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Chapter 4: Seed Files

Seed files

Seed files form the base for most newly created MicroStation design files. Seed files act as a template for a new design or sheet files containing information such as, working units, global origin, etc. Creating a new design file with the seed file and opening the new design file using with project configuration file(*.pcf) will give the user access to the CFL level library, outlined in the CFL levels and symbology chapter, as well as CFL text styles and dimension styles, outlined in the annotation chapter.

At CFLHD, there are currently 6 seed files in use, each with attributes pertaining to a different design case. These seed files should be used to create all new files for CFLHD work. See **Workflow 1** for help with creating a new MicroStation design file using these seed files.

Seed Files	
Name	Description
Sur_ft2D.dgn	US Customary 2D based on US Survey foot
Sur_ft3D.dgn	US Customary 3D based on US Survey foot
Int_ft2D.dgn	US Customary 2D based on International foot
Int_ft3D.dgn	US Customary 3D based on International foot
Metric_2D.dgn	Metric 2D seed file
Metric_3D.dgn	Metric 3D seed file

Table 4.1: Seed files for X30 Criteria

These seed files are located on the CFLHD network at:

N:\V8i_resource\FLH_Common\MicroStation\Seed\English

N:\V8i_resource\FLH_Common\MicroStation\Seed\Metric



US survey foot seed files are widely used on CFL projects. International foot seed files (*Int_ft2D.dgn* and *Int_ft3D.dgn*) shall only be used on CFL projects that have state requirement for these working units. Consultants should contact your COTR if unsure of which seed files to use. Note: The above seed files have a resolution of 10,000.



The working unit features have not been significantly changed in V8i. Changing the basic working units does not affect the size of elements contained in the .dgn file. A conversion is done within the software to display the correct length of elements when the working units are changed from Metric to English, or from drawings with different master and sub units. The design plane has been virtually unlimited. As such, global origin is no longer a factor. Seed file global origins are set to (0,0).

Workflow 1: Creating a New MicroStation Design File

To access this workflow, follow this link:

http://flh.fhwa.dot.gov/resources/cadd/cfl/documents/Workflow_4.1m_v8i.pdf

Working Units

The MicroStation Working Units settings control the “real work” units of measurement, and how measurements are displayed. However, the Working Units settings no longer control the precision of measurements and elements within the design file, as MicroStation V8 design files now have 64-bit floating-point accuracy. Care should still be taken when selecting the correct CFLHD seed file. Changing the resolution setting of a file will affect the size of existing elements. If all new design files are created using the CFLHD seed files as outlined in Workflow 1, the Working Units settings will always be correct, giving the user the correct output. This section shows how to check these settings.

Workflow 2: Accessing the Working Units dialog

To access this workflow, follow this link:

http://flh.fhwa.dot.gov/resources/cadd/cfl/documents/Workflow_4.2m_v8i.pdf

Linear and Angular Unit Readouts

The coordinate readout dialog from V8 has been removed. These settings are now including in the Working Units and the Angle Readout dialogs. Within these dialogs there are several settings including; Format and Accuracy for both Linear Angular Readouts. Format for linear units lets the user select to display linear readout in terms of master units, and sub units. The generally accepted format and the selection for FHWA are master units. Accuracy, as used on the Linear Readout settings, does not refer to the accuracy of the design file, but rather the number of decimal places to be displayed. For angles, format allows the user to display angles in decimal degrees, degrees-minutes, degrees-minutes-seconds, Gradians, or Radians. Once again, the accuracy setting is for decimal places to be displayed. The Direction Mode sets the angle the manner in which angles are measured; by either azimuth, or bearing.

The figures below show the different Linear and Angular Readout settings contained within the CFLHD seed files. To access these dialog boxes use the preceding workflow.

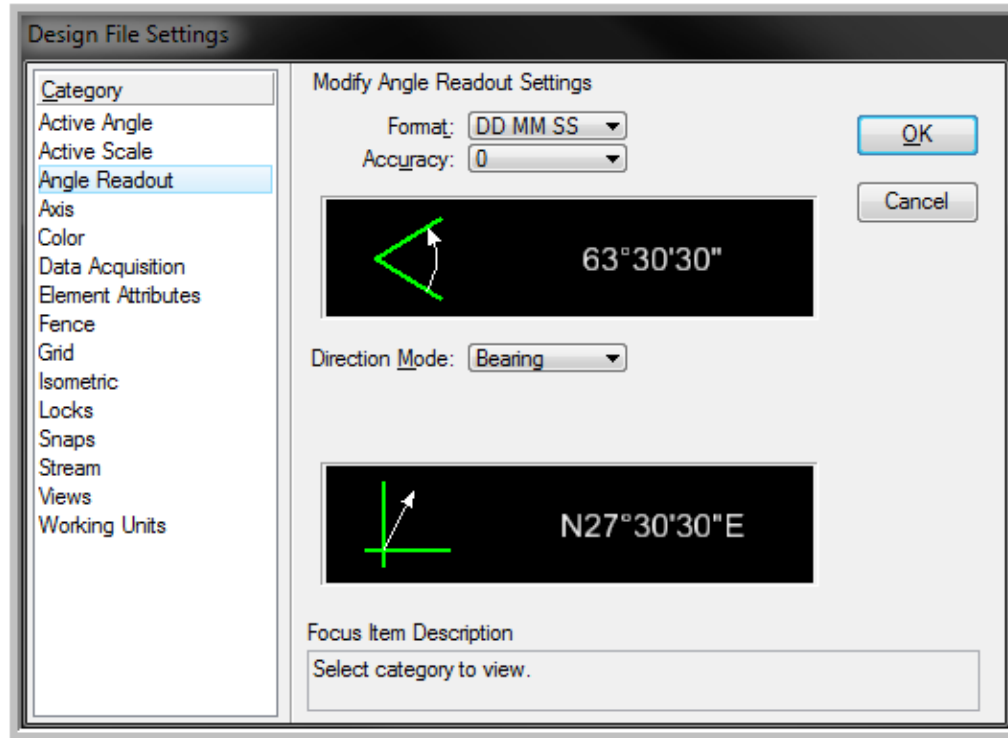


Figure 4.2: Angle Readout for Roadway Seed Files

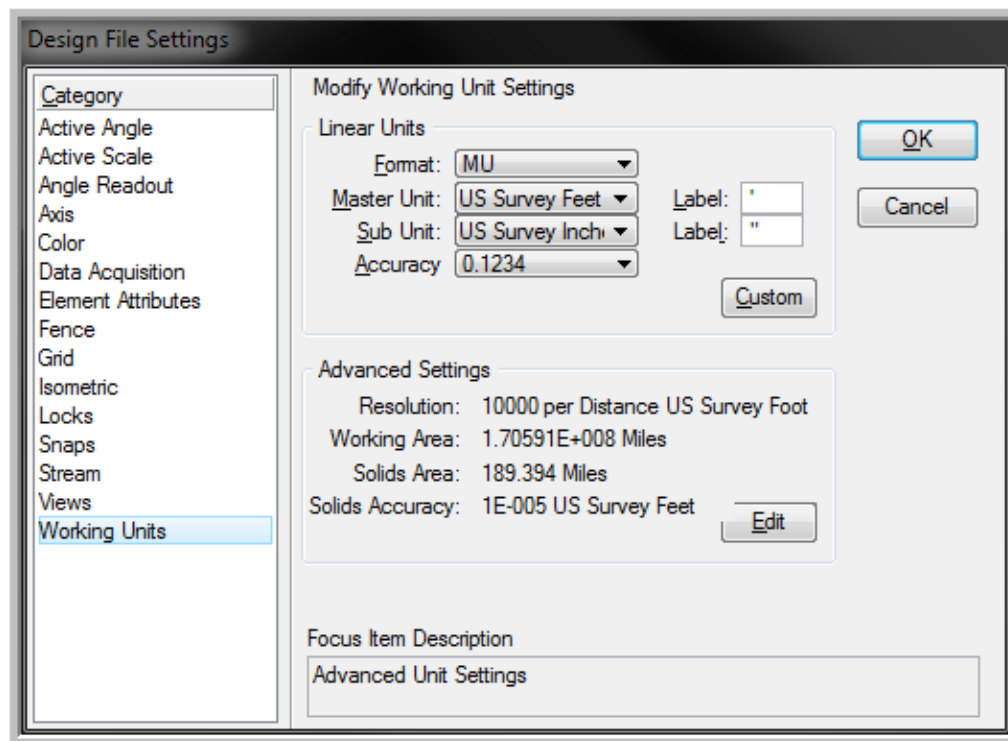


Figure 4.3: Working Units Settings for English Roadway Seed Files

Design File Settings

Category

- Active Angle
- Active Scale
- Angle Readout
- Axis
- Color
- Data Acquisition
- Element Attributes
- Fence
- Grid
- Isometric
- Locks
- Snap
- Stream
- Views
- Working Units**

Modify Working Unit Settings

Linear Units

Format: **MU**

Master Unit: **Meters** Label: **m**

Sub Unit: **Millimeters** Label: **mm**

Accuracy: **0.1234**

Advanced Settings

Resolution: 10000 per Distance Meter

Working Area: 9.0072E+008 Kilometers

Solids Area: 1000 Kilometers

Solids Accuracy: 1E-005 Meters

Focus Item Description

Select category to view.

Figure 4.4: Working Units Settings for Metric Roadway Seed Files

Design File Settings

Category

- Active Angle
- Active Scale
- Angle Readout
- Axis
- Color
- Data Acquisition
- Element Attributes
- Fence
- Grid
- Isometric
- Locks
- Snap
- Stream
- Views
- Working Units**

Modify Working Unit Settings

Linear Units

Format: **MU**

Master Unit: **Feet** Label: **'**

Sub Unit: **Inches** Label: **"**

Accuracy: **0.1234**

Advanced Settings

Resolution: 10000 per Distance Foot

Working Area: 1.70591E+008 Miles

Solids Area: 189.394 Miles

Solids Accuracy: 1E-005 Feet

Focus Item Description

Select category to view.

Figure 4.5: Working Units for English International Foot Roadway Seed File

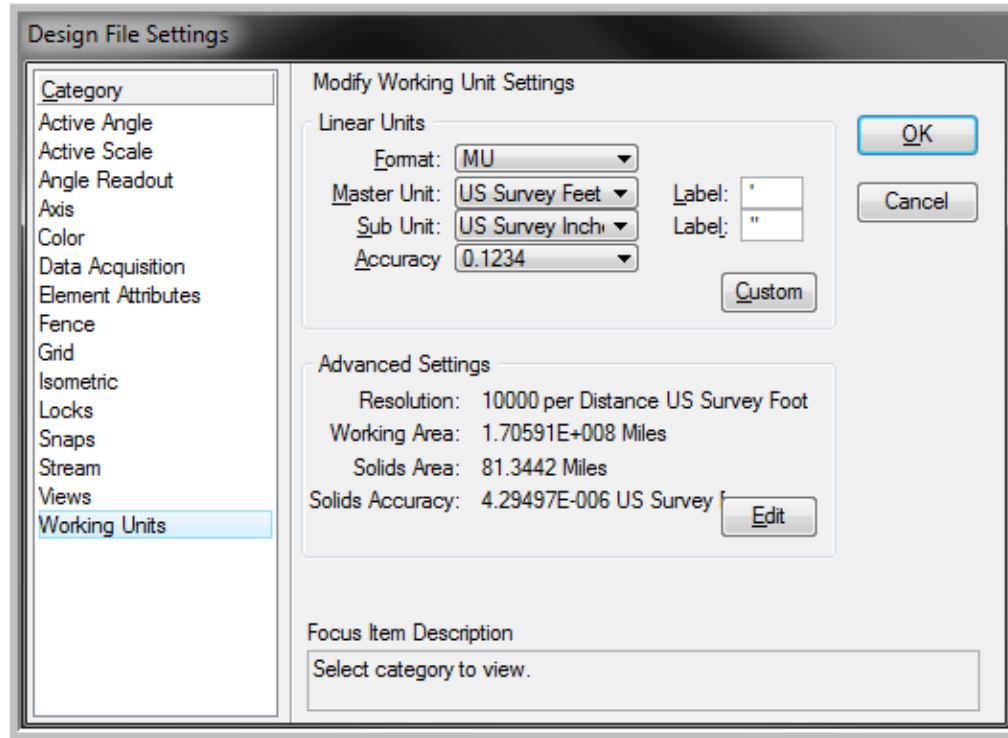


Figure 4.6: Working Units Settings for English Bridge/Structural Seed Files