Chapter 1 - Getting Started In InRoads

InRoads XM Resource Locations

This Section identifies the standard location of the InRoads XM resources in the CDOT XM configuration. In addition, the location of InRoads resources CDOT users create through the design process will be identified.

Section Objectives:

- ♦ Identify the location of InRoads XM resources delivered in the CDOT Workspace
- ♦ Indentify the location of the user generated InRoads XM resources

Delivered InRoads XM Resources

There are four InRoads XM resources that are delivered in the CDOT Workspace.

- ♦ *CDOT_Civil.xin* - The CDOT_Civil.xin is a XML based preference file that replaces several files used by InRoads 2004. This file is in the following location:

  \Workspace\Workspace-CDOT_XM\Standards-Global\InRoads\Preferences

  The new CDOT_Civil.xin preference file replaces the CDOT-Preferences.ini, CDOT-Styles.ini, CDOT-Survey_Features.fwf, CDOT-Survey_Preferences.fxp, Impexp.ini, and CDOTCTL.tiw. Existing Ini's, fwf's, fxp's and tiw's cannot open in InRoads XM.

- ♦ *CDOT_XM Disciplines.reg* - The CDOT_XM Disciplines.reg file is only used once to setup the InRoads Project Defaults with variables that are defined in the Project Configuration File (pcf). This file is in the following location:

  \Workspace\Workspace-CDOT_XM\Standards-Global\InRoads\Preferences

  The registry file supplied for XM does not replace the 2004 registry file. The project defaults for the two versions of InRoads are stored in two different locations. If the 2004 version of the registry file was used, it is required to run the XM version to update the variables in the project defaults to XM.

- ♦ *CDOT_Template-Library.itl* - The CDOT_Template.itl file contains the CDOT standard InRoads templates and components. This file is in the following location:

  \Workspace\Workspace-CDOT_XM\Standards-Global\InRoads\Templates

  When building project templates and components, it is imperative the user copies the *ITL* file from the configuration into the project folder. The location of this project specific file is \JPC# \[Discipline]\InRoads. All modifications to the *ITL* file located in the configuration will be erased on log in.

  The new XM *ITL* file replaced the CDOT-Typical Sections.tml file. Existing tml's cannot open in InRoads XM.

- ♦ *Superelevations Tables* - The superelevation tables for the AASHTO 2001 and 2004 are found in the following location:

  \Workspace\Workspace-CDOT_XM\Standards-Global\InRoads\Superelevation Tables

  These tables are the same as those used in InRoads 2004.

User Created InRoads Files

Throughout the design process several InRoads files will be created by the user.   These files are named with the Job Project Code (JPC) number and are stored in the \JPC# \[Discipline]\InRoads folder.

♦   *JPC#.rwk* - The *rwk* file is the InRoads Project file. It contains the location of the files used for the project. InRoads uses this file to load and save data to multiple files at one time.   The location varies by the discipline that creates the file. This location is \JPC# \[Discipline]\InRoads.

The rwk file in XM is the same file extension and serves the same purpose as the rwk file in InRoads 2004. Existing rwk's must be edited to reflect the new files used in InRoads XM.

♦   *JPC#.dtm* - The *dtm* file is the InRoads Digital Terrain Model file and is stored in the project. The existing dtm is located in \JPC# \ROW_Survey\InRoads\DTM\. The location of the proposed dtm's will vary by the discipline that creates the file. This location is \JPC# \[Discipline]\InRoads.

InRoads 2004 generated design dtm's will open in XM but will not have the same functionality as InRoads XM dtm's. This process doesn't require a translation. Existing dtm's generated by the survey division work properly with either version of the software.

♦   *JPC#.alg* - The *alg* file is the InRoads Geometry file and is stored in the project. The location will vary by the discipline that creates the file. This location is \JPC# \[Discipline]\InRoads.

InRoads 2004 generated alg's will open in XM with no translation. The horizontal and vertical alignments are fully functional. Superelevations defined in the 2004 alg are not used by InRoads XM. They can be imported in the new Roadway Designer, ird file or recreated using the Superelevation Wizard. Importing the superelevation will require editing in the new interactive superelevation diagrams.

♦   *JPC#.ird* - The *ird* file is the InRoads Roadway Definition file and is stored in the project. The location will vary by the discipline that creates the file. This location is \JPC# \[Discipline]\InRoads.

The new InRoads XM ird file replaced the rwl file in InRoads 2004. It contains the corridor definition, template drops, point controls, and superelevation data. Existing rwl files cannot be opened in InRoads XM.

Section Summary:

•   Identify the location of InRoads XM resources delivered in the CDOT Workspace

•   Indentify which InRoads XM resource files need to be copied to the project file and why

•   Indentify the location of the user generated InRoads XM resources

Project Requirements for InRoads XM

Several changes have been made to the InRoads environment that impacts the current CDOT workspace. A new workspace has been developed for the XM environment located at *C:\Workspace\Workspace-CDOT_XM* as opposed to the 2004 environment located at *C:\Program Files\Workspace-CDOT*. This section explores these changes and how a project setup should be completed.

Proper project setup will greatly increase productivity and reduce errors.

Section Objectives:

♦ Create a project folder using the Project Creation Utility

♦ Store project specific files in correct folders

Creating the Project Directory

The project directory structure is created using the CDOT Project Creation Utility to performs two functions; first it creates a project specific folder and file structure based on CDOT standards, and second, it creates a Project Configuration File (PCF) which stores variables to simplify file management for the user. The PCF file is utilized by both MicroStation and InRoads environments.

1. The project directory is created by running the **Project Creation Utility** program. To access this program go to **Start > All Programs >_CDOT_CADD_Information > 8.9.xx – XM > Create XM Project Directory Structure**.
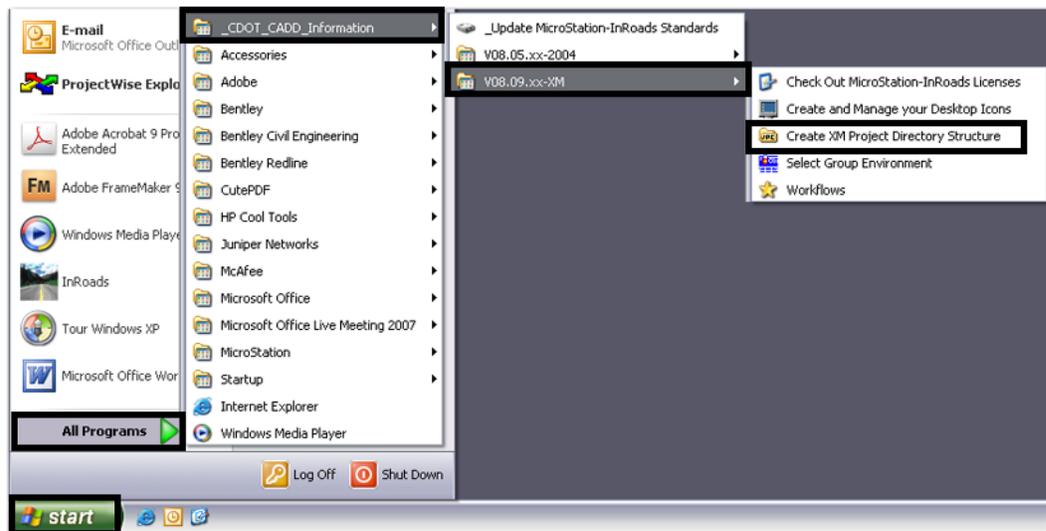
2. After selecting the Create Project Directory Structure program, the following dialog box will appear.
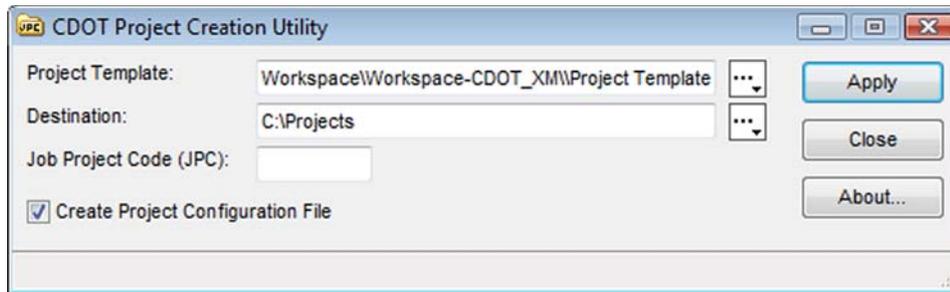
3. Enter the 5 digit Job Project Code (JPC) specific to your project. Verify the ***Create Project Configuration File*** box is checked **ON**. This should be on by default. This will create a customized PCF file for the project identified in the JPC field.

4. Select **Apply**. After the program has executed, select **Close**.
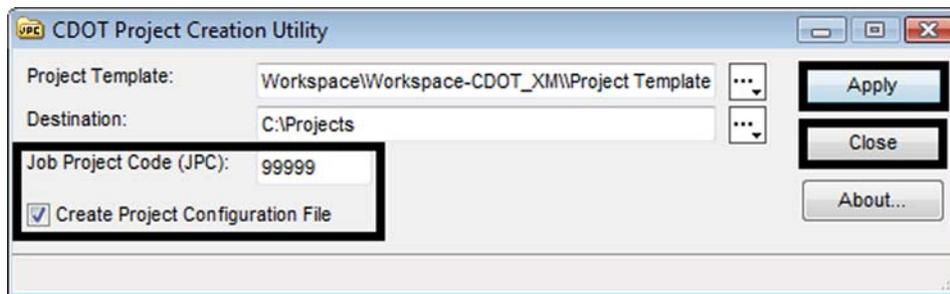
5. Open up Windows Explorer and browse to **C:\Projects** and verify the project folder and corresponding folder structure was created.

Project File Setup

Project files are stored in a project specific directory. Base project files must be copied into the correct folder locations, either by you or the discipline that is suppling the data.

1. Project survey data and existing topographical features are stored in the project DTM file. This DTM file will be the base for design. **Copy** the existing project surface ***DTM*** file into the C***:\Project\#####\ROW_Survey\InRoads\DTM*** folder.

2. Project survey models contain the graphic output of the projects existing DTM. This DGNs will be the reference base for design. **Copy** the existing project ***DGN*** files into the C***:\Project\#####\ROW_Survey\Drawings\Reference_Files*** folder.

3. The project template file will contain the project typical sections used to create model DTM's. Refer to *Chapter 10 -Typical Sections "Creating a Project Template Library"* on page 82

Converting to XM

*   Refer to Migrating CDOT Projects and MicroStation XM Update Guide.pdf document for existing project conversions.

Section Summary:

♦ Roadway design and modeling are significantly different in InRoads XM. Template and roadway libraries will need to be redone.

InRoads Project Setup

Several changes have been made to the InRoads environment that impact the current CDOT workspace. Prior to opening or creating InRoads data, proper setup of the InRoads environment will streamline loading and saving project files created in InRoads.

Section Objectives:

♦ Identify how to setup a new Project Default

♦ Identify how to edit an existing Project Default

♦ Identify how to load a DTM

♦ Identity how to load an ALG

Project Defaults

InRoads project defaults perform two functions; first they load the appropriate CDOT standard resource files such as the standard XIN file, annotation resources, XML style sheets, etc. Additionally, they define default paths to project specific directory folders that contain project data such as DTM's, alignments, survey data, etc.

Creating a New Project Default

To create a project specific Project Default Configuration:

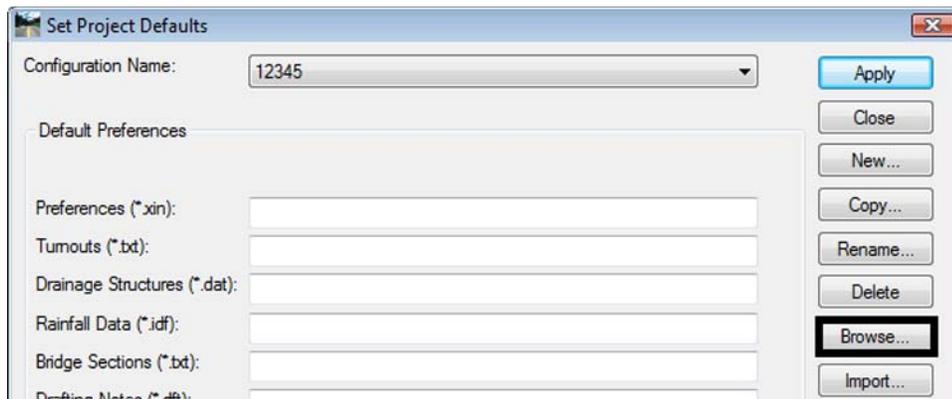1. Open the Project Defaults by Selecting, **File > Project Defaults...**
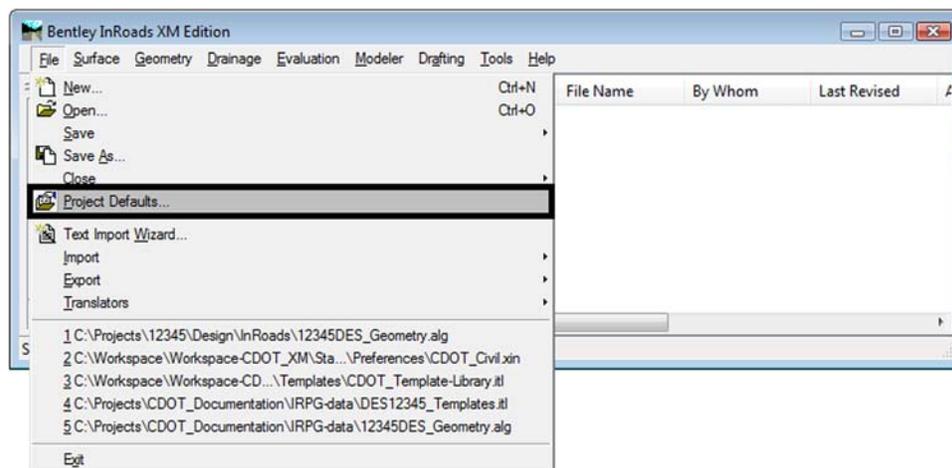
2. **<D>** on the **New** button.
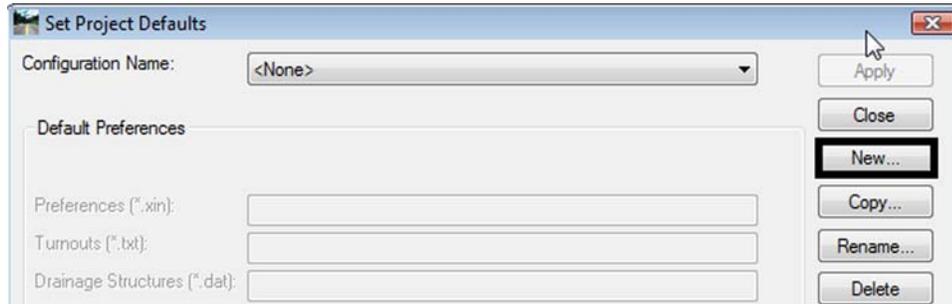
3. Enter in the Name of the New Configuration, *12345* and **<D>** on **OK**.

4. Fill in Preferences by **<D>** in the data entry field and **<D>** the **Browse…** button.
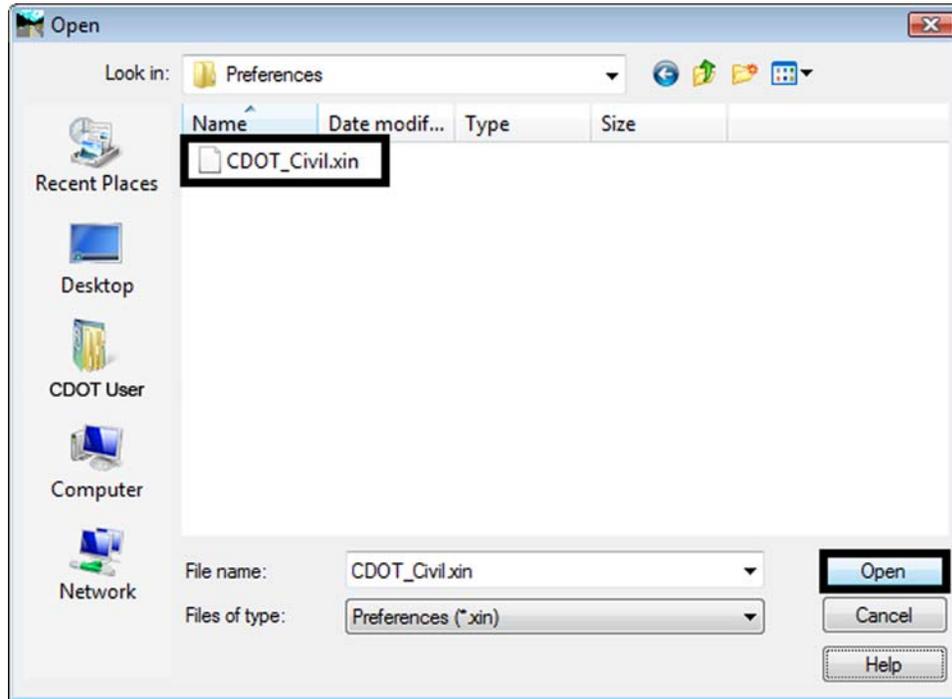

> *Note:*   The Default Preferences section specifies files. These files will load into InRoads directly. The Default Directory Paths section specifies a folder, not files. Any files within the folder will not load, but when opening the file the browse dialog box will open to that folder.

5. Browse to the *C:\Workspace\Workspace-CDOT_XM\Standards-Global\InRoads\Preferences* folder.

6. Select **CDOT_Civil.xin** and **<D>** on the **Open** button.

7. When finished identifying files and folders **<D>** on **Apply** and **<D>** on **Close**.
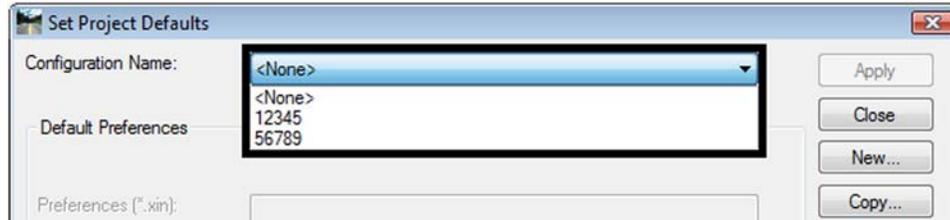
Editing an Existing Project Default

To edit a project specific Project Default Configuration:

1. Open the Project Defaults by selecting, *File > Project Defaults...*
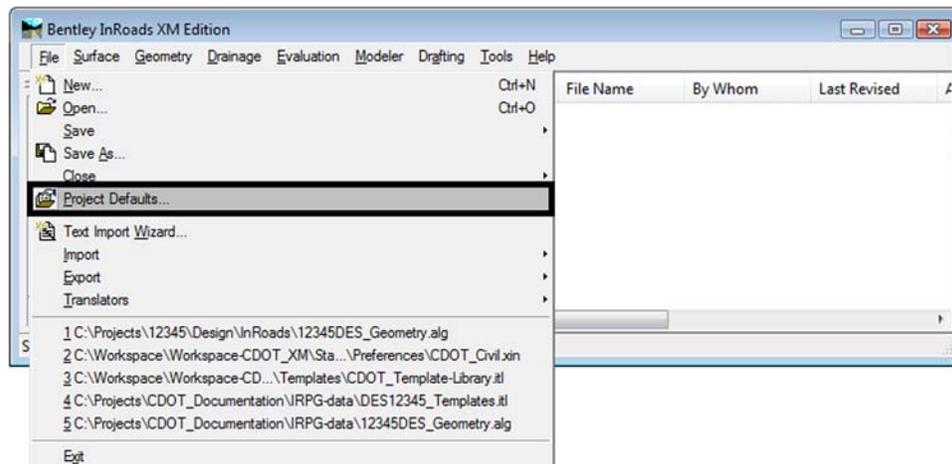
2. Select the project to modify by **<D>** on the ***Configuration Name*** pull down.

3. Edit the Files and Folder paths that are required.

4. **<D>** on **Apply** when finished.

Discipline Project Defaults

The workflow, [CDOT InRoads XM Project Defaults Management.pdf](), utilizes a ***Project Configuration File*** (PCF) which is created at the start of a project. This PCF file is created by running the ***Project Creation Utility***. The resulting PCF stores system variables to simplify file management for the user. This PCF file is utilized by both the MicroStation and InRoads environments.

InRoads Resources

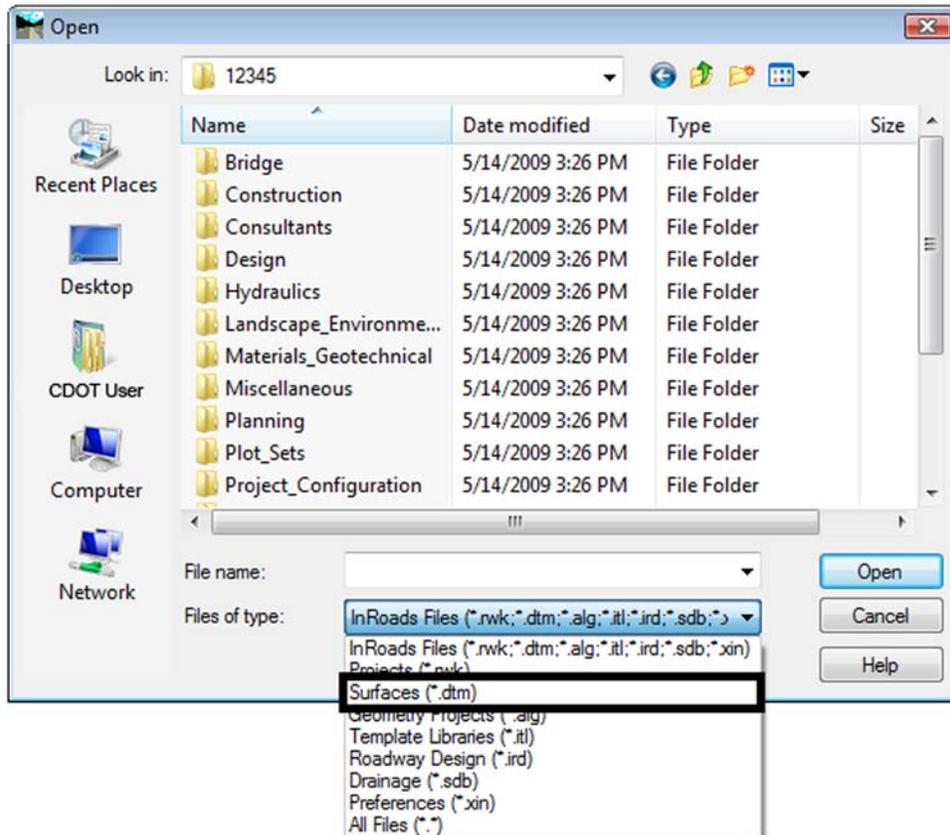Prior to designing in InRoads XM, load the base InRoads project resource files.

Loading a DTM

To open a DTM file:

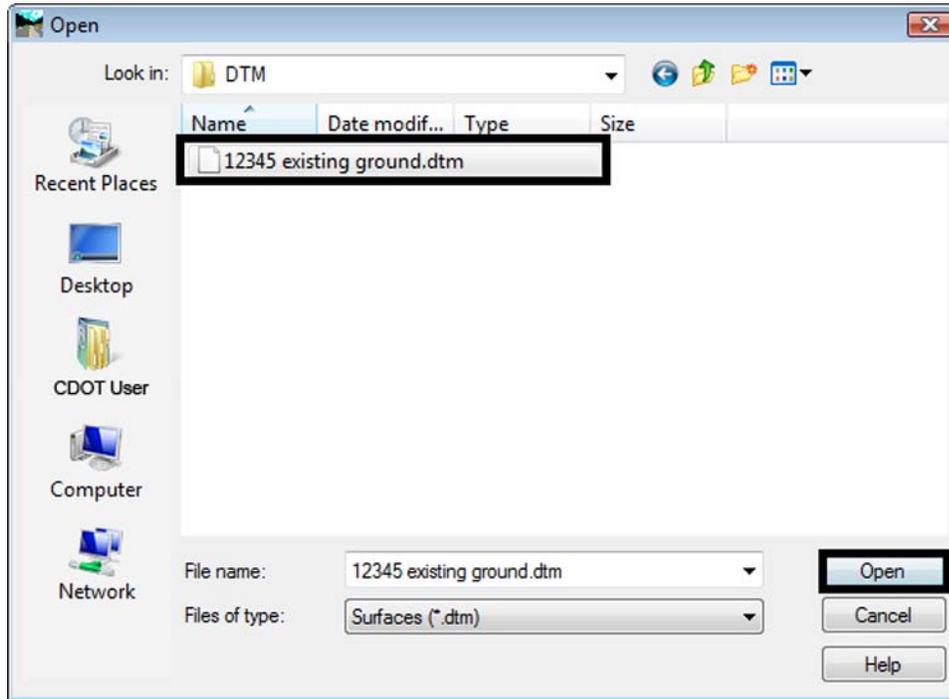1. Open an existing DTM file by selecting, ***File > Open.***
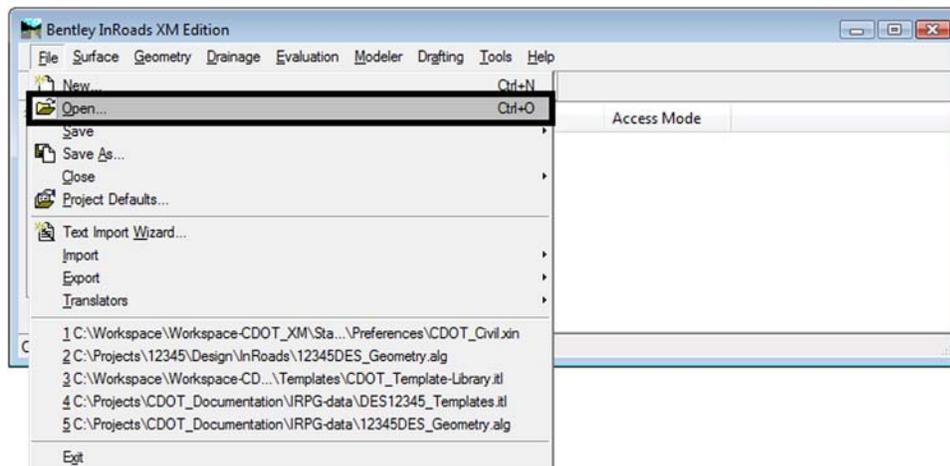
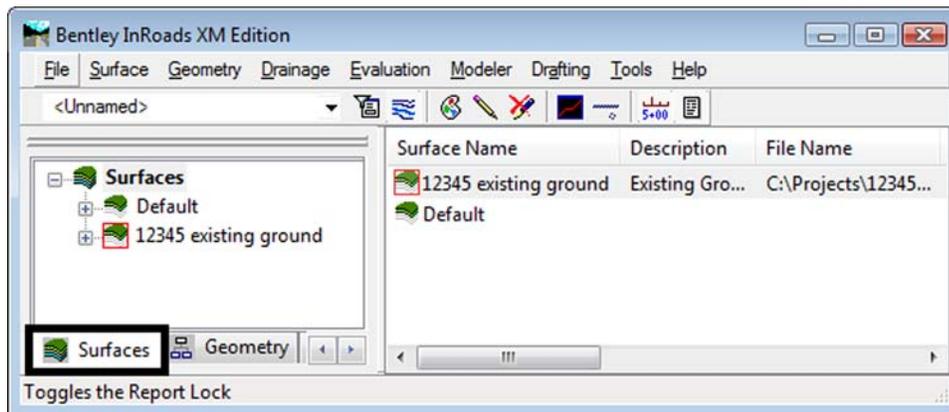2. Change the file type to Surfaces (*dtm) by **<D>** on **Files of Types:**

Note: Once the file type is selected, the path will change if identified in the Project Defaults.

3. **<D>** on file **12345_existingground.dtm** and **<D>** on **Open**.
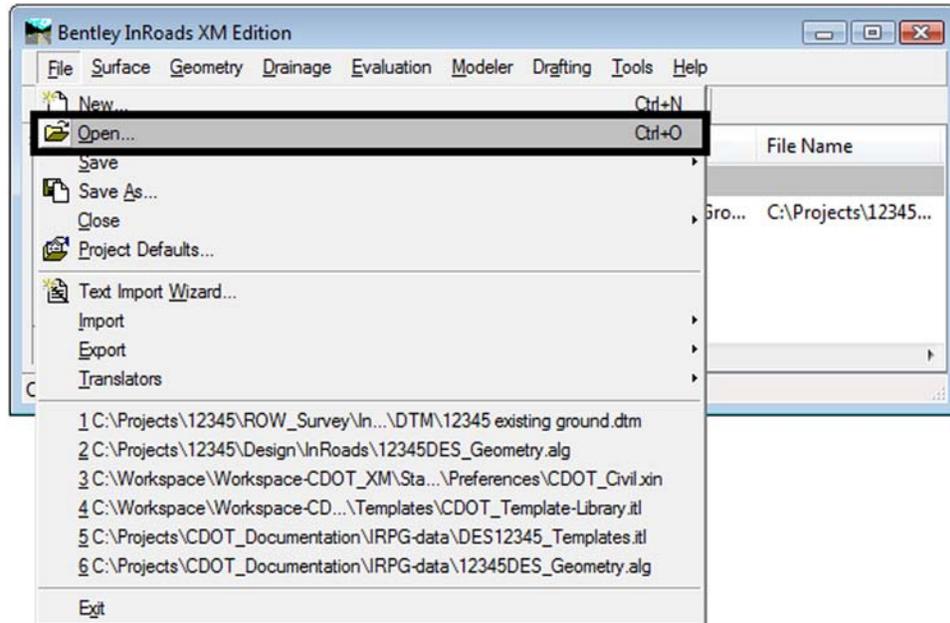

4. **<D>** on **Cancel** to close the dialog box.

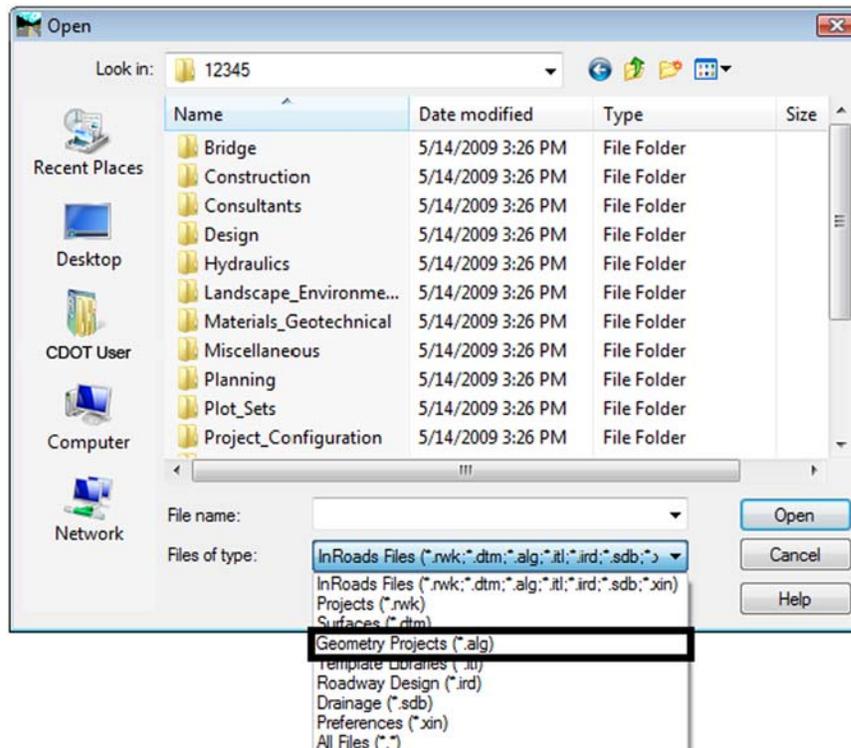5. **<D>** on the *Surfaces* tab to view the loaded DTM.

Loading an ALG

To open an ALG file:
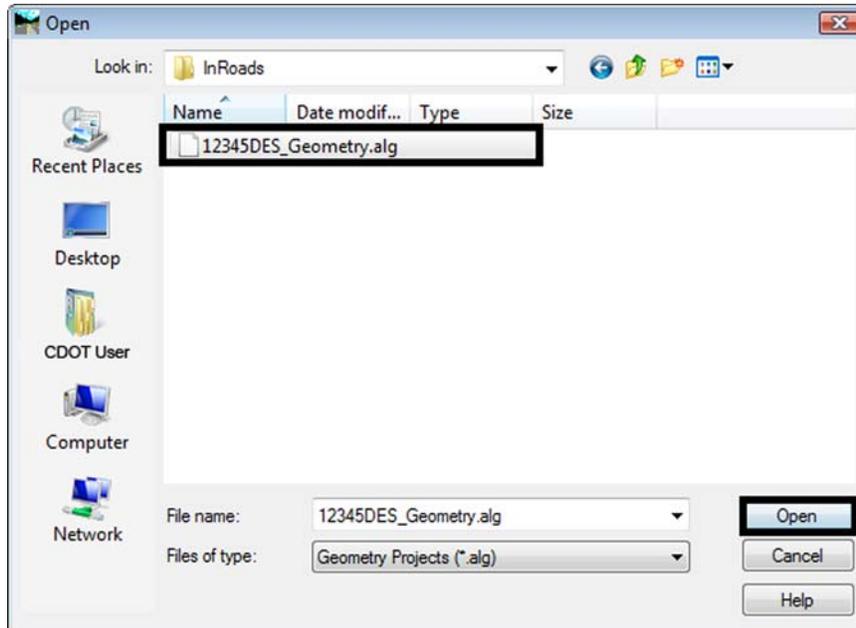
1. Open an existing ALG file by selecting, *File > Open.*

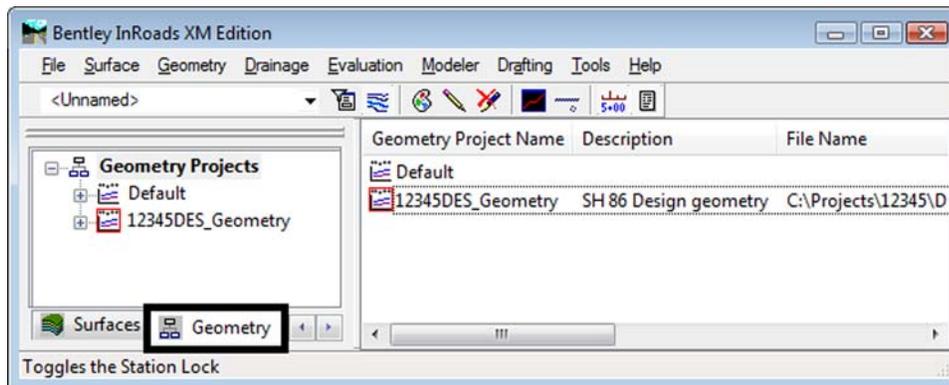2. Change the file type to Geometry Projects (*.alg) by **<D>** on **Files of Types:**

Note: When the file type is selected, the *Look in* folder location will change to the path defined in the Project Defaults.

3. **<D>** on file **12345DES_Geometry.alg** and **<D>** on **Open.**

4. **<D>** on **Cancel** to close the dialog box.

5. **<D>** on the *Geometry* tab to view the loaded ALG.

Section Summary:

♦ Understand the process to create a new Project Default in InRoads

♦ Understand the process to edit an existing Project Default in InRoads

♦ Understand Projects Defaults when using the CDOT_XM Disciplines.reg file with a PCF

♦ Understand the process to load a DTM

♦ Understand the process to load an ALG