
Chapter 2

Start Job & Project Manager

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2.1 Objectives

- Be able to start a new GEOPAK job with the **Start Job** dialog.
- Be able to add a new user to an existing GEOPAK job with the **Start Job** dialog.
- Learn how to set up a project using **Project Manager**.
- Learn how to utilize **Project Manager** as a workflow guide.
- Learn how to access GEOPAK dialogs from the **Project Manager**.

2.2 Definition – Start Job

Start Job is a tool that will set up a GEOPAK job for a user, or add users to an existing job. **Start Job** will create the job directories, and copy default MicroStation files to the directories. **Start Job** will also append the job number to the end of the copied Microstation files if that option is activated. Once a job has been created, **Start Job** will add a user to the job.

2.3 Accessing

Start Job can be accessed from the following Microstation menu:

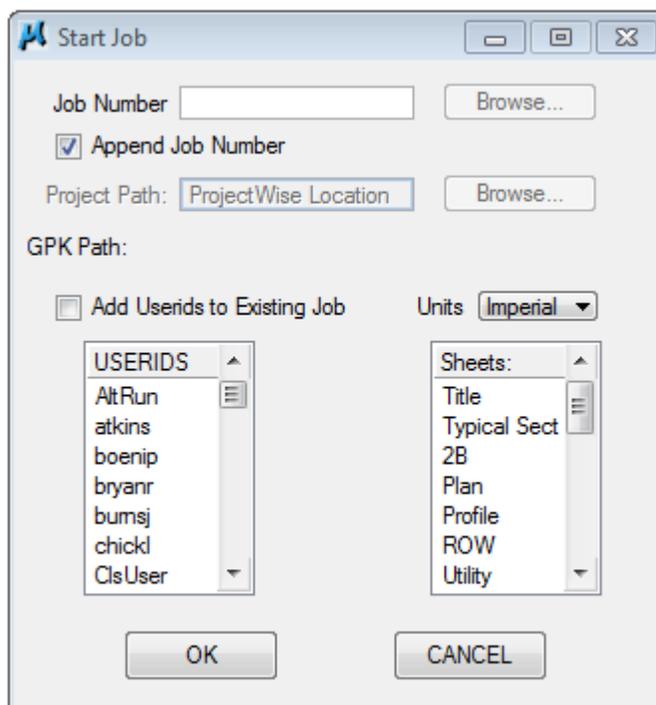
Design>>ProjectWise Start GEOPAK Job/Add User.

2.4 Start Job Dialog

Once the user has accessed the **Start Job** dialog box, shown right, the tool can be used to either create a new job or add users to an existing job.

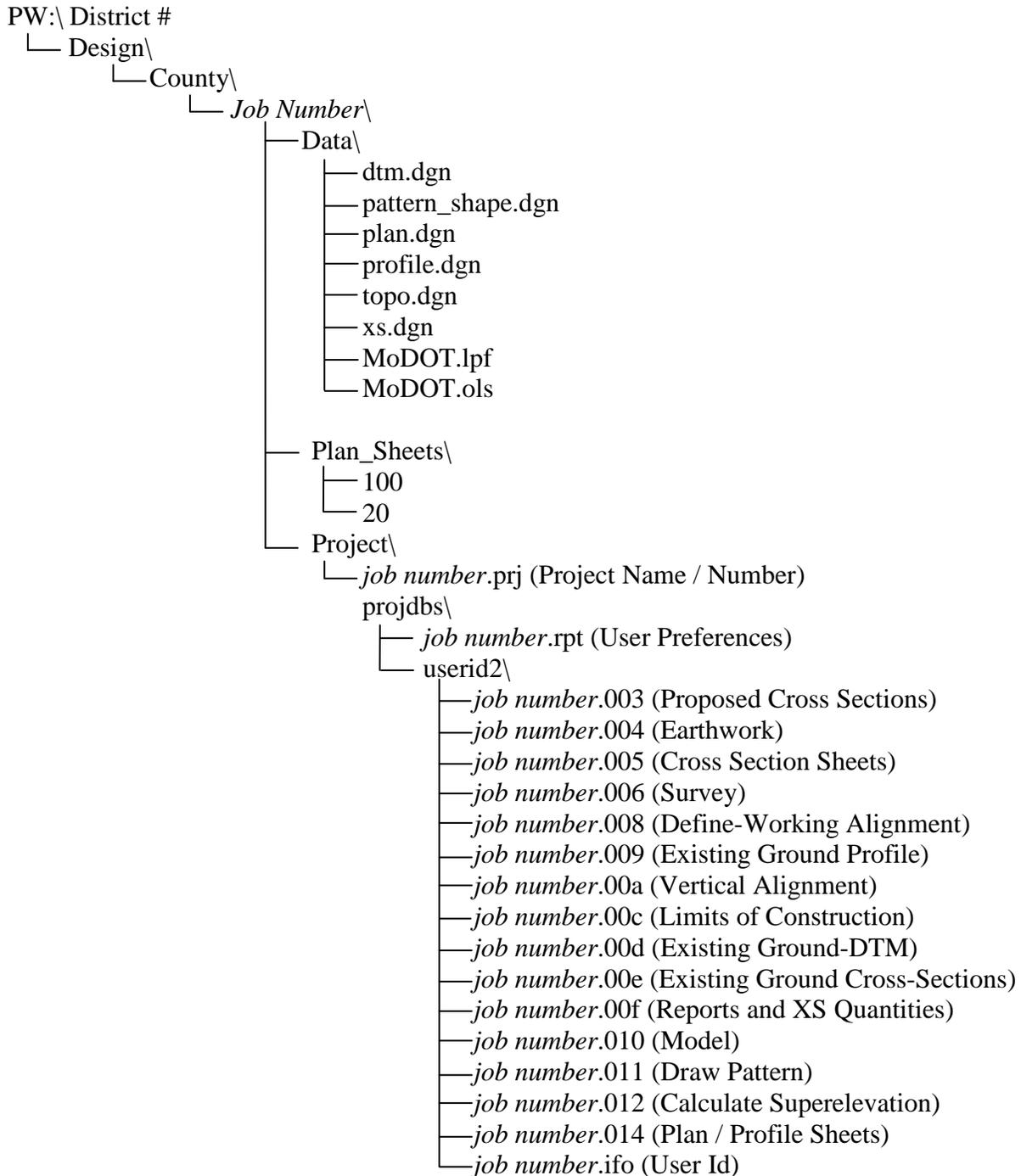
If the user is creating a new job, do not check the **Add Users to Existing Job** toggle. The user then types in the appropriate number in the **Job Number** field. Note that the **Browse** button for selecting a job number is ghosted out. This is because the job doesn't exist yet. The user needs to specify the path in which the job will be placed. The **Browse** button can be selected to navigate through the path. The next step is to choose the **userid**s of the people that will be working on the job. The user can select one or multiple user ID's.

In addition, for a new job, select the **Units** and the **Sheet** types that will be used for the job. This will create a directory for each **Sheet** type selected to place the sheets into as they are created.



If a job already exists, and the users are being added to the job, check the **Add Users to Existing Job** toggle. Note that the **Path, Units, and Sheets** options will ghost out, and the **Job Number Browse** option will become available. Because the job already exists, the user can browse through the job directory to select the **Job Number**.

Once all fields have been filled in, select the **OK** button. The job directories will be set up as shown below.



The **Data** directory contains any project data. This is the directory that contains the Microstation drawings, and any input or output files. The **Sheet** directories contain the plan and profile sheets, cross section sheets, and any other sheets for the project. The **Project** directory contains the GEOPAK project manager file (.PRJ), and the userid directories. The **Userid** directories contain the user runs for the job.

The GEOPAK coordinate geometry database (.GPK), because many users can access it at the same time, is store outside of ProjectWise in the following location:

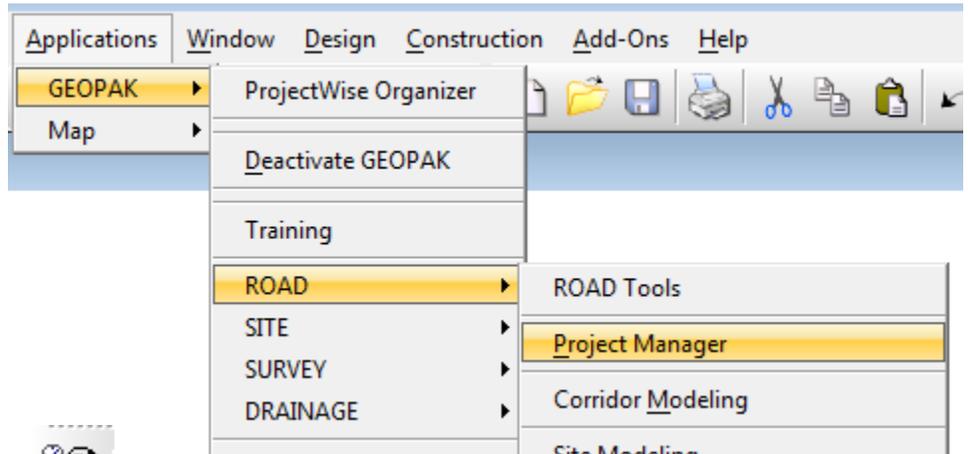
```
T:\
├── De-proj\
│   ├── County\
│   │   ├── Job Number\
│   │   │   └── Data\
```

2.5 Definition – Project Manager

Project Manager is a GEOPAK tool that associates a project with its respective **gpk** job number, users, working directories and project files. Project Manager provides the user with an easy workflow system that keeps records of processes run throughout the design of a project.

2.6 Accessing

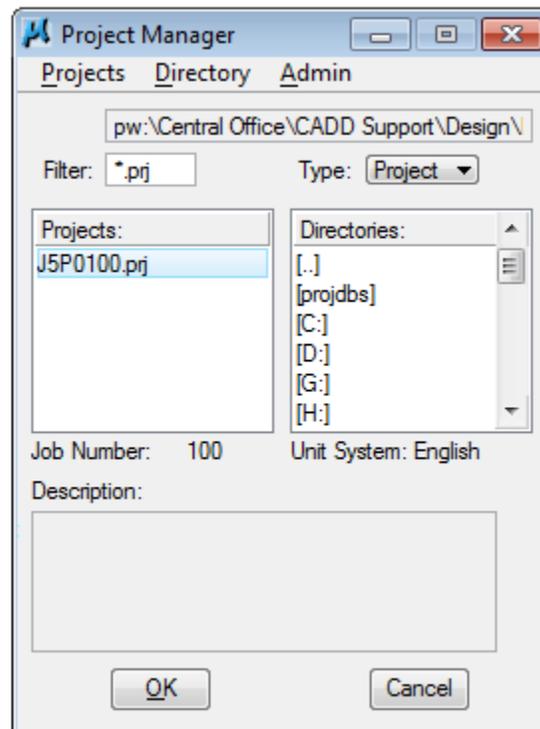
To access Project Manager, select **Applications >> GEOPAK Road >> Project Manager**



or select the Project Manager icon.



The following dialog appears:



2.7 Project Manager Dialog

2.7.1 General Description

The current directory is displayed at the top of the dialog box. This can be modified by traversing to a different directory in the **Directories** list box. Project files (.prj) are displayed in the **Projects** list box. The project files should be located in the pw:\District ??\Design\county\jobnumber**project** directory.

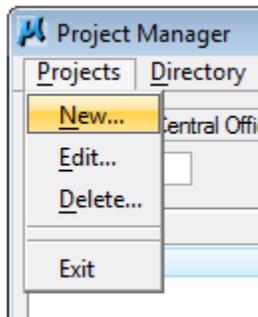
The remainder of the Project Manager dialog box displays information after a project has been selected from the **Projects** list box. At the bottom of the dialog are the **OK** and **Cancel** buttons. If the user wishes to exit Project Manager, the **Cancel** button should be selected. To continue in the Project Manager process, the **OK** button should be selected.

2.7.2 Project Manager Menu Bar

There are three pull down choices on the Menu Bar: **Projects**, **Directory**, and **Admin**. Each of these choices has options contained in the pull down.

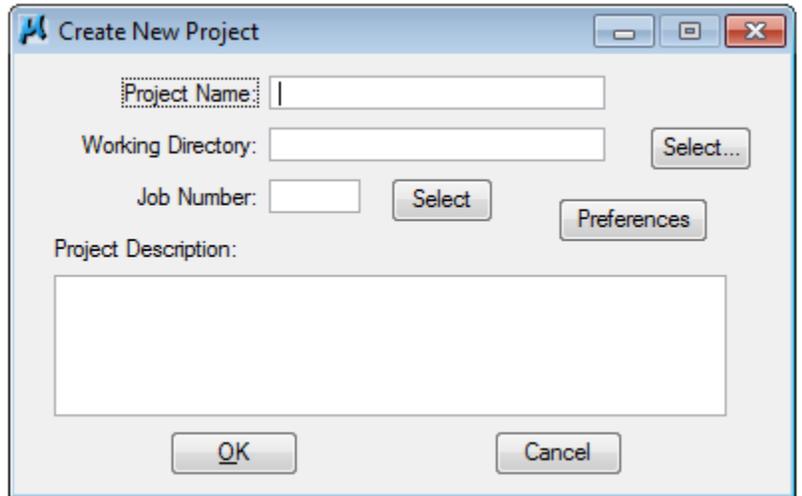
2.7.2.1 PROJECT TOOLS

There are four choices under the **Projects** pull down: **New**, **Edit**, **Delete**, and **Exit** as shown below.



As can be seen from this dialog box, the Windows motif also keeps track of the last few processes that have been executed. These may be recalled as needed by selecting the desired process.

The **New** menu option is used to create a new project. The .prj file will be stored in the directory shown in the Directory path at the top of the Project Manager dialog box. When the **New** menu option is selected, the following **Create New Project** dialog appears.



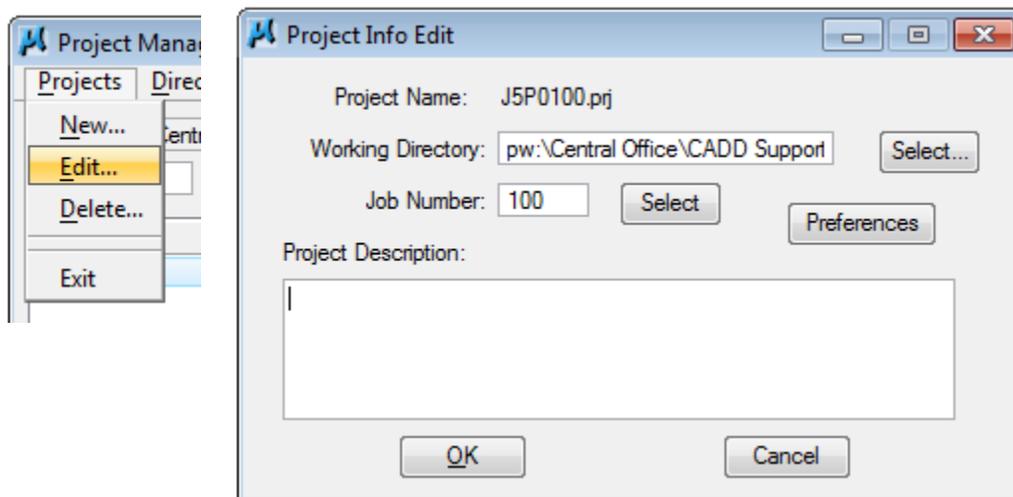
The **Project Name** can be any number of alphanumeric characters. For MoDOT projects, the **Project Name** needs to be the same as the job number. (i.e. j1p0999.prj) The **Working Directory** specifies the location of the project data files. The **Working Directory** may be keyed in or the **Select** button may be chosen and the appropriate directory selected. For MoDOT, the **Working Directory** should be set to pw:\District ??\Design\county\jobnumber\data directory.

The next field is for typing in the cogo job number, or the **Select** button may be chosen and the appropriate cogo job number selected.

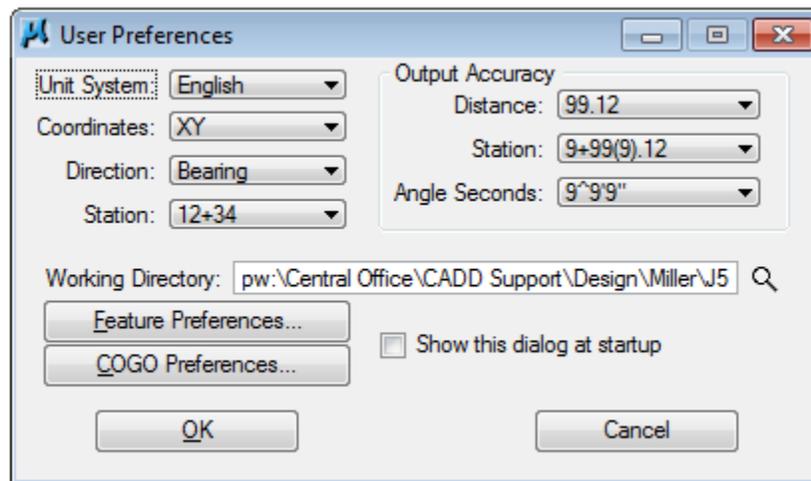
Shown below is a sample project that includes a project description, which may be keyed in at the bottom of the **Create New Project** dialog box.

For MoDOT users, the (.PRJ) file and the (.GPK) file are automatically created during the **Start Job** routine.

The **Edit** menu option is used to change any settings associated with the currently selected project. When chosen, the **Project Info Edit** dialog box appears.



To review or change any of the preferences, select the **Preferences** button, and the following **Project Preferences** dialog appears.



The user may set the particular parameters for each project as well as the **Working Directory**. By setting these parameters for the project, the user does not need to re-set these parameters as they change projects. The preferences set with that project are recalled when the project is recalled. After all of the information is entered, the **OK** button is selected, or if the user wishes to abort, the **Cancel** button may be selected. For more information on the **User Preferences** dialog, see section 1.4 in the Chapter 1.

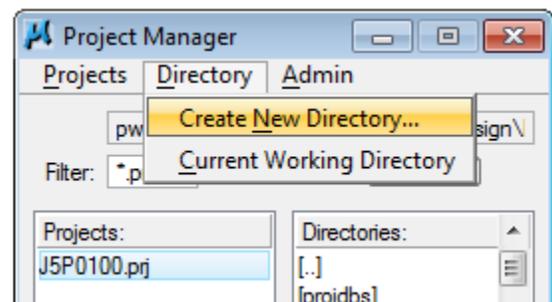
The **Delete** menu option is used to delete any project that has been stored. The user highlights the project in the **Projects** and selects **Delete**.

The **Exit** menu option closes the Project Manager and writes the settings to a resource file.

2.7.2.2 DIRECTORY TOOLS

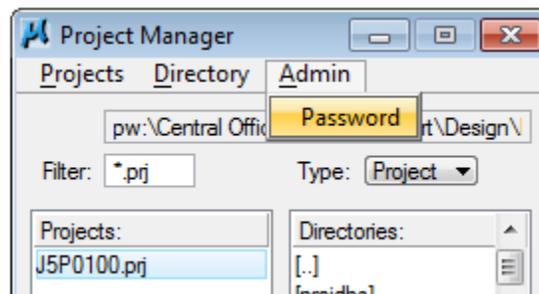
There are two options under the **Directory** pull down, **Create New Directory** and **Current Working Directory** as shown.

The **Create New Directory** option will create a new directory on the disk. If the **Current Working Directory** option is chosen, the directory path in Project Manager is changed to that directory.



2.7.2.3 ADMINISTRATION TOOLS

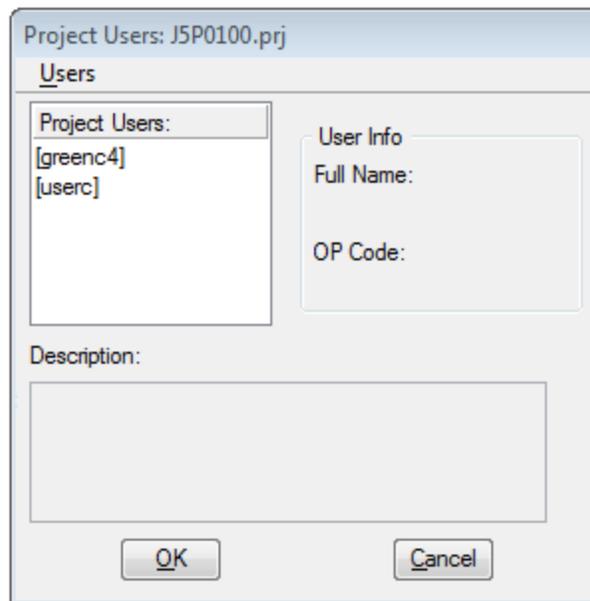
The **Administration** menu option is used to set a password on a project. It is recommended that a password *not be used* since the project will need to be accessed by more than one user.



2.8 Project Users Dialog

Once a project is highlighted and **OK** is selected, the **Project Users** dialog appears.

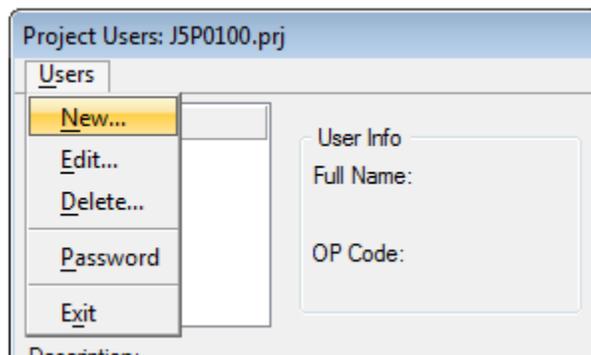
This dialog has three sections: **Project Users**, **User Info**, and **Description**. The **Project Users** list displays a list of users that have been created to work with any project that resides in the current projects home directory. The names shown in **Project Users** will be the userid's of the people working on that project as specified in the **Start Job** dialog. Within the **User Info** group box, the **Full Name** field further identifies the user, and displays the full name of the user that is currently selected. The **OP Code** field displays the GEOPAK Operator Code of the currently selected user. The GEOPAK Operator Code is used for all coordinate geometry operations during this session. The Operator Code, along with the Job Number, will be utilized whenever an input or output file is created by the software. The Operator Code will be the user's initial. The **Description** field displays the description of the currently selected user.



Four tools are supported on the Project Users pull down as depicted in the exploded view below.

2.8.1 New

The New pull down menu option creates new users. **This option is not to be used at MoDOT.** To create a new user for a project, use **Start Job/Add User** under the MoDOT menu. This is the only way the user will have the default MoDOT runs.



2.8.2 Edit

The **Edit** pull down menu option allows the user to change any of the parameters of the currently selected user. (Note: The User cannot be changed. This will change the user information for the current project only.)

2.8.3 Delete

The **Delete** pull down menu option allows the user to delete the currently selected user.

2.8.4 Password

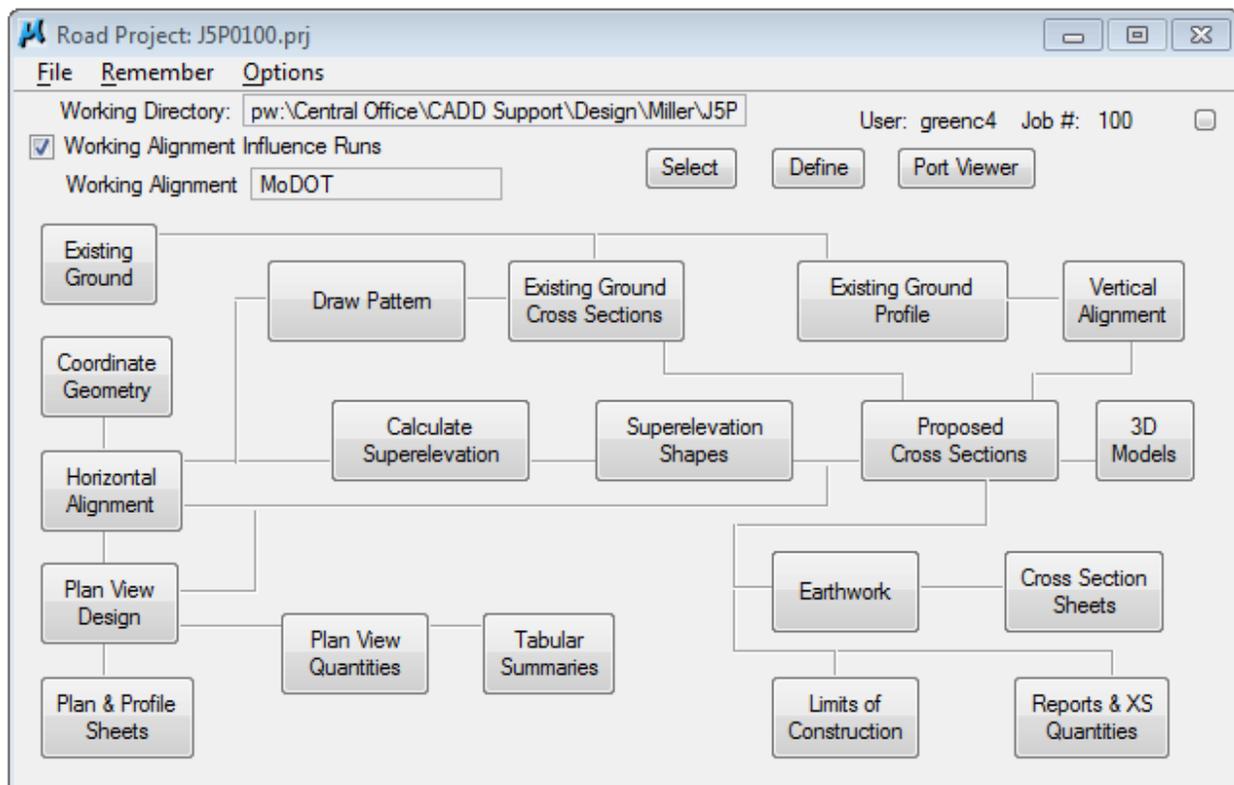
The **Password** tool creates or modifies a password for the selected user. If the selected user already has a password, the user will be prompted to enter the current password before continuing.

2.8.5 Exit

The **Exit** option closes the User dialog and returns back to the Project Manager dialog.

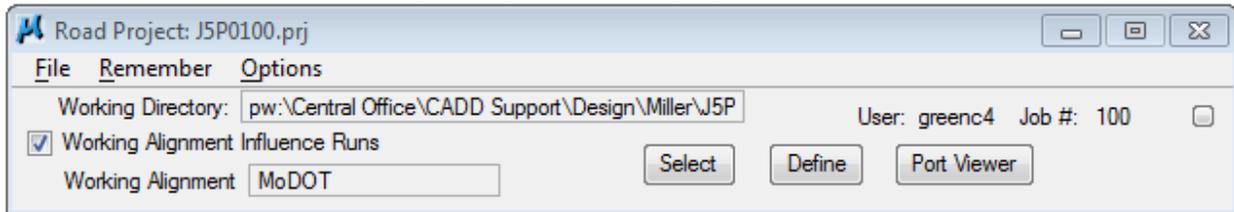
2.9 Road Project Dialog

After a minimum of one user has been defined, selecting the **OK** button on the lower left corner of the Project Users dialog or double clicking on a Project User will open the Applications dialog as depicted below.



2.9.1 General Description

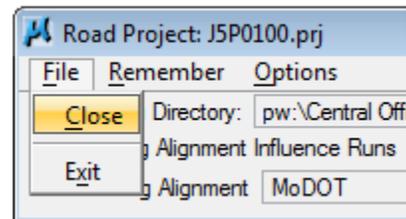
The top of the dialog displays the **Working Directory**, **Working Alignment** (if defined), **User** and **GEOPAK Job Number**. In addition, a toggle for **Working Alignment Influence Runs** is also supported. The bottom portion of the dialog box displays the various processes supported during the design process. The small square in the upper right corner (to the right of the Job Number) will condense the dialog as depicted in the graphic below.



In addition, the user can sink the dialog by data pointing on the Bentley B located on the upper left corner of the banner and selecting the **sink** option.

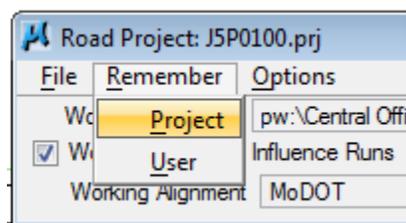
2.9.2 Road Project Dialog Menu Bar

There are three pull down menu bar options: **File**, **Remember**, and **Options**. When the **File** option is selected, the choices are **Close** and **Exit**.



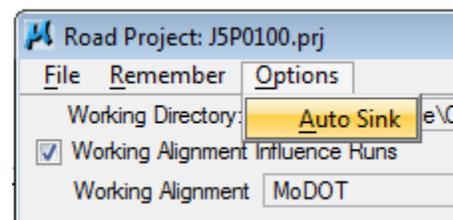
If the **Close** option is selected, the user is returned to the **Applications** dialog. If **Exit** is selected, the user is exited from Project Manager.

When the **Remember** option is selected, the user can instruct the software to remember the **Project**, or **User** in subsequent sessions. For example, if both toggles are activated, and the Project Manager is completely closed, the invocation of the Project Manager immediately invokes the Road Project dialog (flow chart) and utilizes the project name, username, etc., which were active when the **Remember** toggles were selected.



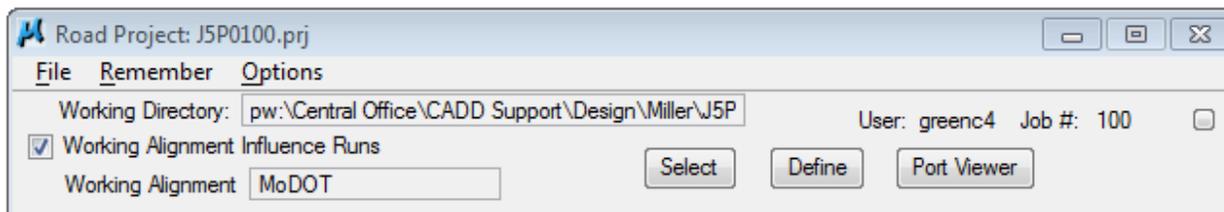
If only the **Project** toggle is activated, the user is returned to the Project Users dialog in subsequent sessions. This option is particularly useful when numerous users are working on one project.

The **Options** menu allows the user to toggle on the **Auto Sink** option. When toggled on, this option will sink (move behind the open drawing views) the Road Project dialog when a tool is chosen from the Road Project. When a tool is closed, the Road Road Project dialog will become the active dialog.



2.9.3 Working Alignment

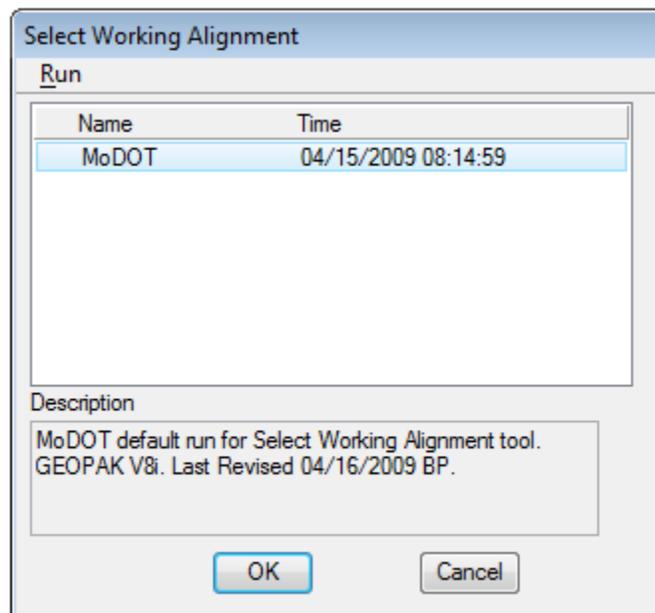
The concept of a working alignment enables the designer to organize a project and to access project information without continually typing the required information. On a simple project, only one working alignment may be needed. However, on a more complicated project, an unlimited number of working alignments may be defined. The designer can easily change from one working alignment to another by highlighting the desired alignment listed in the **Select** dialog. Three tools relating to working alignments are located at the top of the Road Project dialog:



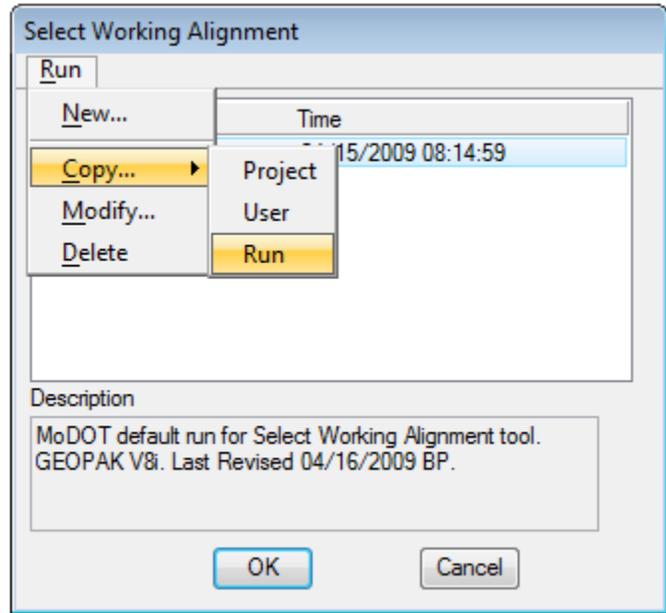
- **Select Button**
- **Define Button**
- **Working Alignment Influence Runs** (toggle on left side of dialog)

2.9.4 Select Option

When the **Select** button is pressed, the **Select Working Alignment** dialog appears as depicted to the right. If no working alignments have been defined, MoDOT appears in the Run List box. If working alignments have been defined, they are listed with the last run time. The description of the working alignment can be seen in the bottom of the dialog when each Name is highlighted. To select a previously defined working alignment, highlight the run from the list, then press the **OK** button at the bottom of the dialog. Double clicking on the Name also selects a previous working alignment for subsequent processing. Pressing the **Cancel** button will close the **Select Working Alignment** dialog without any working alignment change. Several file options are supported as depicted in the exploded view on the next page. These include **New**, **Copy**, **Modify**, and **Delete**.

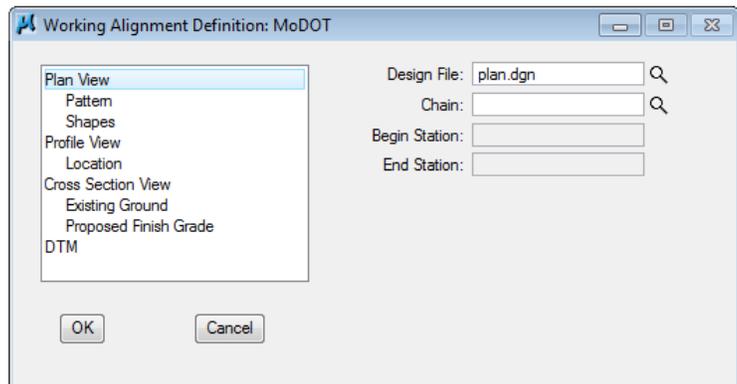


- **Run>>New** – allows the user to create a new working alignment. (Do not use this option as it will not copy the default MoDOT settings for the working alignment. Instead, use Run>>Copy>>Run to copy the MoDOT run.)
- **Run>>Copy** – allows the user to copy and a new run from an existing Project, User or Run.
- **Run>>Modify** – allows the user to change the name or description of the existing working alignment.
- **Run>>Delete** – allows the user to delete an existing working alignment.

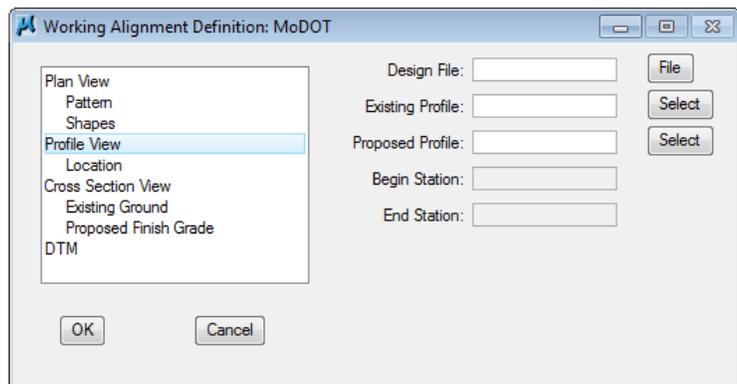


2.9.5 Define Option

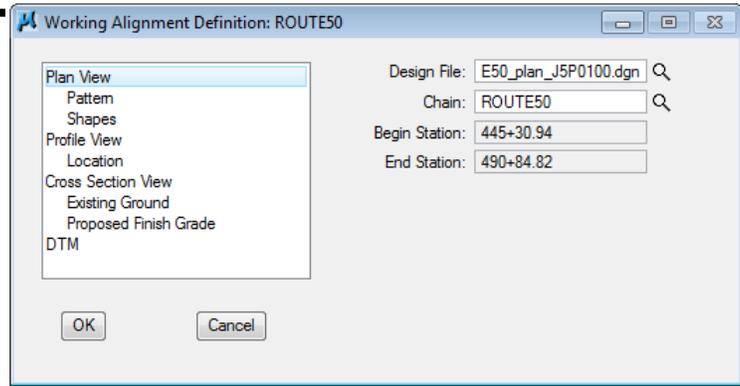
Once a Working Alignment has been selected, pressing the **Define** button invokes the dialog depicted to the right. The information that can be associated with a working alignment is listed in the left portion of the dialog box. As each option is chosen, the right side of the dialog box will change to reflect the information needed as can be seen in the dialog box to the right after Profile View was selected.



All information entered in these fields can be used in subsequent processes runs from the Road Project Manager. In the beginning of a project, much of this information will not be known. As the user goes through the design process, it can be added to the working alignment definitions.



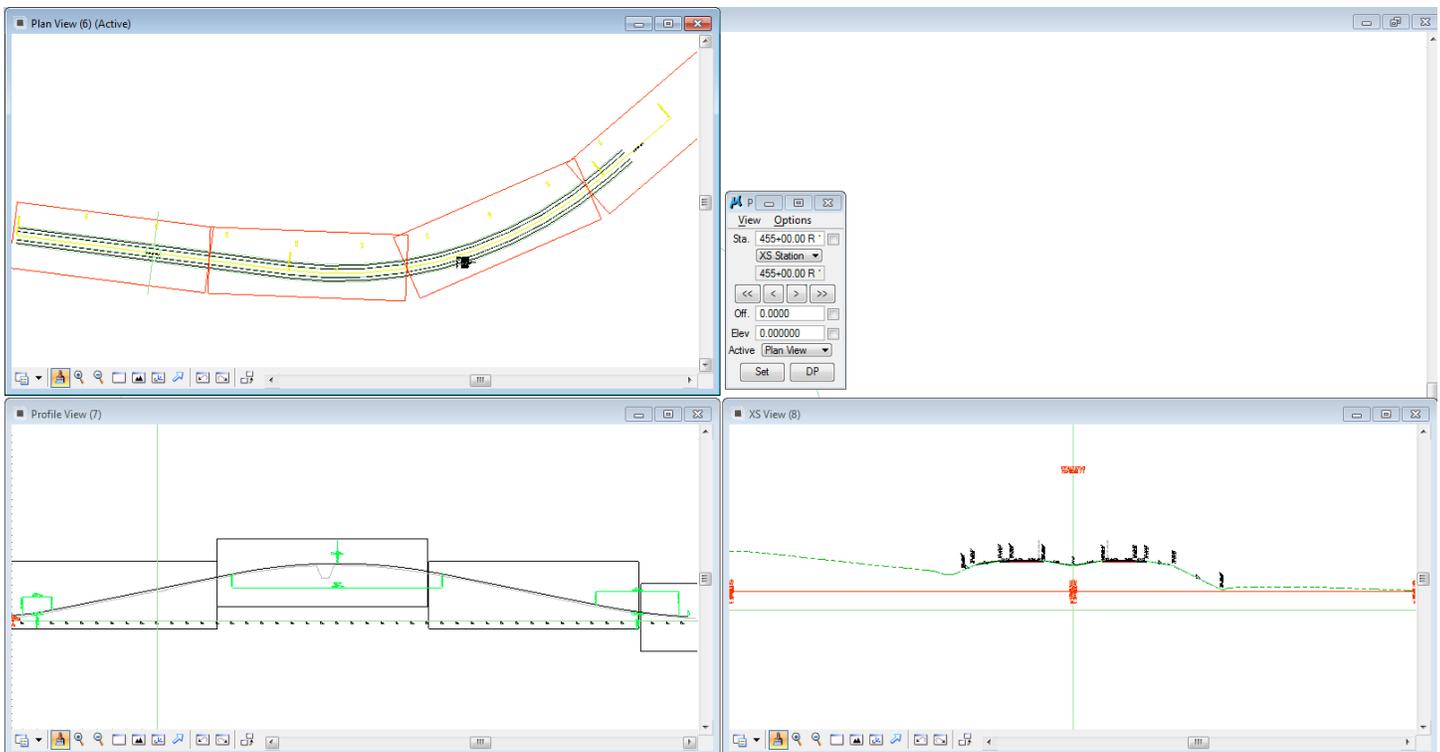
For example, as soon as the chain has been stored in COGO, the user can enter that information in the Plan View fields as depicted to the right. For a more complete explanation of each option shown, please see the *GEOPAK Manual*.



2.9.6 Port Viewer

The **Port Viewer** is a tool that enables the user to view all three major aspects of a road design simultaneously even though they are located in different files. The three views include:

- **Plan**
- **Profile**
- **Cross Section**



2.10 Accessing

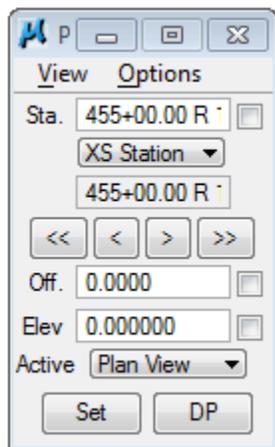
Prior to starting the **Port Viewer** the working alignment must be set up to include the plan view drawing file, centerline chain, profile view file, profile name and location, and cross-section view file.

To access the **Port Viewer**, choose the **Port Viewer** button from the **Road Project** dialog.

2.11 Dialog

The **Port Viewer** dialog box allows the user to manipulate the views several different ways.

2.11.1 Station, Offset, and Elevation Controls



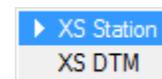
The user is able to key-in the **Station** they want to view. The cross hairs in the plan and profile move to the keyed-in station, and the section view displays the cross-section nearest that station.

The navigation buttons allow the user to navigate station by station (< or >), or to the beginning (<<) or ending (>>) station.

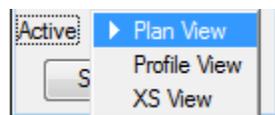
The **Offset** option controls the location of the circle in the plan view and the vertical cross hair in the cross-section view.

The **Elevation** option controls the location of the horizontal cross hairs in the profile and cross-section views.

If the Portview TIN is defined in the **Working Alignment** definition, the DTM view can be substituted for the cross-section view. The DTM view cuts a section at the location of the cross hairs in the plan view.



2.11.2 Active View Control



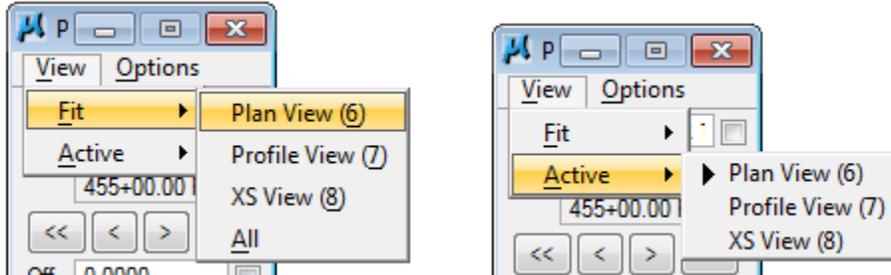
The **Active View** chooses the view to be used as the current file. Any MicroStation drawing commands are executed in that file. For instance, if you want to draw something in the cross sections, switch the **Active View** to XS View.

Selecting the **Set** button allows the user to move the cursor to a view and move the cross hairs in that view. As the user moves the cursor along the view, the other two views are updated according to the placement of the cursor in the current view.

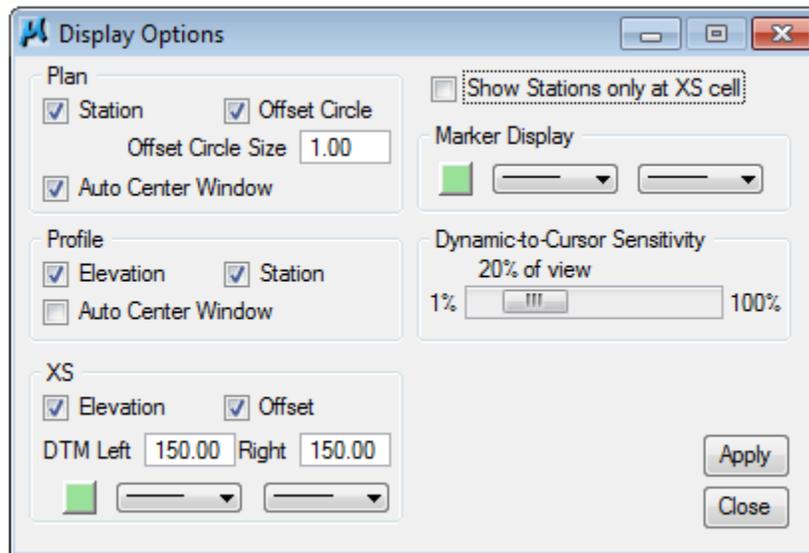
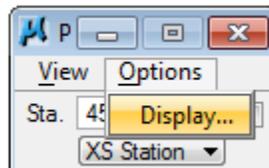
The **DP** button allows the user to issue a data point for a MicroStation command. For example, if you wanted to draw a line at the given station and offset listed in the **Port Viewer** dialog, select the line tool, and press the **DP** button. This begins a line at the given station and offset.

2.11.3 Menus

The **View** menu at the top of the dialog box allows the user to fit one or all of the views, or to select the **Active View**.

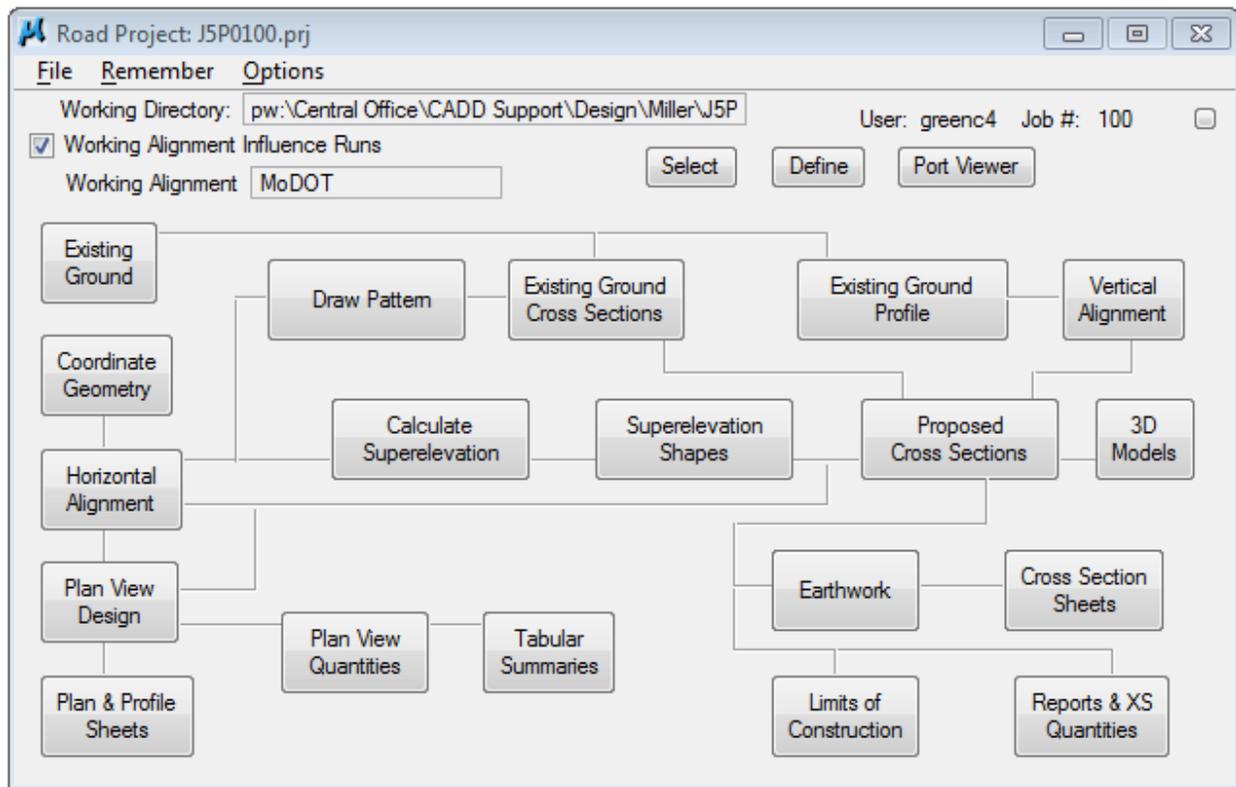


The **Options** menu has one item, **Display**. The **Display Options** control which cross hairs to display (**Plan**, **Profile**, & **XS**), whether to center the **Plan** and **Profile** views, the symbology and offsets of the **DTM** section view (**XS** section of dialog), whether to **Show Stations only at XS cell**, the cross hair symbology (**Marker Display**), and how close the cursor needs to be to the cross hairs to gain dynamic control (**Dynamic-to-Cursor Sensitivity**).



Road Project Process

The **Road Project** dialog is depicted below. The advantage of utilizing the **Road Project** dialog rather than selecting functions directly from the **Road** menu is that pertinent information stored within the **Road Project** is automatically displayed within the invoked dialog. Therefore, job numbers, chain names, stationing, file names, and data associated with the project do not have to be typed in each time a dialog is utilized. However, if the user chooses to change the fields, they have that option.



Many of the **Road Project** processes function identically to their corresponding dialog's invocation from the Road menu. However, some of the procedures will invoke the **Select Run** dialog prior to invoking the actual dialog. The **Select Run** dialog allows the user to set up different options to use in alternative design choices.

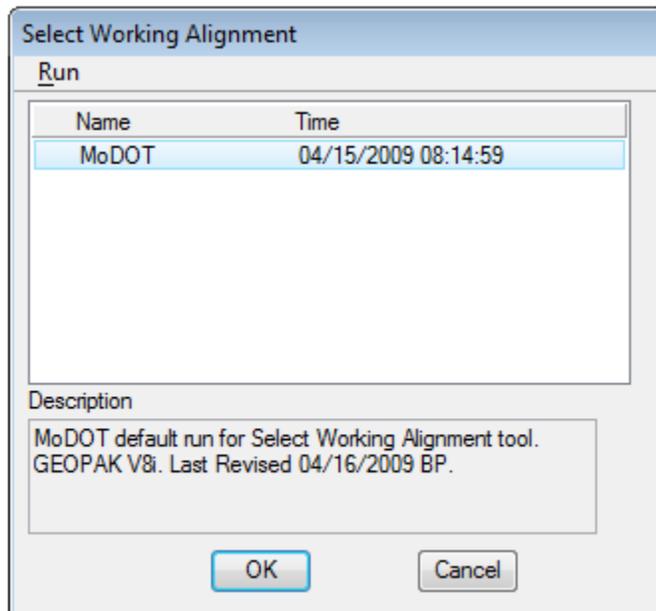
Each of the Road Project dialog processes will be covered individually in the separate remaining chapters.

2.11.4 Select Run Option

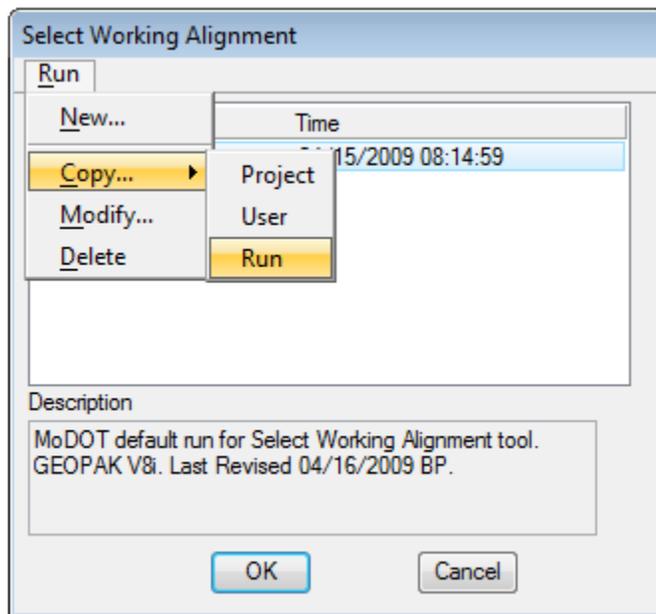
When certain procedures are selected from the **Road Project** dialog, the **Select Run** dialog will be invoked. The **Select Run** dialog allows the user to save the settings for each procedure in a

Run that can then be recalled whenever the user needs to execute that procedure. With the individual runs, a user can keep a history of the project, and can access the various procedures with the settings that were previously used. This way a user can repeat various procedures with the same settings previously used.

When the **Select Run** dialog is invoked, MoDOT appears in the Run List box. (Some Select Run boxes will display default run names such as English, Metric, I_XS_10, etc.) If **Runs** have been defined, they are listed with the last run time. The description of the **Runs** can be seen in the bottom of the dialog when each Name is highlighted. To select a previously defined **Run**, highlight the run from the list, and then press the **OK** button at the bottom of the dialog. Double clicking on the Name also selects a previous **Run** for subsequent processing. Pressing the **Cancel** button will close the **Select Run** dialog without any run settings change. Several file option are supported as depicted in the exploded view below. These include **New**, **Copy**, **Rename**, and **Delete**.



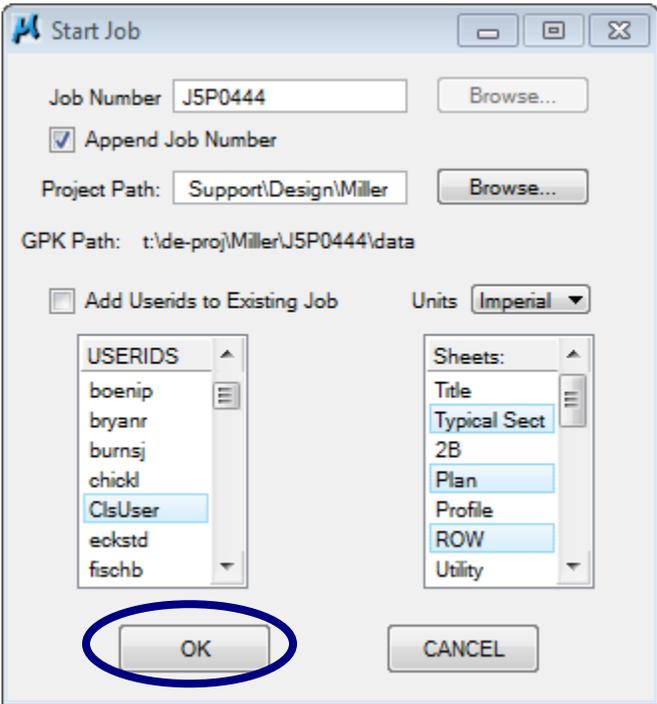
- **Run>>New** – allows the user to create a new run. (Do not use this option as it will not copy the default MoDOT settings for the procedure selected. Instead, use Run>>Copy>>Run to copy the MoDOT run.)
- **Run>>Copy** – allows the user to copy and existing Project, User or Run.
- **Run>>Modify** – allows the user to change the name of the existing Run.
- **Run>>Delete** – allows the user to delete an existing Run.



2.12 Exercise 2-1

1. Open any MicroStation file

2. Create the following job with the **Start Job** dialog.



3. Review the directory structure and the files created in the directory.

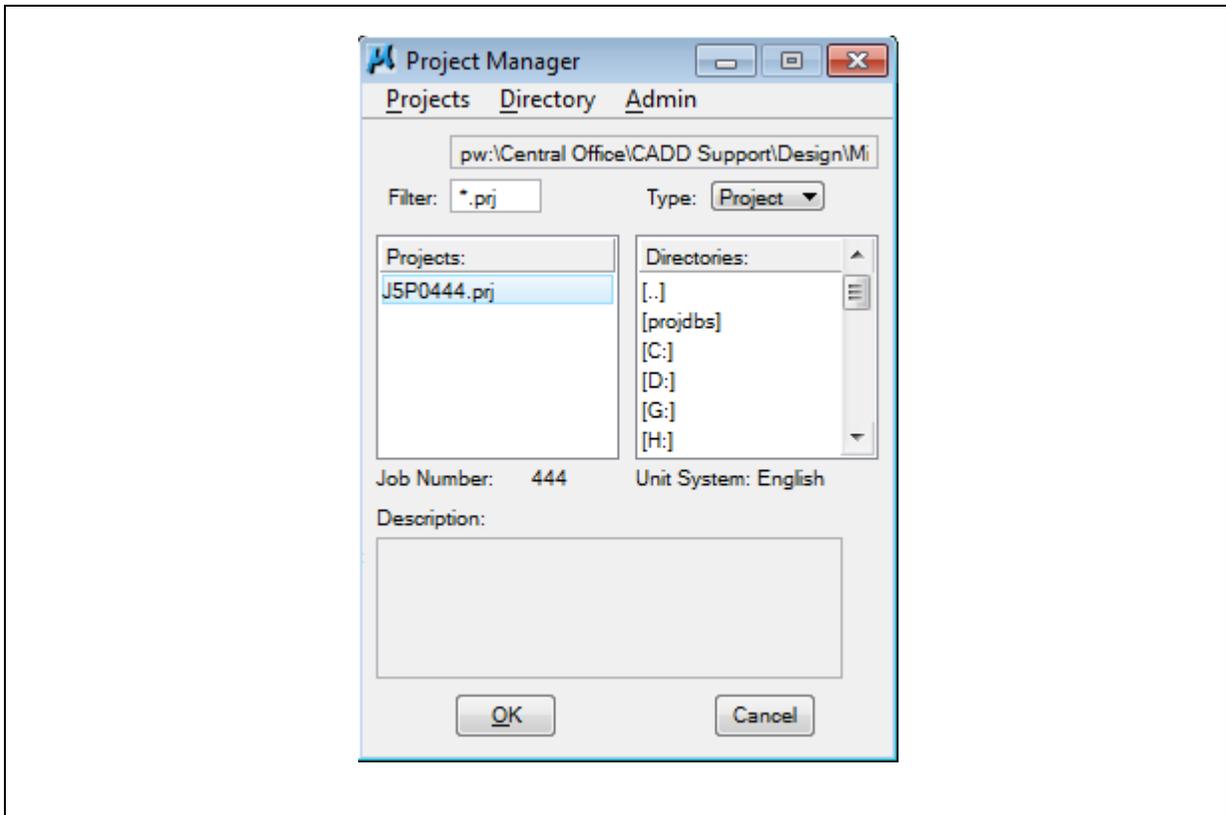
4. Use the **Project Manager** dialog to review the newly created project:

Start Project Manager

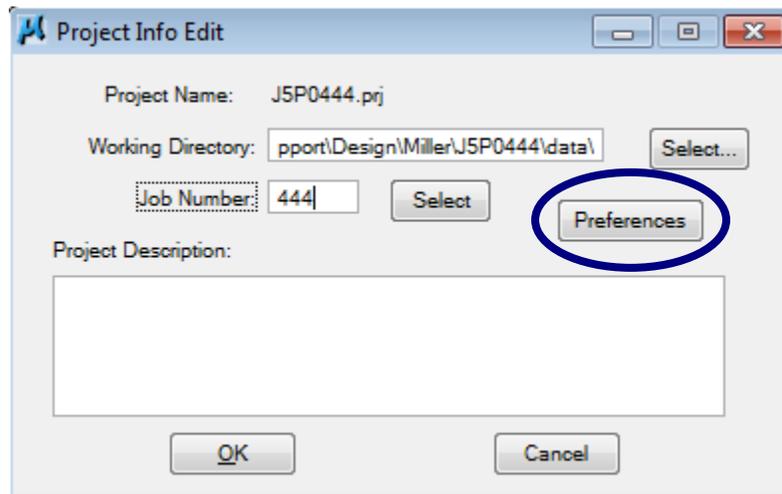
Navigate to the following directory:

pwname: \\MoDOT\Documents\District CADD\Design\Miller##\J5P0444\project

The **J5P0444.prj** file should be listed as shown next page



5. Choose **Projects>>Edit**. It should read as follows:



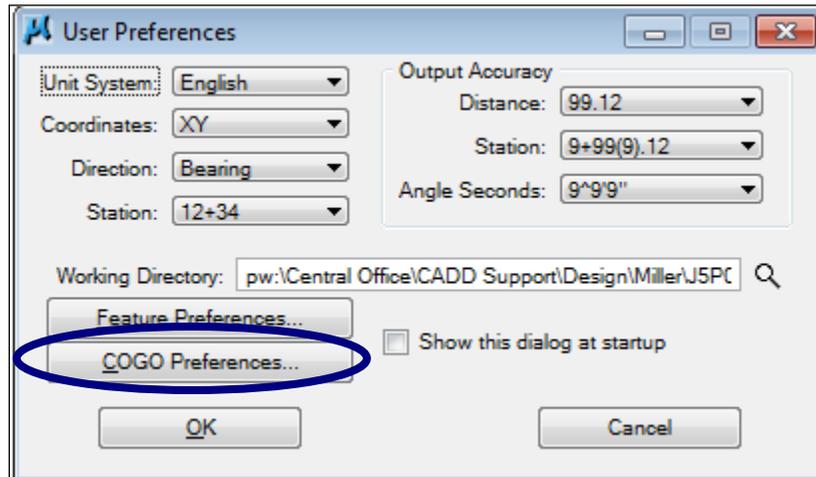
Project name: **J5P0444**

Working Directory: **pw:\District CADD\Design\Miller##\J5P0444\data**

Job Number: **444**

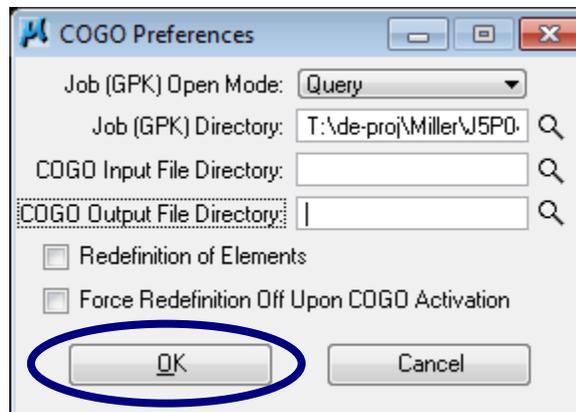
6. Select the **Preferences** button to review user preferences set for the project, they should be set as shown below.

Working Directory: **pw:\District CADD\Design\Miller##\J5P0444\data**



7. Select the **COGO Preferences** to review. The Job (GPK) Directory should be set as shown below. The COGO Input & Output File Directories can be left blank.

Job (GPK) Directory: **t:\de-proj\Miller##\J5P0444\data**



8. Add **user5** as a new user to the newly created project **J5P0444**.

