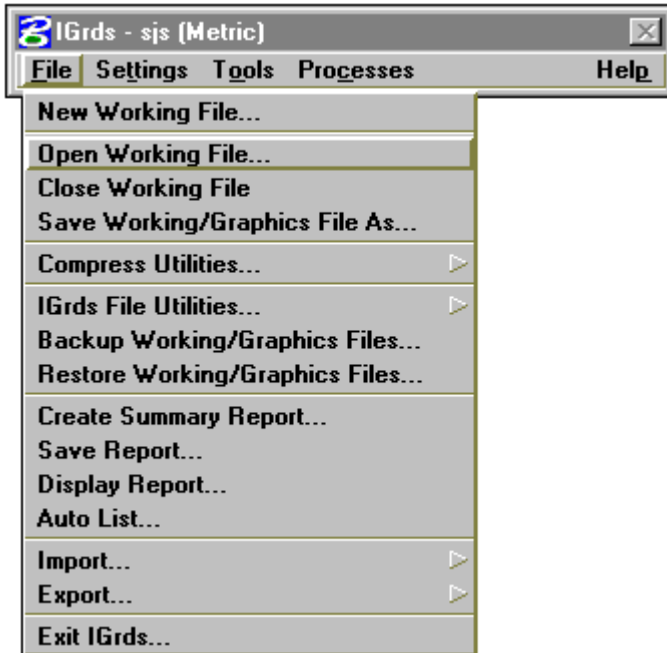
The **Open Working File...** menu selection pops up a dialog box that is used to open existing IGrds Working Files is shown here.
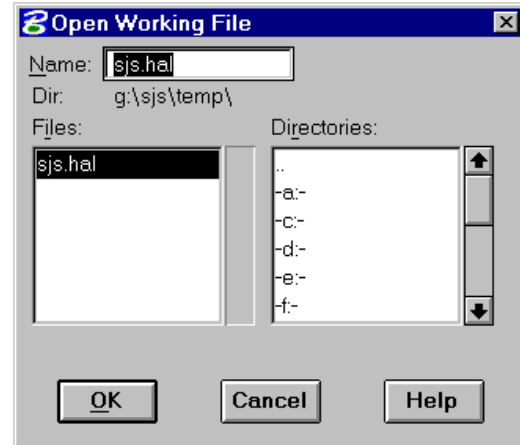
After the dialog box appears check the directory listed under the **Name** text box. If a different directory is desired, go to the **Directories** list box and scroll to the desired directory. Double click on the desired directory and that directory will be listed under the **Name** text box. Enter the name of the existing working files in the **Name** text box without extensions or select the existing working files from the **Files** list box. When the **OK** push button is clicked, IGrds opens the existing working files. Striking the enter key produces the same result since the **OK** push button is the default action.

When a working file is opened, the name of the working file is added to the banner of the IGrds top level window, thusly:

IGrds [current working file name]

If an IGrds working file is already open, then this file is closed before the new working file is opened. The user may cancel the process without opening a working file by clicking the **Cancel** push button. Both the **OK** and **Cancel** push buttons dismiss the dialog box. The process of opening working files is very analogous to opening a MicroStation design file.
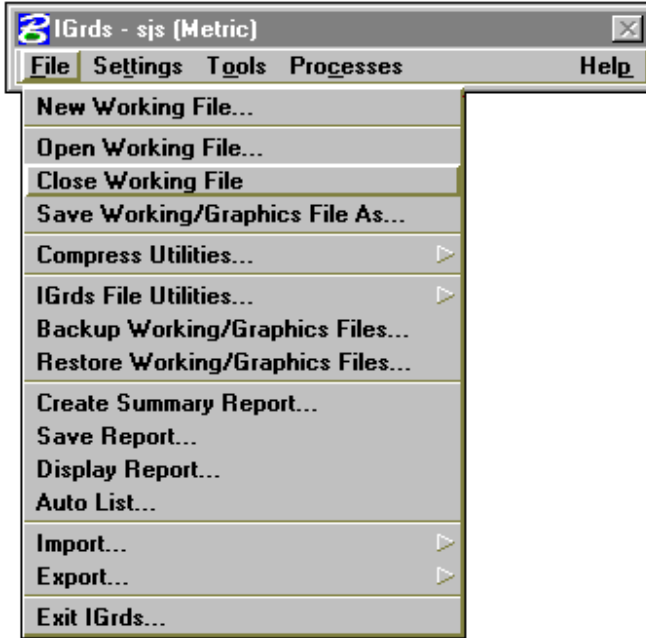
The **Close Working File...** menu selection is used to close IGrds working files. When the menu item is selected, the current IGrds working file is closed and the name is removed from the banner of the IGrds top level window.

The selection closes the IGrds working file without exiting from IGrds process. There is no dialog box.

The process of closing IGrds working files is analogous to closing a MicroStation design file.
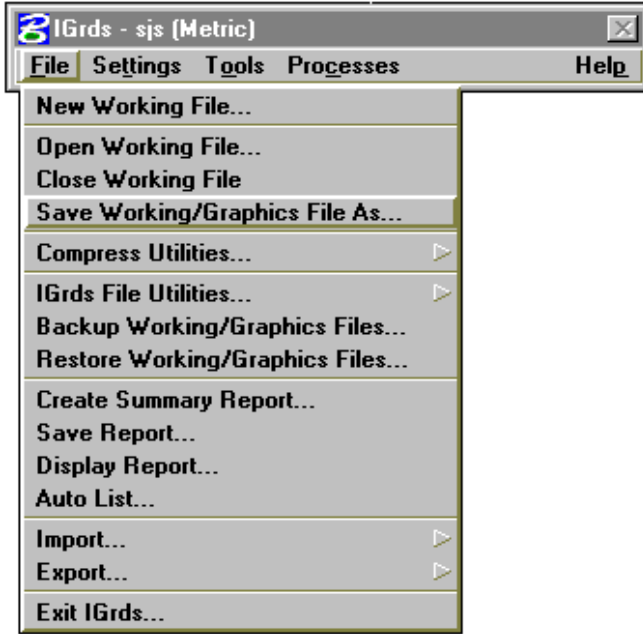
The **Save Working/Graphics File As...** menu selection pops up a dialog box that is used to save the current IGrds working files and/or graphics file with a different name is shown here.
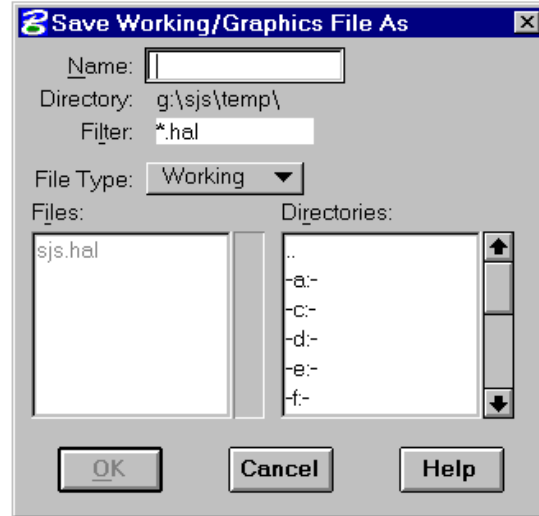
After the dialog box appears, check the directory listed under the **Name** text box. If a different directory is desired to save the working files and/or graphics file go to the **Directories** list box and scroll to the desired directory. Double click on the desired directory and that directory will be listed under the **Name** text box. Go to the **File Type:** option button. Working, Graphics, or Both are the three options. If the Working files only are to be saved, select the Working option button. If the Graphics (Design) file only is to be saved, select the Graphics option button. If the Working files and graphics file are to be saved, select the Both option button. Enter the desired name of the saved working files and/or graphics file in the **Name** text box without extensions. When the **OK** push button is clicked, IGrds copies the working files and/or graphics files to the new name, closes the current files, opens the new files and pops up an information dialog box specifying what files have been saved under the new name. Striking the enter key produces the same result since the **OK** push button is the default action. If the new name is the same as an existing name of the same file type, the user is prompted whether to overwrite the existing file. Click on the **OK** push button of the information dialog box to overwrite the existing file. The user may cancel the process of overwriting the existing file by clicking the **Cancel** push button to get rid of the information dialog box. The user may cancel the saving files process by clicking the **Cancel** push button on the dialog box.
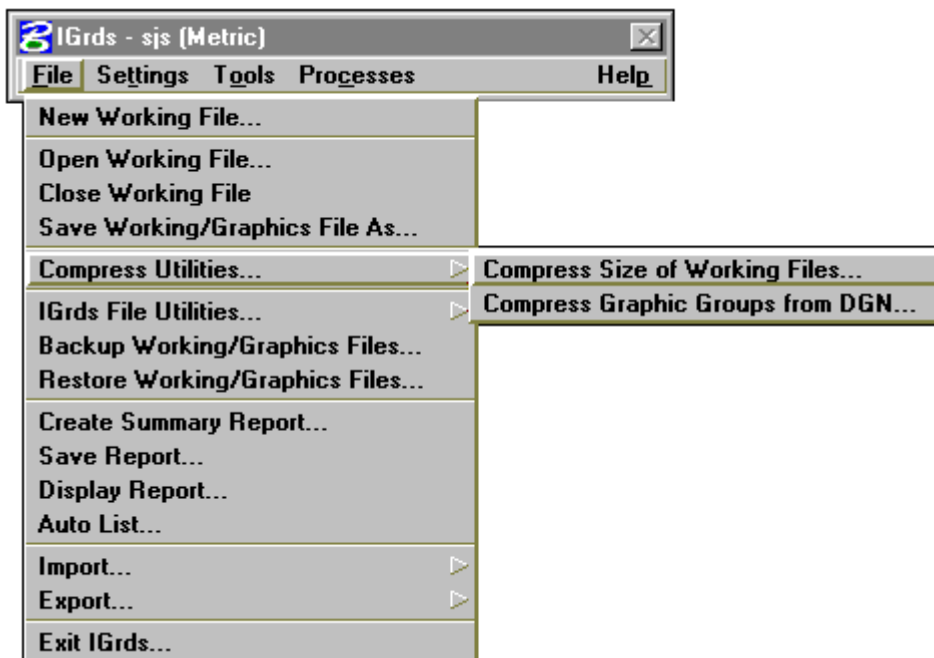
The **Compress Utilities...** menu selection opens a cascading menu with two additional menu selections: **Compress Size of Working Files...** and **Compress Graphic Groups from DGN ...**.

Compress Size of Working Files ...
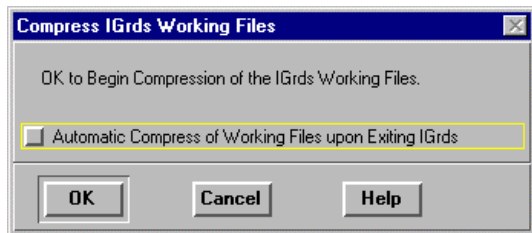
As a user designs an IGrds project, the IGrds working files grow as more data is added. When a particular data type is modified and saved, the internal file mechanism will detect that the data already exists and that record is marked as deleted, the modified data is then added to the end of the file. The file size is allocated for the deleted data as well as the active data. There is an internal file mechanism to reclaim the deleted records of the file, but the size of the file never decreases. In some instances, the IGrds working files are excessively large compared with the amount of actual data that exists. Also, when data is deleted from the IGrds project, the file size allocation does not change to reflect the deleted data.

This command will sequentially scan each IGrds FDM based working file and remove all the deleted elements. The physical size of the file is adjusted to only the active elements of the file. If a problem is detected during this process, the original file is kept intact with a .bak file extension and the user is warned of the problem. The command also contains a toggle button to allow the working files to be compressed every time IGrds is exited.

Compress Graphic Groups from DGN ...
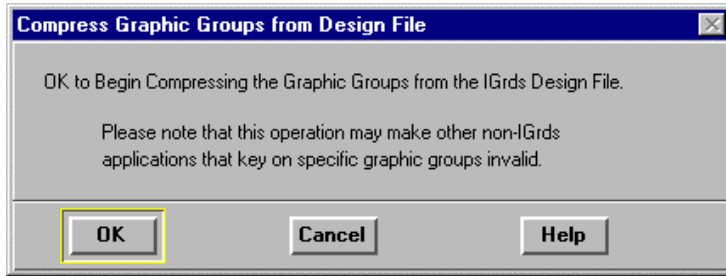
Various IGrds commands that create graphic elements manage the elements by use of MicroStation graphic group numbers. IGrds will increment the graphic group numbers and store various graphic group numbers in IGrds files in order to increase efficiency when manipulating graphics. Some IGrds commands use the same graphic group number each time an element is drawn since the number of graphic elements is constant (i.e., horizontal alignments). Several IGrds commands will continue to use additional graphic group numbers since the number of graphic elements to be drawn may vary (i.e., XSM and geometry).

IGrds monitors the graphic group numbers being used, and alerts the user when the maximum MicroStation allowed graphic group number has been reached (65,535). When this occurs, the user is advised to create a new DGN file in order to continue.

This command scans the MicroStation design file (.dgn) and reclaims any available graphic groups by resequencing the IGrds elements. The user should be aware that non-IGrds applications that key on specific graphic group numbers may no longer work properly after this command is invoked.
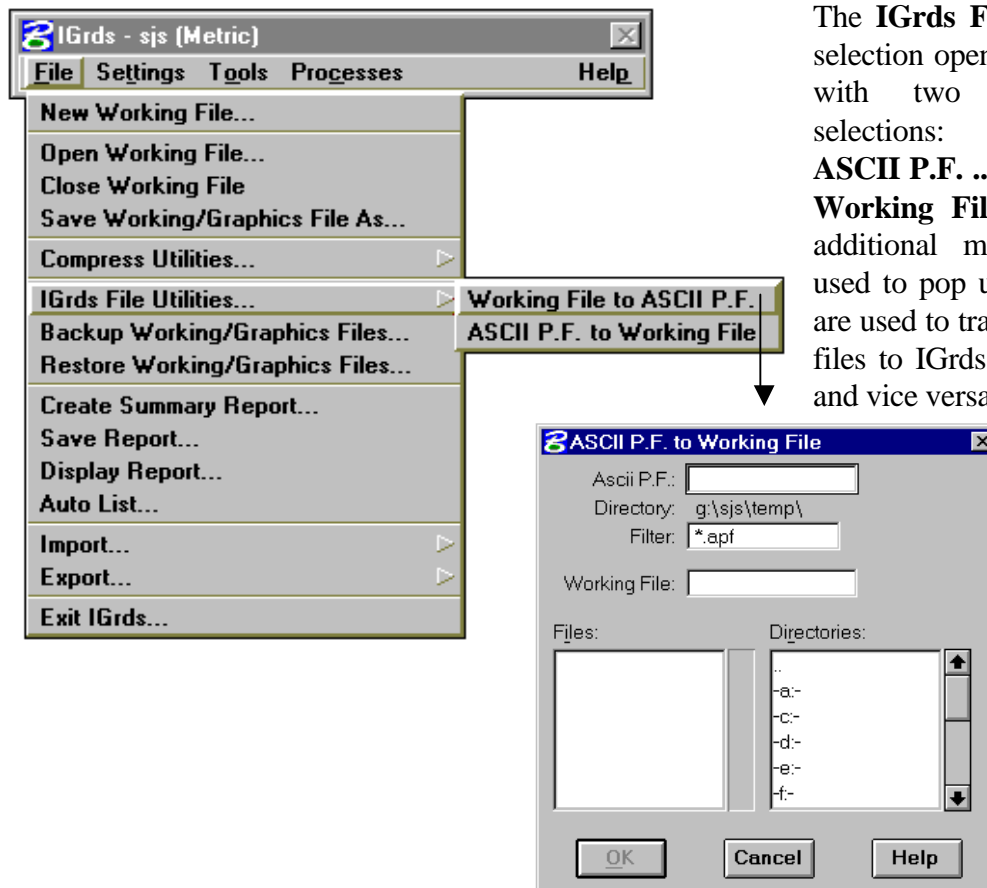
The **IGrds File Utilities...** menu selection opens a cascading menu with two additional menu selections: **Working File to ASCII P.F. ...** and **ASCII P.F. to Working File ...** . These two additional menu selections are used to pop up dialog boxes that are used to transfer IGrds working files to IGrds ASCII project files and vice versa as shown here.

To transfer working files to ASCII project files, the user selects the **Working File to ASCII P.F. ...** Menu item which pops up the appropriate dialog box. The user enters the working file name to be transferred in the **Working File Name** text box without extensions or selects the working file to be transferred from the **Files** list box. The current working file is the default and will be in the **Working File Name** text box when the dialog box opens.

The user can change directories, if desired, using the **Directories** list box. Once the chosen working file's name is in the **Working File Name** text box, the user clicks the **ASCII P.F. Name** text box, thusly changing the input focus to this box. The user then enters the ASCII Project File name to be transferred to in this box with extensions or selects the file name from the **Files** list box.

The user can change directories, if desired, using the **Directories** list box. Once the chosen ASCII Project File name is in the **ASCII P.F. Name** text box, the transfer is accomplished by clicking the **OK** push button or striking the enter key since the **OK** push button is the default action. The user may cancel the transfer by clicking the **Cancel** push button. Both the **OK** and **Cancel** push buttons dismiss the dialog box.
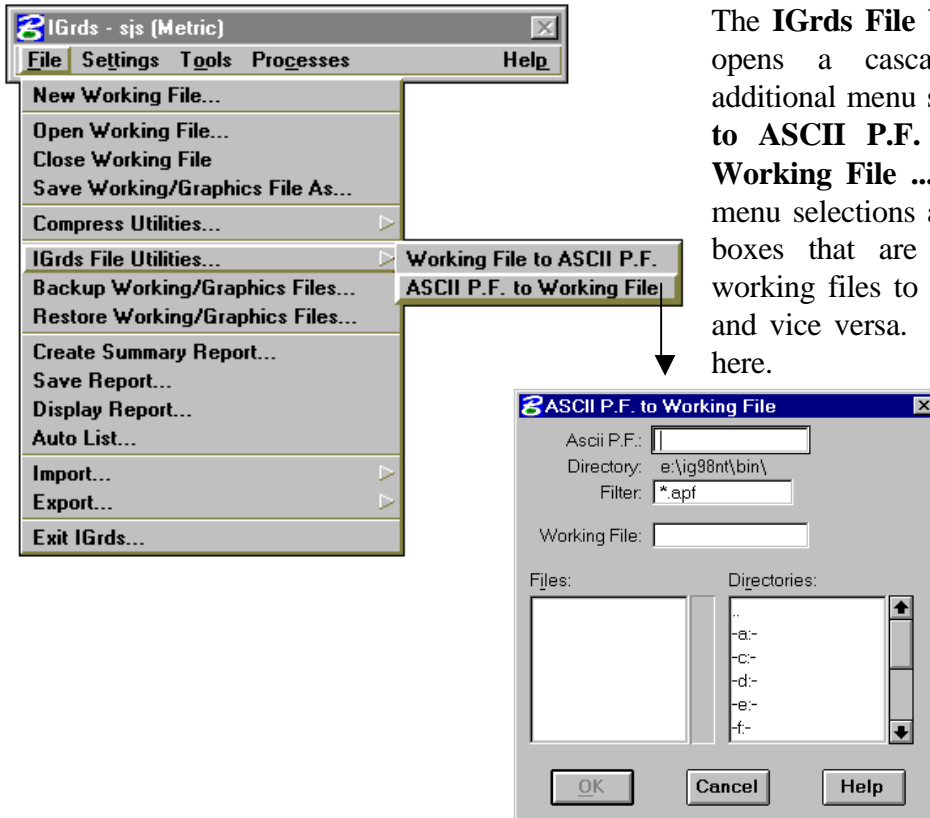
The **IGrds File Utilities...** menu selection opens a cascading menu with two additional menu selections: **Working File to ASCII P.F. ...** and **ASCII P.F. to Working File ...** . These two additional menu selections are used to pop up dialog boxes that are used to transfer IGrds working files to IGrds ASCII project files and vice versa. The dialog box is shown here.

To transfer ASCII P.F. to Working Files, the user selects the **ASCII P.F. to Working File ...** menu item which pops up the appropriate dialog box. The user enters the working file name to be transferred in the **ASCII P.F. Name** text box without extensions or selects the working file to be transferred from the **Files** list box. The current working file is the default and will be in the **ASCII P.F. Name** text box when the dialog box opens.

The user can change directories, if desired, using the **Directories** list box. Once the chosen working file's name is in the **ASCII P.F. Name** text box, the user clicks the **Working File Name** text box, thusly changing the input focus to this box. The user then enters the Working File name to be transferred to in this box with extensions or selects the file name from the **Files** list box.

The user can change directories, if desired, using the **Directories** list box. Once the chosen ASCII Project File name is in the **Working File Name** text box, the transfer is accomplished by clicking the **OK** push button or striking the enter key since the **OK** push button is the default action. The user may cancel the transfer by clicking the **Cancel** push button. Both the **OK** and **Cancel** push buttons dismiss the dialog box. When the process is complete, the transferred working files become the current working file and its name is added to the banner in the IGrds top level window.
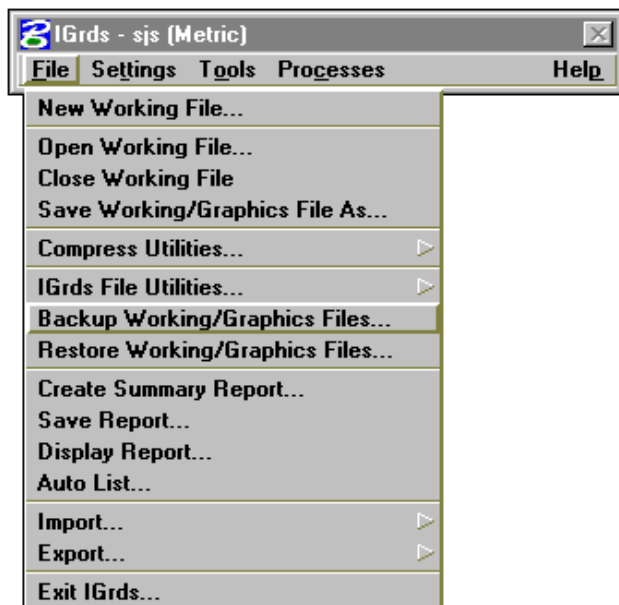
The **Backup Working/Graphics Files...** menu selection pops up a dialog box that is used to backup IGrds working/graphics files is shown here.
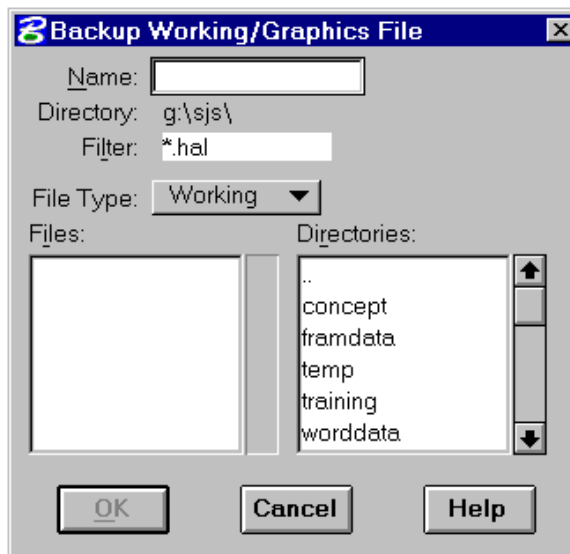
After the dialog box appears, check the directory listed under the **Name** text box. If a different directory is desired, go to the **Directories** list box and scroll to the desired directory. Double click on the desired directory and that directory will be listed under the **Name** text box. Go to the **File Type:** option button. Working, Graphics, or Both are the three options. If the Working files only are to be backed up, select the Working option button. If the Graphics (Design) file only is to be backed up, select the Graphics option button. If the Working files and 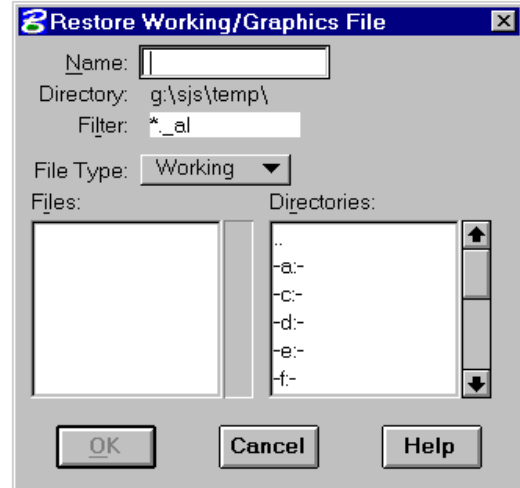Graphics files are to be backed up, select the Both option button. Enter the name of the working files and/or graphics file to be backed up in the **Name** text box without extensions or select the working files and/or graphics file to be backed up from the **Files** list box. When the **OK** push button is clicked, IGrds backs up the working files and/or graphics file in the current directory and pops up an information dialog box specifying the name and type of files backed up. Striking the enter key produces the same result since the **OK** push button is the default action. Click on the **OK** push button of the information dialog box to get rid of the information dialog box. The user may cancel the backup operation by clicking the **Cancel** push button. The backup process creates a copy of the working files and/or graphics file with a slightly different name. The naming convention mechanism varies depending on the operating system.

The **Restore Working/Graphic Files…** menu selection pops up a dialog box that is used to restore IGrds Working/Graphic files as shown here.

After the dialog box appears, check the directory listed under the **Name** text box. If a different directory is desired, go to the **Directories** list box and scroll to the desired directory. Double click on the desired directory and that directory will be listed under the **Name** text box. Go to the **File Type:** option button. Working, Graphics, or Both are the three options. If the backup Working files only are to be restored, select the Working option button. If the Graphics (Design) file only is to be restored, select the Graphics option button. If the Working files and Graphics files are to be restored, select the Both option button. Enter the name of the backup working files and/or graphics file to be restored in the **Name** text box without extensions or select the backup working files and/or graphics file to be restored from the **Files** list box. When the **OK** push button is clicked, IGrds restores the backup working files and/or graphics file in the current directory and pops up an information dialog box specifying the name and type of files restored. Striking the enter key produces the same result since the **OK** push button is the default action. If the restored name is the same as an existing name of the same file type, the user is prompted whether to overwrite the existing file. Click on the **OK** push button of the information dialog box to overwrite the existing file. The user may cancel the process of overwriting the existing file by clicking the **Cancel** push button to get rid of the information dialog box. The restored working file and/or graphics file becomes the current working and/or graphics file and its name is added to the banner of the IGrds top level window. The user may cancel the restore operation by clicking the **Cancel** push button.
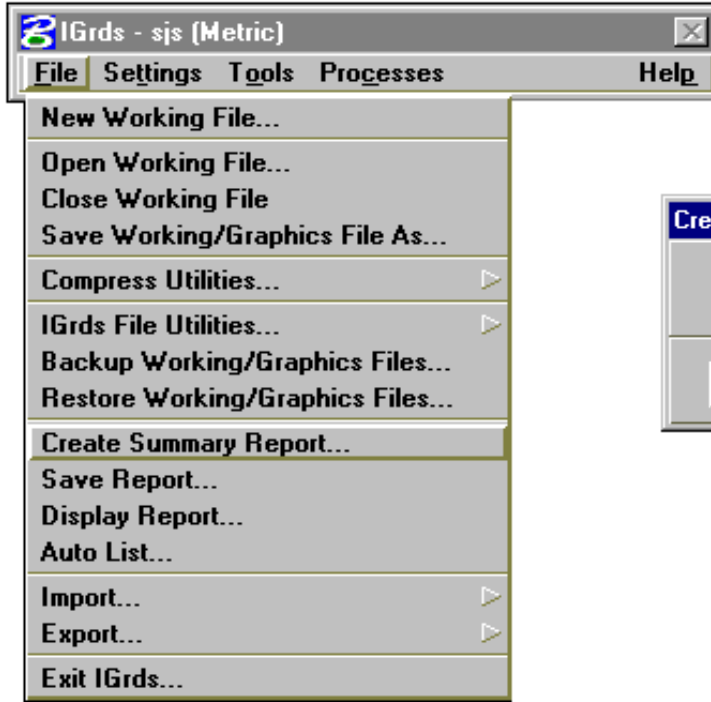
The **Create Summary Report** menu selection pops up the **Create Summary** dialog box.
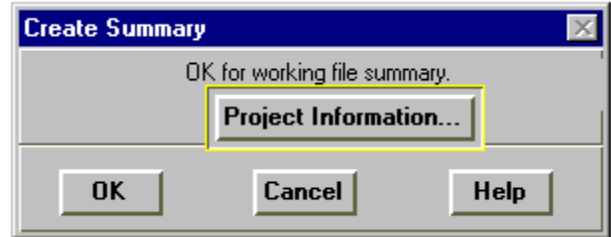
This command generates a working file summary report by clicking on the **OK** push button and writes it to the temporary file (.TMP). Striking the enter key produces the same result since the **OK** push button is the default action. If the AUTO LIST switch is on, IGrds also writes the working file summary report to the list file (.LST).

The report lists the roadways and baselines in the working files and what has been defined for each roadway, like horizontal alignment, vertical alignment, superelevation, etc. Also listed are the baselines and which roadways are associated with it. For each baseline, it lists the .xsX file associated with it and the beginning and ending stations if original ground cross sections, design cross sections, or final cross sections have been defined. The last item listed is whether the working files are imperial (US) or metric; hundred or thousand meter stationing and 2 or 3 decimal places for terrain input.

The user may cancel the Create Summary command by clicking the **Cancel** push button. The user may get on line help for this command by clicking **Help** push button.

The user may review/change the project information by clicking on the Project Information button.

Project ID	Project Identification (up to 3 characters).
Prefix	Earthwork Output File Prefix.
Project Name	Project Name.
Date	Date to be shown on reports. "&date" is the current date.

OK	Click to save and use displayed data.
Cancel	Click to cancel dialog box.
Help	Click to display help for this dialog box.

The **Save Report...** menu selection pops up a dialog box as shown here that is used to save the IGrds reports in the temporary report file (.TMP) to the list file (.LST).

Enter the new file name (without extensions) for the list file (.LST) or use the existing list file. When the **OK** push button is clicked, the temporary report file is appended to the list file. Striking the enter key produces the same result since the **OK** push button is the default action. The user may cancel the Save Report command by clicking the **Cancel** push button.
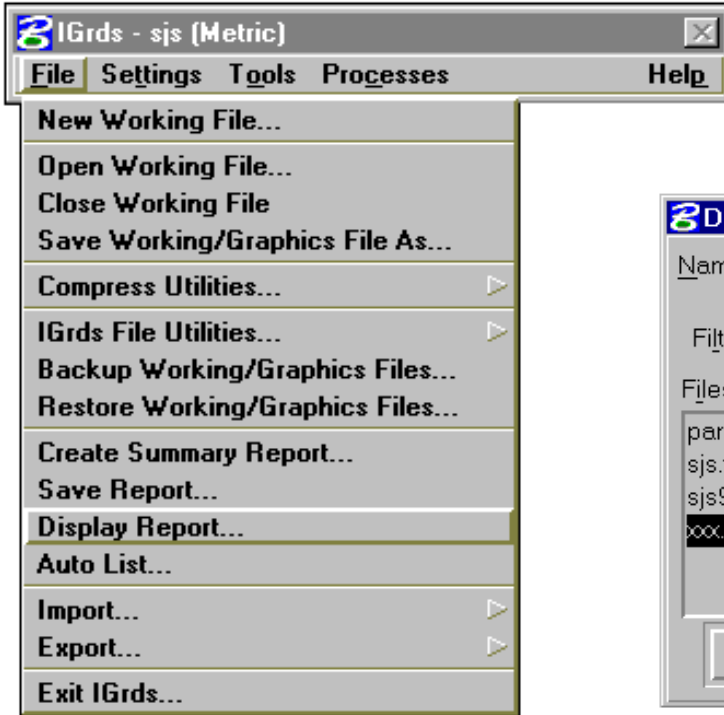
The **Display Report...** menu selection pops up a dialog box that is used to display IGrds reports in a text window on the graphic screen is shown here.
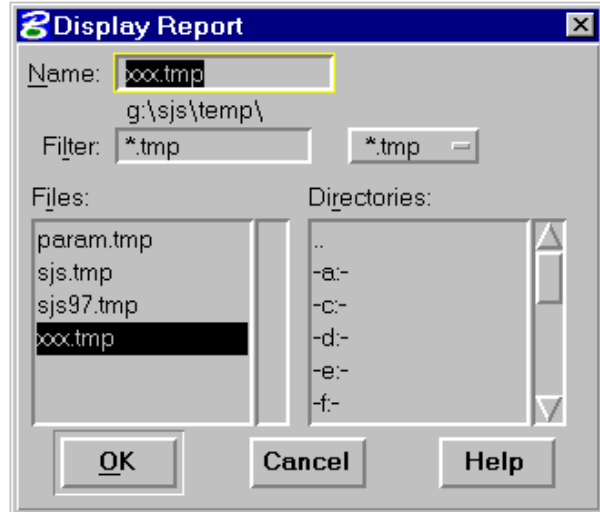
Enter the IGrds report name in the **Name** text box with extensions or select the report name from the **Files** list box. The display report process can be immediately executed by double clicking the report name in the **Files** list box. The user can change directories, if desired, using the **Directories** list box. The user can also change the file extension by changing the **Filter** text box and the tabbing with the tab key or clicking in the **Files** list box or by selecting the desired files from the filter option button. When the user is satisfied, the process is initiated by double clicking the file name (mentioned above), clicking the **OK** push button or striking the enter key, since the **OK** push button is the default action. The process can be canceled without displaying a report by clicking the **Cancel** push button. Both the **OK** and **Cancel** push buttons dismiss the **Display Report** dialog box. The display report process is very analogous to the MicroStation display text file process.
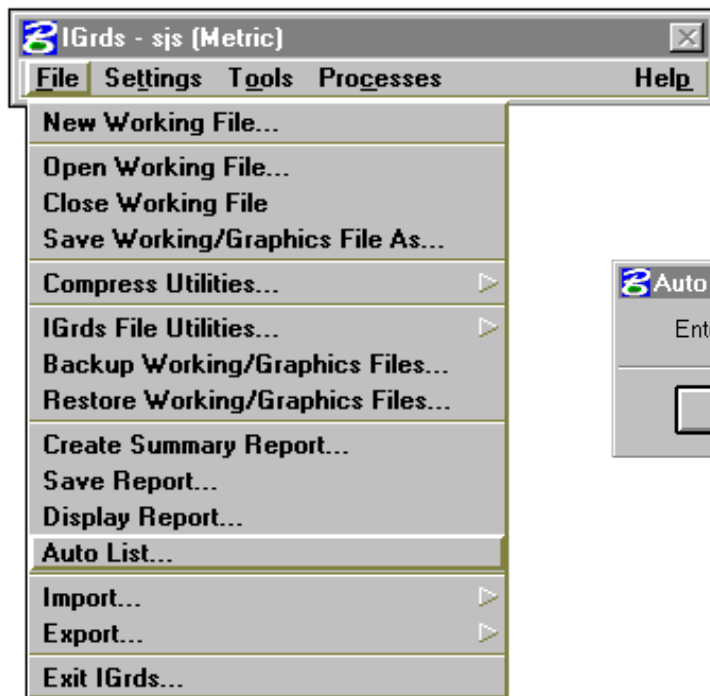
The **Auto List** menu selection pops up a dialog box as shown here if the auto list switch is off.

This command controls whether or not IGrds automatically appends the temporary report file (.TMP) to the list file (.LST). The default condition is AUTO LIST OFF.

If the Auto List switch is on and an **Auto List** menu selection is made, the auto list switch is turned off and a message is displayed stating this. If the auto list switch is off and an **Auto List** menu selection is made, the dialog box pops up. Enter the new file name (without extensions) for the list file (.LST) or use the existing list file. When the **OK** push button is clicked, the auto list switch is turned on and a message is displayed stating this along with the name of the list file. Striking the enter key produces the same result since the **OK** push button is the default action. The user may cancel the Auto List command by clicking the **Cancel** push button.
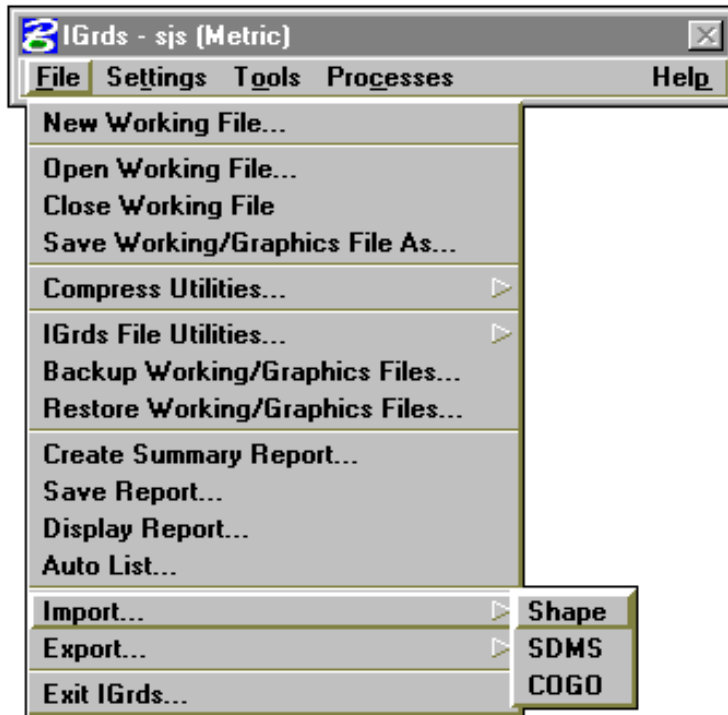
The **Import** menu selection opens a cascading menu with **Shape, SDMS,** and **COGO** being the menu selections. For information on the **SDMS** (Survey Data Management System) menu selection, please see Chapter 11 of this manual. For information on COGO, see Import Points on page 2-22A. The **Shape** menu selection pops up a dialog box that is used to import shapes (template, sideslopes, and medians) into the current working files. Two options for importing shapes are available: Replace or Merge. The Replace option causes the current shape file (.dtb) to be overwritten with the shapes in the selected shape file. The Merge option permits specific shapes to be selected from the import file and merged in with the shapes of the current shape file.
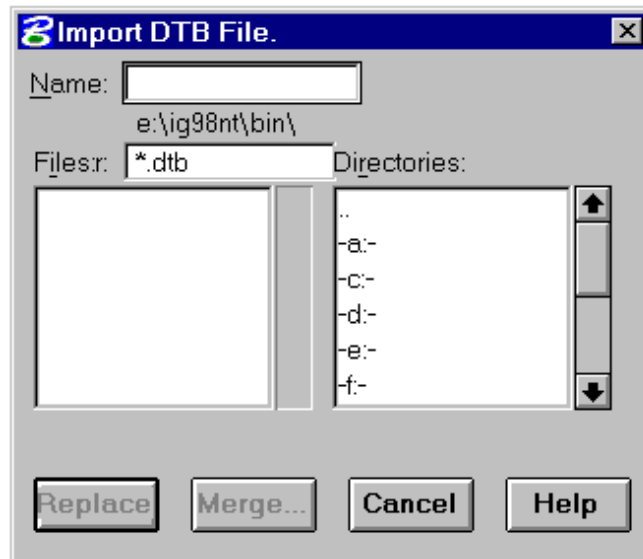
After the dialog box appears, check the directory listed under the **Name** text box. If a different directory is desired, go to the **Directories** list box and scroll to the desired directory. Double click on the desired directory and that directory will be listed under the **Name** text box. Enter the name of the existing shape file in the **Name** text box without extensions or select the existing shape file from the **Files** list box. Proceed in the process by selecting the **Replace**, **Merge**, **Cancel**, or **Help** buttons.

Replace	Press the Replace option button to import the entire shape file listed in the Name text box. The contents of the selected file overwrites all shapes, if any, in the shape table associated with the current working files. Before doing this, however, an Alert message menu is displayed in the screen. It states that a .dtb file already is open. Press OK to overwrite the current file and exit the command, or press Cancel to exit the command without taking any action.
Merge	Press the Merge button to open the Shape Merge menu which will then appear on the screen. The description of this menu follows this description of the Import menu.
Cancel	Press the Cancel button to exit from the Import process without taking any action.
Help	Press the Help button to display the online help information about this command.
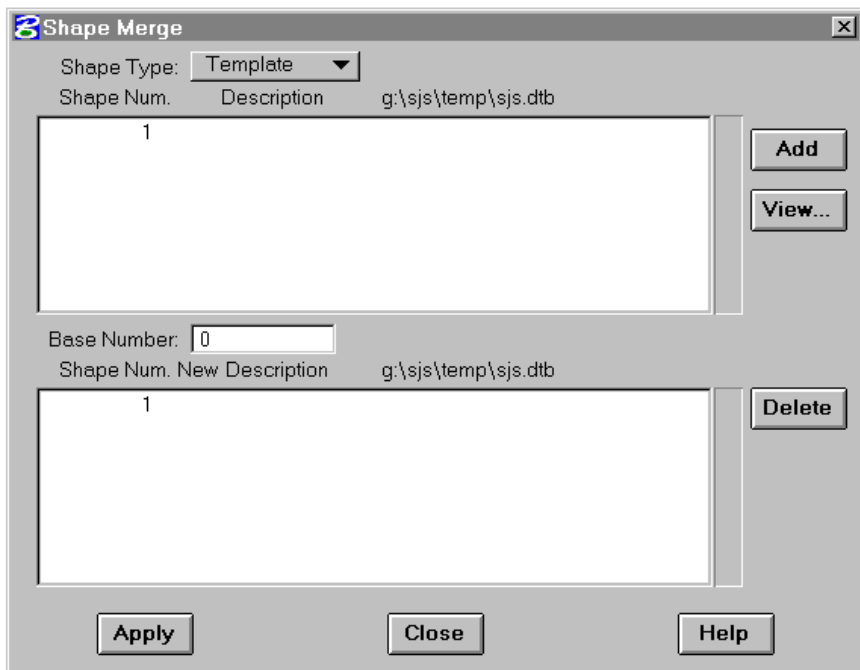
The Shape Merge menu shown above contains two basic parts. The upper half of the menu contains shape numbers and descriptions for the shapes that can be selected for merging, and the lower half of the menu depicts the status of the current shape table as the shape merge process is carried out. The basic procedure is to set the Shape Type (Template, Sideslope, or Median), and highlight one or more shapes in the import file list that are to be merged into the current shape table list. To select a shape or a group of shapes from the import list, click on the desired one, or click and drag the cursor over a group of shapes and release the button. On release, the selected shape or shapes will also appear in the current shape table list.

Shape Type	Select the Shape Type option: • Template - Select this option to import and merge selected template shapes. • Sideslope - Select this option to import and merge selected sideslope shapes. • Median - Select this option to import and merge selected median shapes.
Import Shape Table	The Import Shape table list contains a list of Shape Numbers and Descriptions available for selection and merging to the current project working .dtb file.
Base Number	Enter a number to be added to the selected Shape Number(s) to create a new number for each shape when it appears in current shape table list. Use this option to prevent shape number duplication which is not allowed. (The default of 0 is displayed.) The number input may be negative so long as it does not yield a negative or zero result.
Working File Shape Table	The Working File shape table contains a list of the current selected shape types in the merged file. The list shows the Shape Number and its Description, but in addition there is a column headed New which will display an asterisk (*) if that shape was one inserted as a merged shape during the current process.

Add	Press the Add option button to add one or more highlighted shape types. If the number of a selected shape already exists for a shape in the current merged shape table list, a message box menu labeled Element Already Defined, will appear. Several choices are available: Press the Cancel button to negate the original request; Press the OK button to overwrite the existing shape having this number, or; Enter a new shape number and press the OK button to perform the merge.
View	Press the View option button to see a display of one, or a display stack of three shapes beginning at the top of the shape list. To view a single shape, highlight the desired shape by clicking on it and then pressing the View option button. This action brings up a display of the standard single shape display window used by Shape Builder of the Design Data Manager process described elsewhere in the Manual. If none of the shapes in the list are highlighted and the View Button is pressed, then the standard three shape stack display menu of Shape Builder is displayed, which permits one to visually scan all shapes in the list.
Delete	Press the Delete option button to delete any unwanted shape from the current list. The shape to be deleted must be highlighted by selecting it first. If none of the shapes are highlighted and the Delete button is pressed, an Alert message is displayed stating that is the case. Press OK or Cancel on that menu to dismiss the message, and select a shape for deletion.

Apply	Press the Apply button to save all changes made to the current shape (.dtb) file.
Close	Press the Close button to close the Shape Merge menu. If changes were made to the Working File shape table, then an Alert menu box will display a message stating that clicking on OK will import the changes to the file before closing. If the changes are not to be saved, press the Cancel button of this menu instead. If no changes were made to the Working File shape table, the menu closes with no action taken.
Help	Press the Help button to display help information for this command.
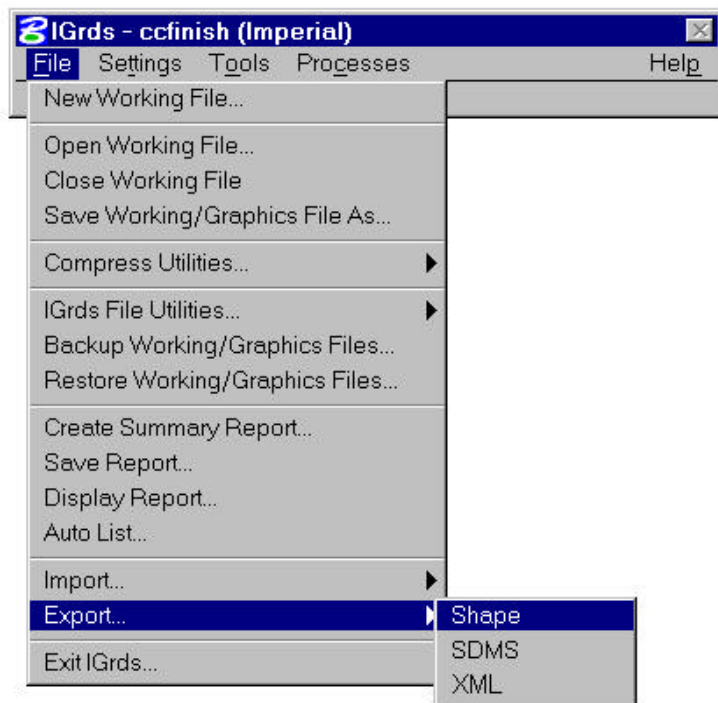
The **Export** menu selection opens a cascading menu with **Shape, SDMS** and **XML** being the menu selections. For information on the **SDMS** (Survey Data Management System) menu selection, and the **XML** export facility, please see Chapter 11 of this manual. The **Shape** menu selection pops up a dialog box that is used to export shapes (template, sideslopes, and medians) into a .dtb file. The entire shape file (.dtb) is exported into the .dtb file. At present, there is no way of exporting a partial file.
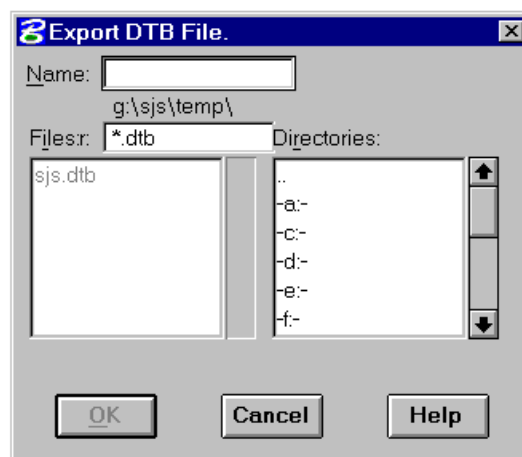
After the dialog box appears, check the directory listed under the **Name** text box. If a different directory is desired, go to the **Directories** list box and scroll to the desired directory. Double click on the desired directory and that directory will be listed under the **Name** text box. Enter the name of the shape file in the **Name** text box. When the **OK** push button is clicked, the shapes from the present working files will be exported to the file listed in the **Name** text box. The user may cancel the process by clicking the **Cancel** push button.

IMPORT POINTS
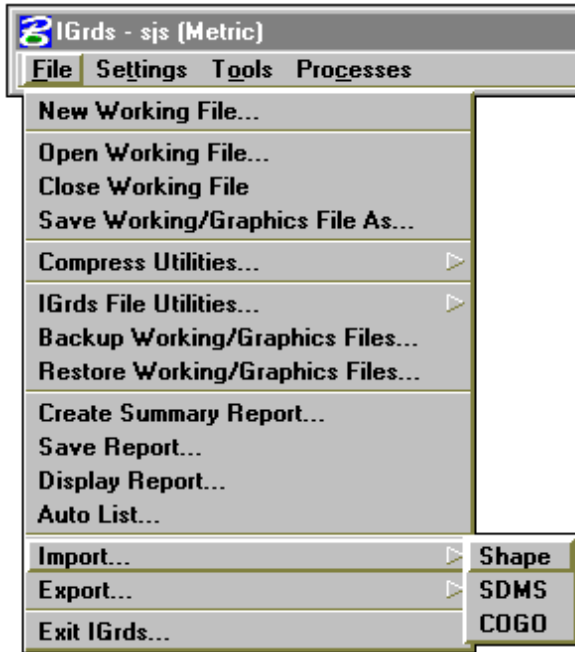
The Import Point command allows point data to be read into the current IGrds project from an ASCII file. The point file can have point definition data organized in various orders. The data to be read into IGrds is specified by the user by selection from a data options list. In this manner, point files of various formats can be used.

| Input File	Enter the name, including path, to the file containing point data to be read.
Browse	Select the Browse button to open a standard directory list dialog and select the point file to be read.
Options	These are the point file format options that conform to the format of the file to be read. Options are highlighted with the cursor and added to the file format list as described below. Options selected must match the data format of the point file to be read. A single format is supported at this time and all lines in the point file must match the format (i.e., no other text can be included in the point file).
X	Specifies the data item is an X coordinate (real number).
East	Specifies the data item is an easting coordinate (real number).

Y	Specifies the data item is a Y coordinate (real number).	
North	Specifies the data item is a northing coordinate (real number).	
Z/Elevation	Specifies the data item is an elevation (real number).	
ID	Specifies the data item ID or number. ID values must be unique integers.	
Feature Code	Specifies the data item is a feature code (four alpha numeric characters).	
Null	Specifies the data item is to be skipped when the point file is read.	
Add	Adds the currently selected data item in the Options list to the format list.	
Delete	Deletes the currently selected item in the format list.	
Delete All	Deletes all of the items from the format list.	
OK	Proceed with the point data import.	
Cancel	Exit the dialog without any action.	
Help	Access on-line help.	
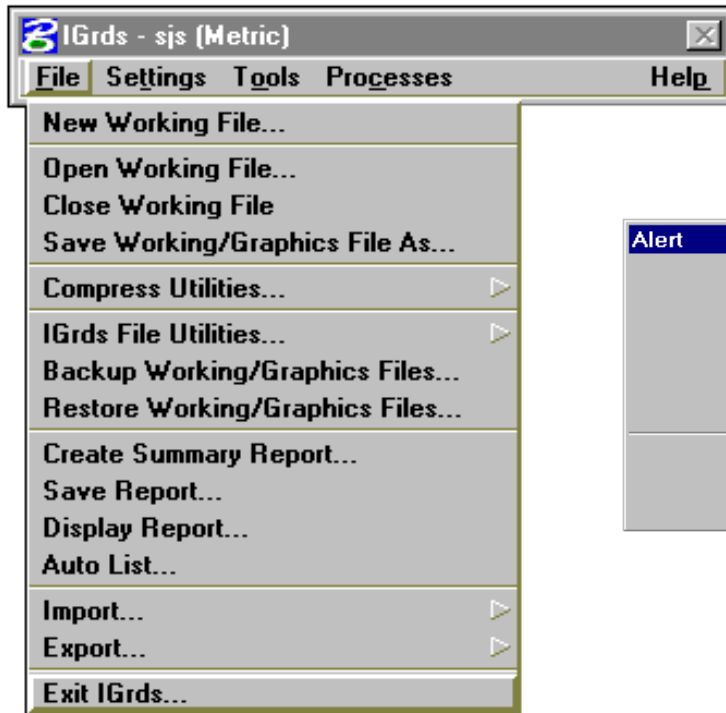
The **Exit IGrds** menu selection is used to exit the IGrds process. The **Exit IGrds** menu selection pops up a dialog box as shown here.
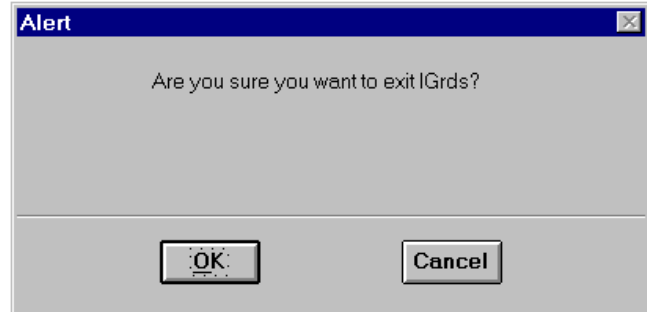
The user ends the IGrds session by clicking the **OK** push button or striking the enter key since the **OK** push button is the default action. The working file is automatically closed and the IGrds top level window, all open modeless dialog boxes, and command palettes are closed. The user may cancel the exit by clicking the **Cancel** push button. Both the **OK** and **Cancel** push buttons dismiss the dialog box.

SETTINGS MENU

Menu selections within the Settings menu are used to change IGrds parameters and general settings. The **Parameters** selection pops up a dialog box and the **General Settings** pops up an icon Palette that solicit user information for altering the parameters or settings.

SETTINGS MENU - PARAMETERS

Selecting Parameters under the Settings Menu displays a general dialog box which provides for modifying graphic parameters for a large number of IGrds elements.
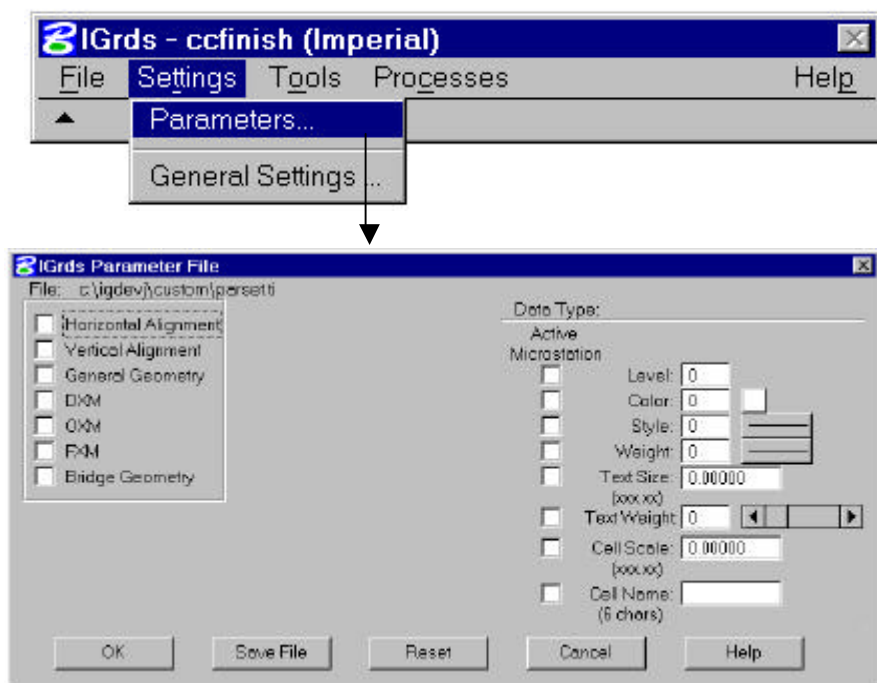

The toggle buttons on the left are used to select the data type and the right side is used to review/modify the parameters for a selected data type. These topics are discussed next.

> Selecting a Data Type
> Modifying Parameters
> Saving Parameters

SELECTING A PARAMETER DATA TYPE

Selecting a data type requires selecting one of the toggle buttons on the left and then clicking on one of the push buttons which appear in the center of the dialog box. For example, select the Vertical toggle button which displays a set of push buttons for individual elements under Vertical as shown here.
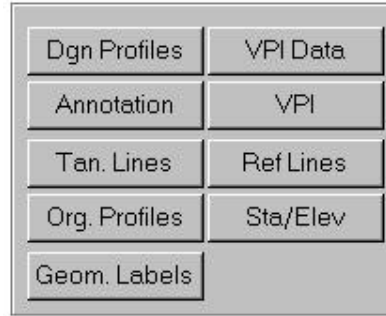
Clicking on one of the push buttons, such as "Tan Lines", focuses on that particular Data Type (element) for review or modification. The possible data type selections are shown here:

* Horizontal	* Vertical
◊ Alignments ◊ Annotation ◊ Tangent ◊ Ditch ◊ PI ◊ PI Data ◊ Crown	◊ Design Profiles ◊ Annotation ◊ Tangent Lines ◊ Original Profiles ◊ VPI Data ◊ VPI ◊ Reference Lines ◊ Station/Elevation ◊ VA Geometry Labels
* OXM	* FXM
◊ Original Cross Section ◊ Initial Points ◊ Station Values	◊ Final Cross Sections ◊ Initial Points ◊ Station Values
* DXM	* General Geometry
◊ Original Cross Section ◊ Initial Cross Section ◊ Temporary Cross Section ◊ Initial Points ◊ Label: ROW ◊ Label: Maximum Slope ◊ Keypoints ◊ Station Values	◊ Elements ◊ Element IDs
	* Bridge Geometry
	◊ Transverse Slab ◊ Bents ◊ Splice ◊ Slab ◊ Beam ◊ Radial Line ◊ Diaphragm ◊ Bearing ◊ Longitudinal Slab ◊ Frame

MODIFYING PARAMETERS

When a data type has been selected, the applicable parameters are displayed on the right side of the dialog box. Before changes are made, the parameters displayed will be those which have been established for your installation.   Parameters which are not applicable will be grayed.

You can change from the standard defaults in two ways:

- If the Active MicroStation toggle button is not active (it is blank), select the Active MicroStation toggle button to make it active (it will then have an "X" in it).   The text box of the parameter will then display the current MicroStation value. With the Active MicroStation toggle button active, the parameter can be changed by changing the MicroStation setting.

- If the Active MicroStation toggle button is active, select the Active MicroStation toggle button and deactivate the Active MicroStation toggle button. Double click on the text box of the parameter and enter the new value.

    ◊   Level   1-63
    ◊   Color   0-255
    ◊   Style   0-7
    ◊   Weight   0-15
    ◊   Text Size   Any positive value
    ◊   Text Weight   0-15
    ◊   Cell Scale   Any positive value
    ◊   Cell Name   1-6 characters

The color may also be changed by selecting a color on the color picker. The style and weight may be changed by selecting a style and weight on the option button for them. The text weight may be changed by selecting a value on the scroll bar. More than one parameter may be changed for a data type.

To change parameters for another data type select the new type. The system remembers and uses any changes made during the session if the **OK** and/or **SAVE FILE** push buttons are used at the end of the session.

SAVING PARAMETER MODIFICATIONS

When parameters have been changed for one or more particular data types, they apply for the current session, but the push buttons at the bottom of the dialog box must be used properly to get the desired results.

OK

If the **OK** push button only is selected, the parameter values as set by this session in the IGrds Parameter File dialog box will be used for the present IGrds session. The **OK** push button also exits the IGrds Parameter File dialog box. When the present graphics file is exited, the parameter values will be lost.

SAVE FILE

If the SAVE FILE push button is selected, the parameter values as set by this session in the IGrds Parameter File dialog box will be saved in a local.par file in the directory where the working files reside. This local.par will override an existing local.par in that directory. The parameter values from the local.par will be used for all IGrds sessions in that directory.

RESET

If the RESET push button is selected, all the parameter values are reset to the value they had at the beginning of this session in the IGrds Parameter File dialog box.

CANCEL

If the CANCEL push button is selected, the IGrds Parameter File dialog box is exited and there is no change in the parameter values.

SETTINGS MENU - GENERAL SETTINGS ...

The **General Settings ...** menu selection pops up an icon Palette that is used to change general IGrds settings within a work session as shown here. The **General Settings** icon Palette can also be launched from the IGrds Main Command Frame.
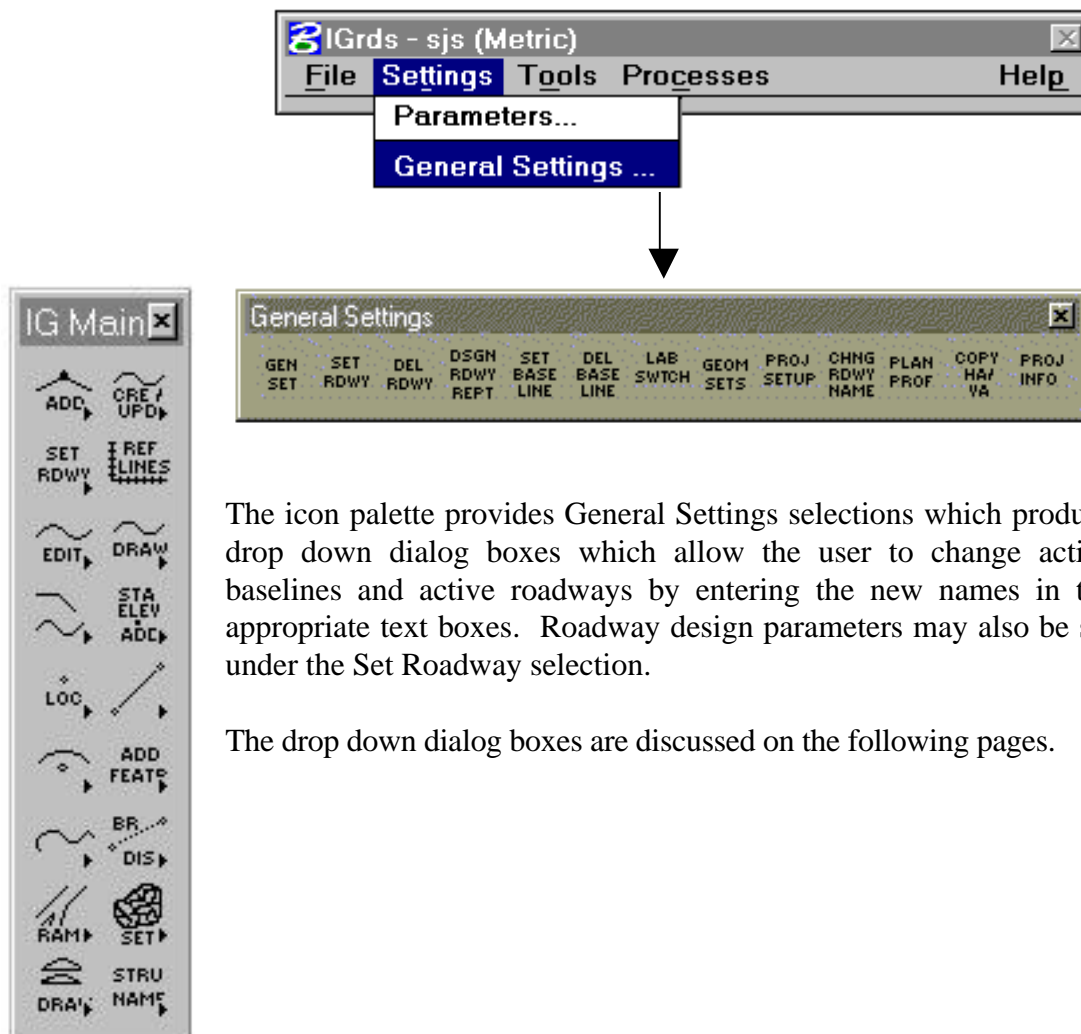
The icon palette provides General Settings selections which produce drop down dialog boxes which allow the user to change active baselines and active roadways by entering the new names in the appropriate text boxes. Roadway design parameters may also be set under the Set Roadway selection.

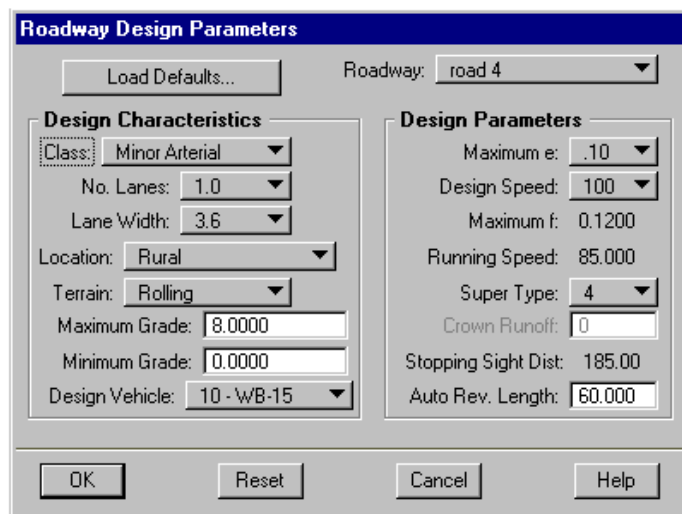The drop down dialog boxes are discussed on the following pages.

SET ROADWAY
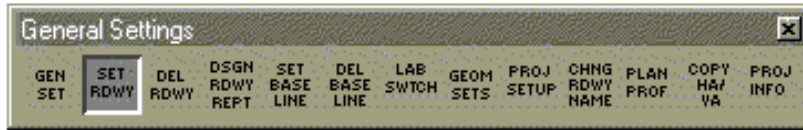
Displays the current active roadway and provides for changing to another roadway. It also provides access to the Roadway Design Parameters dialog box.

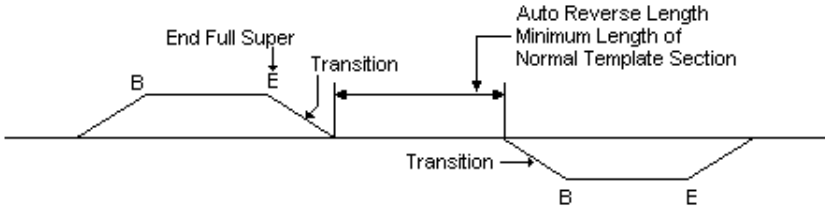|	
Roadway	The active roadway is displayed. Use the option button to select a new roadway or the text box to enter a new roadway identifier. If a new roadway identifier is entered in the text box, strike the enter key to make the roadway active. Roadway identifiers can consist of up to eight ASCII characters with imbedded blanks. Leading or trailing blanks are ignored.
Roadway Design Parameters	Push to activate the Roadway Design Parameters dialog box which is discussed next.
Apply	Push to create a new roadway after entering thenew roadway name in the text field Also sets the active roadway.
Close	Push to close the dialog box.
Help	Push to display Help.

ROADWAY DESIGN PARAMETERS

Provides for review or modification of design parameters used by several IGrds design processes. The dialog is initiated from the Set Roadways drop down dialog box, the Add/Insert/Revise dialog box, or if the user requests any automatic calculation such as curvature or superelevation without setting the design parameters for the roadway. (The roadway design parameters are set to default parameters for roadways upgraded from a previous version which did not have design parameters. When creating a new roadway the design parameters MUST be entered.) Design parameters are stored for the roadway as well as for each PI in the alignment. The following parameters are defined for the Roadway only: Class, Maximum Grade, Minimum Grade, and Auto Reverse Length. All other parameters can be modified for the Roadway or the PI.

Roadway	The active roadway is displayed. Use the option button to select a new active roadway.
Load Defaults…	Opens a dialog with an option to select a set of default design parameters which may be changed in the ha.tbl file.
Design Characteristics	
Class	Use the option button to select • Major Arterial • Minor Arterial • Collector • Ramp • Frontage Road • Freeway
No. Lanes	Use the option button to select the number of lanes. The option button values may be changed in the ha.tbl file.
Lane Width	Use the option button to select the lane width. The option button values may be changed in the ha.tbl file.

Location	Use the option button to select • Rural • Urban High Speed • Urban Low Speed
Terrain	Use the option button to select • Rolling • Level • Mountainous
Maximum Grade	• Enter maximum grade
Minimum Grade	• Enter minimum grade
Design Vehicle	Use the option button to select the particular design vehicle to use for the roadway. The option button values may be changed in the ha.tbl file.
Design Parameters	
Maximum e	Use the option button to select the maximum e value. The option button values may be changed in the ha.tbl file.
Design Speed	Use the option button to select the design speed value. The option button values may be changed in the ha.tbl file.
Maximum f	Displays the maximum f based on the design speed. This value may be changed in the ha.tbl file.
Running Speed	Displays the running speed based on the design speed. This value may be changed in the ha.tbl file.
Super Type	Use the option button to select • 0 • 1 • 2 • 3 • 4

Crown Runoff (If Super Type=0)	Enter crown runoff length.
Crown Rate (If Super Type=1,2,3)	Enter crown rate (normal cross slope rate).
Crown Runoff (If Super Type=4)	Value grayed out.
Stopping Sight Dist.	Displays the stopping sight distance based on design speed. This value may be changed in the ha.tbl file.
Auto Rev. Length (Type 0 & 4 Super Only)	Enter Auto Reverse Length for compound superelevation.
OK	Click to save the parameter values as set by this session.
Reset	Click to reset all parameter values to the value they had at the beginning of this session.
Cancel	Click to dismiss the dialog.

Note: When the length of normal template section between two superelevated curves is less than the Auto Rev. Length, automatic compounding of superelevation between the two curved sections is applied.
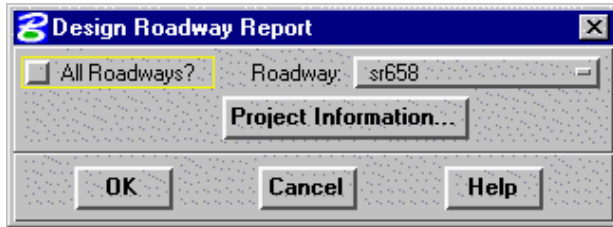
DELETE ROADWAY
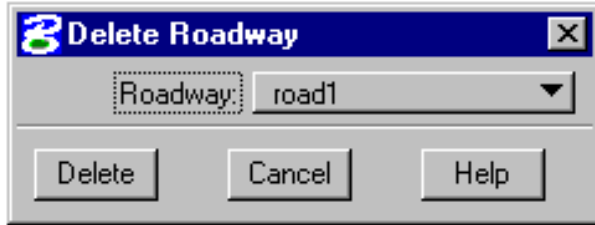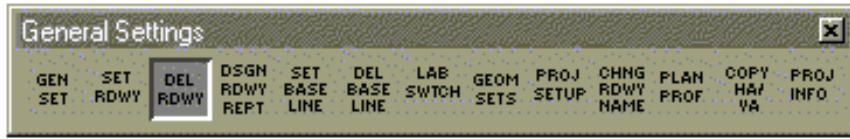
The Delete Roadway deletes a roadway from the list of available roadways. It also deletes all references to the roadway through the system such as in Horizontal Alignment, Vertical Alignment and Design Data Manager, etc.

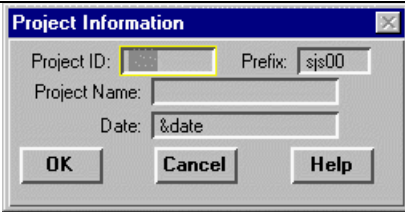| Roadway	Select the roadway to be deleted.
Delete	Press this button to carry out the deletion. A second confirmation box will appear before the deletion is completed.
Cancel	Click to cancel the dialog with no action.
Help	Click to display Help.

DESIGN ROADWAY REPORT

This command generates a report showing Roadway Design Parameters for individual or all roadways. Roadway Design Parameters are set in the Set Active Roadway command.

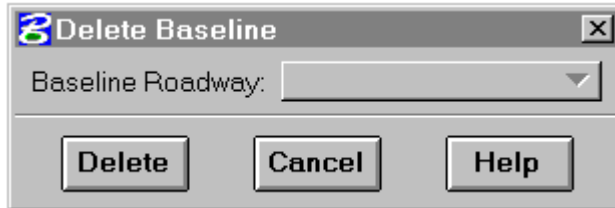|	
All Roadways?	Check this box to generate a Design Parameter Report for all roadways.
Roadway	If All Roadways is not checked, select the roadway to create a Design Parameter Report for.
Project Information	Click to review/change Project Information.
Project ID	Project Identification (up to 3 characters).
Prefix	Earthwork Output File Prefix.
Project Name	Project Name.
Date	Date to be shown on reports. "&date" is the current date.
OK	Click to generate Design Roadway Report.
Cancel	Click to cancel dialog box.
Help	Click to display help for this dialog box.

SET BASELINE
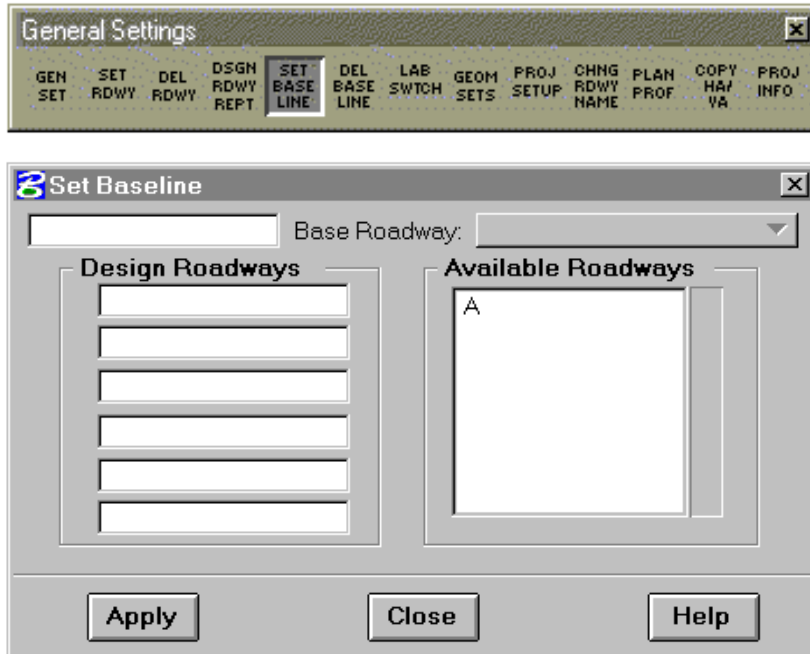
Displays the current active base roadway (baseline), provides for changing to another base roadway, and provides for designating roadways to be included in design computations for a base roadway.

|	
Base Roadway	Active base roadway is displayed. Use option button to select an existing base roadway. Use the text box to enter a new base roadway or select a roadway from the Available Roadways List box. If a new base roadway is entered in the text box, push **Apply** to make the base roadway active.
Design Roadway	Designate design roadways as required (up to 6) in the text boxes. Use the text box to enter a design roadway or select a design roadway from the Available Roadways list box. The order of the listed roadways determine which roadway is designed first. The first design roadway listed is the first roadway designed, etc.
Apply	Click to save the design roadways for the base roadway.
Close	Click to close dialog.
Help	Click to display help for this command.

DELETE BASE LINE

This command deletes a baseline association from an alignment previously designated as a baseline. The alignment itself is not deleted or is any design data associated with the alignment. Deleting a baseline association also results in the automatic deletion of its associated cross section file (.xsn) resulting in the loss of any original/design/final cross sections.

Base Line Roadway	Active baseline roadway is displayed. Use option button to select a new baseline roadway to delete.
Delete	Click to execute the command.
Cancel	Click to cancel the dialog with no action.
Help	Click to display HELP.

LABEL SWITCH
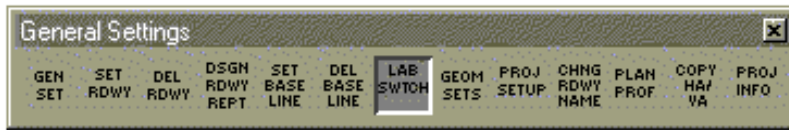
This command provides for setting switches for annotation graphics.
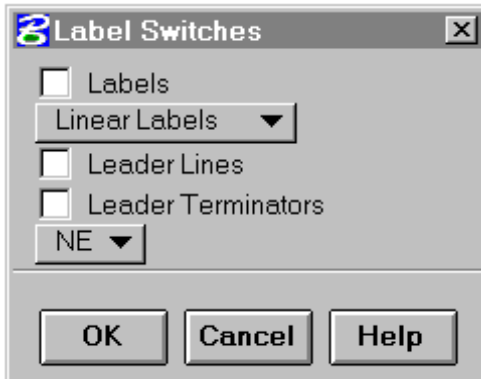
Labels	Push toggle button to activate the graphic label feature which draws a label and displays the identifying information in the message fields. (The identifying information in the message field is also displayed when the label feature is off.) Labeling is available for the following IGrds commands:

* Calculate Station and Offset (483)
* Calculate Station, Offset and Elevation (484)
* Compute/Label Station and Elevation (107)
* Compute/Label Profile Station and Elevation (126)
* Calculate Area of a Shape (485) (Leader lines and terminators are not available for this command.)

IGrds creates a label using the following default parameters:

* Text Height and Width
* Text Node Justification
* Active Angle
* Weight
* Line Spacing (Stacked Annotation only)
* Color
* Font

|	
Stacked Labels	Use the option button to select • Linear Labels • Stacked Labels
Leader Lines	Push toggle button to place leader lines from label to the element.
Leader Terminators	Push toggle button to place arrowhead at the end of the leader line.
NE/XY	Use the option button to select: • XY • NE
OK	Click to save the label switch settings as set by this session.
Cancel	Click to cancel the dialog.
Help	Click to display HELP.

GEOMETRY SETTINGS
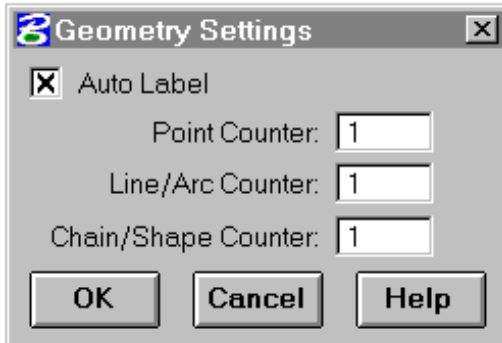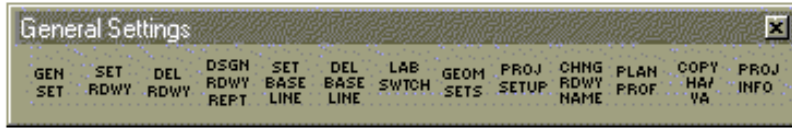
This command allows the geometry point, line/arc, and chain/shape counters to be set for geometry automatic numbering. If the number is already in use for the geometry element, the number will be the next available ID number. This number will be the base number for the geometry element counter for newly created geometry elements until the number is changed by using this command again. This command also toggles on and off for automatic labeling of geometry elements.

|	
Auto Label	Enable this option to display the label for the created elements.
Point Counter	Enter the ID number for the first new point to be created. The default number shown is the next available ID number for points.
Line/Arc Counter	Enter the ID number for the first new line/arc to be created. The default number shown is the next available ID number for line/arcs.
Chain/Shape Counter	Enter the ID number for the first new chain/shape to be created. The default number shown is the next available ID number for chain/shapes.
OK	Click to save the setting of the point, line/arc, and chain/shape counter as set by this session.
Cancel	Click to cancel the dialog.
Help	Click to display HELP.

PROJECT SETUP
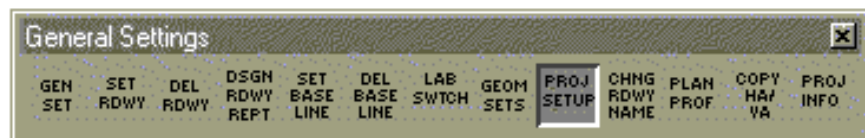
Provides for establishing project center and project origin in the graphic file when a center other than the default center is desired.
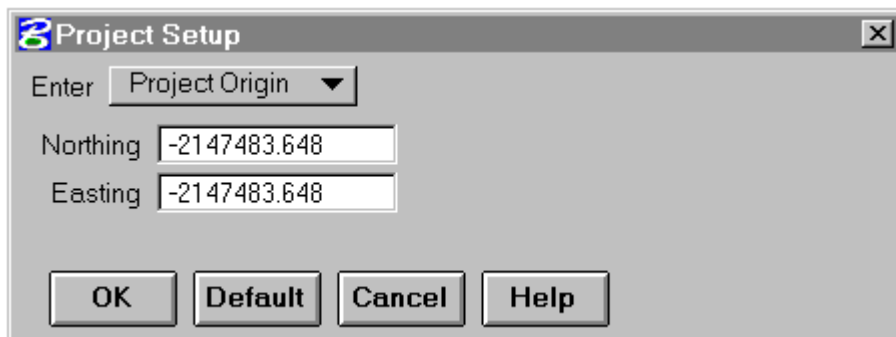
Enter	Use the option button to select: • Project Center • Project Origin • Reference File (See figure on following page)
Northing (Y)	Present north coordinate of project center or project origin is displayed. Enter desired north coordinate in text box.
Easting (X)	Present east coordinate of project center or project origin is displayed. Enter desired east coordinate in text box.
OK	Click to save the setting of the project center or project origin as set by this session.
Default	Click to change the coordinates to 0,0.
Cancel	Click to cancel the dialog.
Help	Click to display HELP.
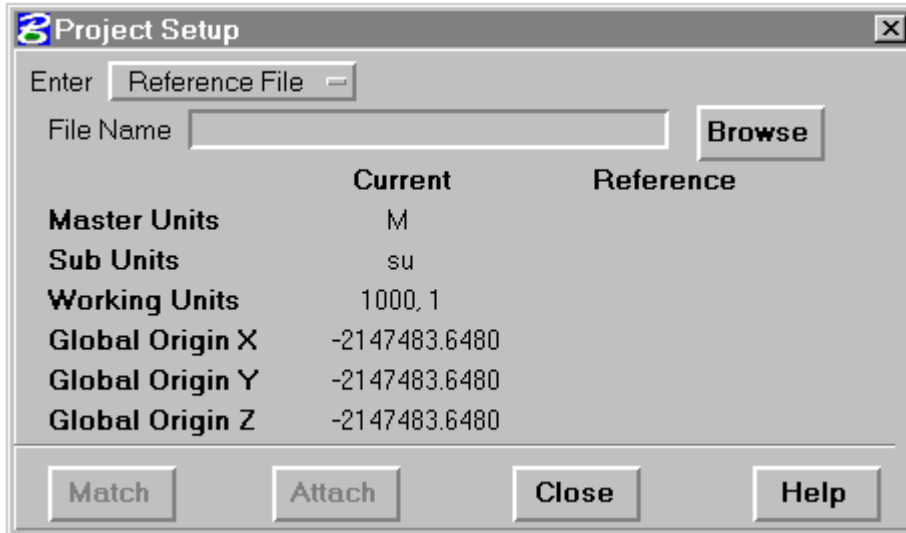
The Reference File option allows setting of the project origin base on setting in a reference (i.e., topo) graphics file. This option will set the current graphics file Master Units, Sub Units, Working Units, and Global Origin to match those in another graphics file and optionally attach that file as a reference file.

File Name	Enter the name of the reference graphics file or use the Browse button to locate the desired file.
Match	Match the current graphics file settings to those in the selected reference file.
Attach	Attach the reference file to the current graphics file.
Close	Close this palette.
Help	Invoke the interactive help facility.

CHANGE ROADWAY NAME
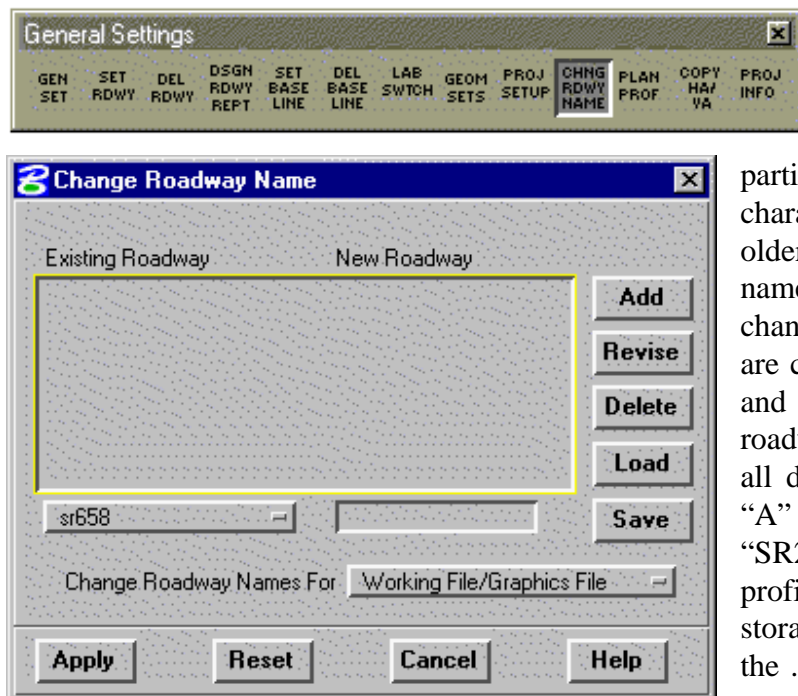
The Change Roadway Name Command allows an existing roadway name to be changed to another name. This command is particularly useful for changing single character roadway names created in older projects to new, more descriptive names. When a roadway name is changed, all references to the roadway are changed in both the IGrds database and graphics files. For example, if roadway "A" is changed to "SR206", all data previously stored for roadway "A" is now stored for roadway "SR206". This data consists of profiles, template and all design data storage along with graphic attributes in the .dgn file. Multiple roadway names can be changed in a single pass. The list of roadway names to be changed can be saved to a file and recalled to eliminate repetitive entry.

Existing Roadway	Select the roadway name to be changed from the list of available roadways
New Roadway	Enter the new roadway name to be used
Change Roadway Names For	The Working File/Graphics file selection will change the roadway name in both the working files and the attribute linkages of the IGrds Elements Displayed in the Graphics file. The Working File only selection will change only the roadway name from the working files. The Graphics File only selection will change only the attribute linkages of the IGrds elements displayed in the Graphics file.

|	
Add	Click this button to add the current existing - new roadway name pair to the list of names to be changed.
Revise	Highlight the line in the list to be changed, make the change in the edit field below the list and click this button to make the change to the list.
Delete	Click this button to delete the currently highlighted line from the list
Load	Click this button to activate the file browser used to select a previously created file of roadway name changes. The contents of the file are loaded into the list. The default extension of the roadway name change file is .rdy.
Save	Click this button to activate the file browser used to save the current roadway name change list. The contents of the list are loaded to the file. The default name of the file is work_file.rdy, where work_file is the current working file name.
Apply	Click this button to process the current roadway name change list.
Reset	Click this button to clear the current roadway name change list.
Cancel	Click this button to close the dialog
Help	Click this button to access on line help.

SYNCH PLAN/PROFILE VIEWS
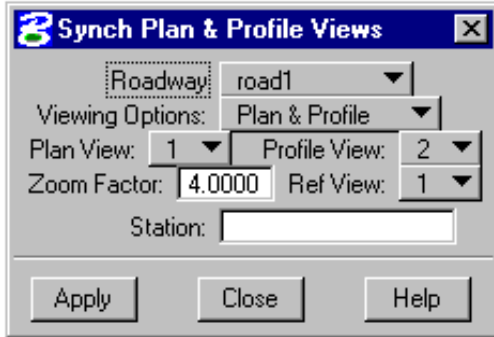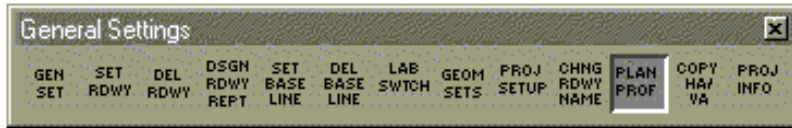
The Synch Plan/Profile Views command allows IGrds plan and/or profile views to be displayed in selected MicroStation views. If the plan and profile option is selected, the profile station range is displayed corresponding to the selected plan view characteristics. Changes in the plan view are automatically shown in the profile view.

|	
Roadway	Select the roadway to be used for plan/profile viewing.
Viewing Option	Select **Plan & Profile** to view plan and profile views simultaneously. Select **Plan Only** to view a plan view only. Select **Profile Only** to view profile a view only.
Plan View	Select the MicroStation view that will display the plan view. Note that the view must be a Top View if working in 3D files.
Profile View	Select the MicroStation view that will display the profile view. Note that the view must be a Top View if working in 3D files.
Zoom Factor	Enter the desired zoom factor. This factor applies to both the plan and profile views. A zoom factor greater than 1 will zoom in. A zoom factor less than 1 will zoom out.
Ref. View	Select the MicroStation view to be used to initially select the station to zoom about.
Station	Select from the plan view or enter the station to zoom about. This station must be on the selected roadway.
Apply	Click to save the design roadways for the base roadway.
Close	Click to close dialog.
Help	Click to display help for this command.

COPY HORIZONTAL AND VERTICAL ALIGNMENT
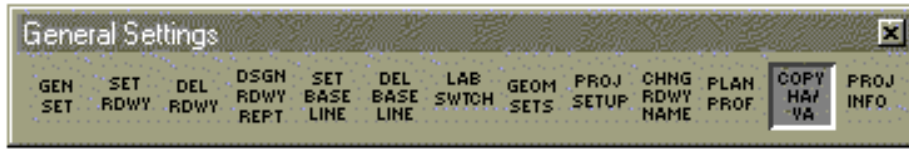
This command allows an existing horizontal and vertical alignment to be copied to a new alignment. Optionally, the vertical alignment only can be copied.
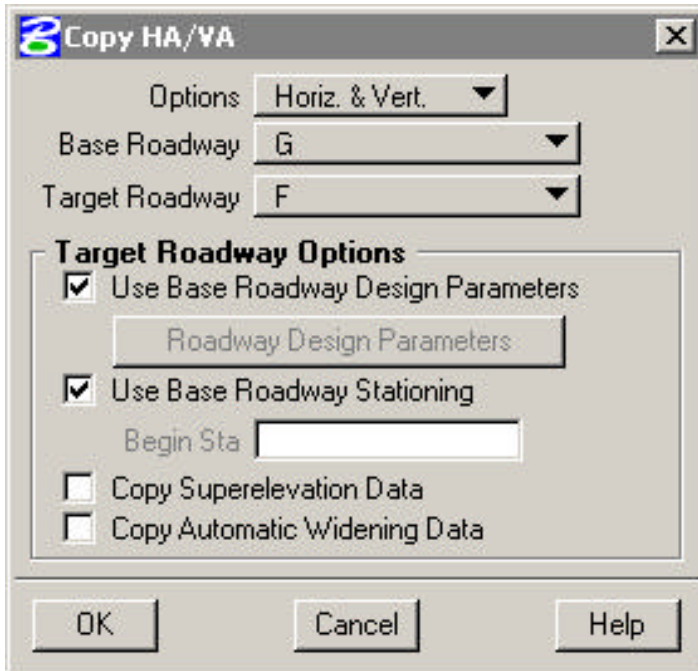
Options	
Horiz. & Vert.	Select this option to make a copy of the horizontal and vertical alignments.
Horizontal Only	Select this option wo make a copy of the horizontal alignment only.
Vertical Only	Select this option to make a copy of the vertical alignment only.
Base Roadway	Select the base roadway which will be used to copy the horizontal and/or vertical alignment.
Target Roadway	Select the roadway to which the horizontal and/or vertical alignment will be copied.

Target Roadway Options	
Use Base Roadway Design Parameters	Check this button if base roadway design parameters are to be copied to the target alignment.
Roadway Design Parameters	This button is active if the Use Base Roadway Design Parameters button is unchecked. Press this button to set the roadway design parameters. See page 2-30 for more information.
Use Base Roadway Stationing	Check this button if stationing for the target roadway is to be the same as the base roadway.
Begin Station	This edit field is active if the Use Base Roadway Stationing button is unchecked. Enter the begin station to be used for the target roadway. If a horizontal or vertical alignment is being copied, the begin station will be applied to the first pi and all other stationing will be computed.
Copy Superelevation Data	Check this button if you wish to copy the Superelevation Data from the base roadway. This can only be selected if copying horizontal only or horizontal and vertical alignment.
Copy Automatic Widening Data	Check this button if you wish to copy the Automatic Widening Data from the base roadway. This can only be selected if copying horizontal only or horizontal and vertical alignment.
Apply	Click to execute the command.
Cancel	Click to dismiss the dialog without any action.
Help	Click to display help for this command.

PROJECT INFORMATION
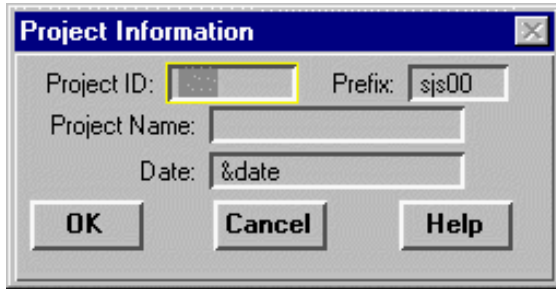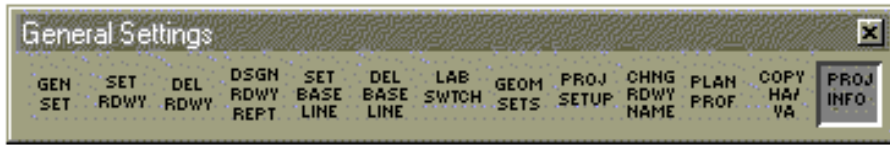
This dialog displays Project Information to be placed on all reports and cross section plots.

Project ID	Project Identification (up to 3 characters).
Prefix	Earthwork Output File Prefix.
Project Name	Project Name.
Date	Date to be shown on reports. "&date" is the current date.
OK	Click to save and use displayed data.
Cancel	Click to cancel dialog box.
Help	Click to display help for this dialog box.

HELP MENU FUNCTIONS

Menu selections within the **Help** menu are used to provide IGrds help functions. All of these menu selections pop up dialog boxes that assist the user in understanding IGrds commands and processes. The **Help Menu** selections are shown here and are discussed on the following pages.
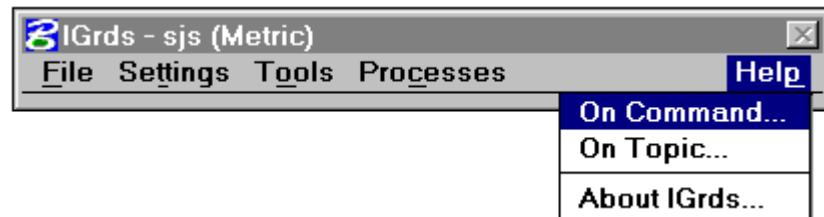
HELP MENU - ON COMMAND AND ON TOPIC

The **On Command** and **On Topic** menu selections both pop up the **IGrds Help** dialog box which is used to provide users with on line assistance regarding IGrds commands and processes as shown on the facing page.

When the **IGrds Help** dialog box is displayed with the **On Command** menu selection, the current IGrds command is displayed in the top option menu and the on line assistance information regarding that command is shown in the top list box. If there is more information regarding the command than will fit in the list box, scroll bars are provided so the user can view all of the information by "scrolling" the list box. Other related commands can be selected from the top option menu. Help on command can also be activated from the individual command dialog.

When the **IGrds Help** dialog box is displayed with the **On Topic** menu selection, the bottom list box is filled in with a list of all relevant IGrds topics and the scroll bar for the list box is activated. The user scrolls through the topics in the list box and selects a topic. This specific topic is then displayed in the top list box using the "open" button and the topic name is shown in the top option menu.

The user can also use the **Find** dialog box to search for specific strings and commands. The **Find** dialog box is popped up from the **IGrds Help** dialog box by clicking the **Find** button. The user can key in a specific string to be "found" in the **Find String** edit field, then click the **Go** button. The help process then finds the first occurrence of the string and displays the relevant information in the top list box in the **IGrds Help** dialog box. The user can "find" the next occurrence by clicking the **Go** button again. The **Go** button will "gray out" when the last occurrence is found.

Both the **IGrds Help** and **Find** dialog boxes can be minimized to icons by clicking on the **Minimize** button in the top right corner and kept open during an IGrds session. The dialog boxes are restored by double clicking on the pertinent icon. Both dialog boxes are closed using the System menu on the top left corner of the dialog box. The IGrds help procedure is very analogous to that provided by MicroStation.

HELP MENU - ABOUT IGrds ...

The **About IGrds ...** menu selection pops up the **About IGrds** dialog box which shows the version and copyright information regarding IGrds. It also displays the serial number and the product key.