SolidWorks Advanced Property Mapping

In SolidWorks basic property basic mapping we looked at how to map a SolidWorks file property to a Vault property for the purpose of viewing thumbnails and assigning items to files.

In advanced property mapping we will now look at how to write Vault properties back to the CAD file and display these.
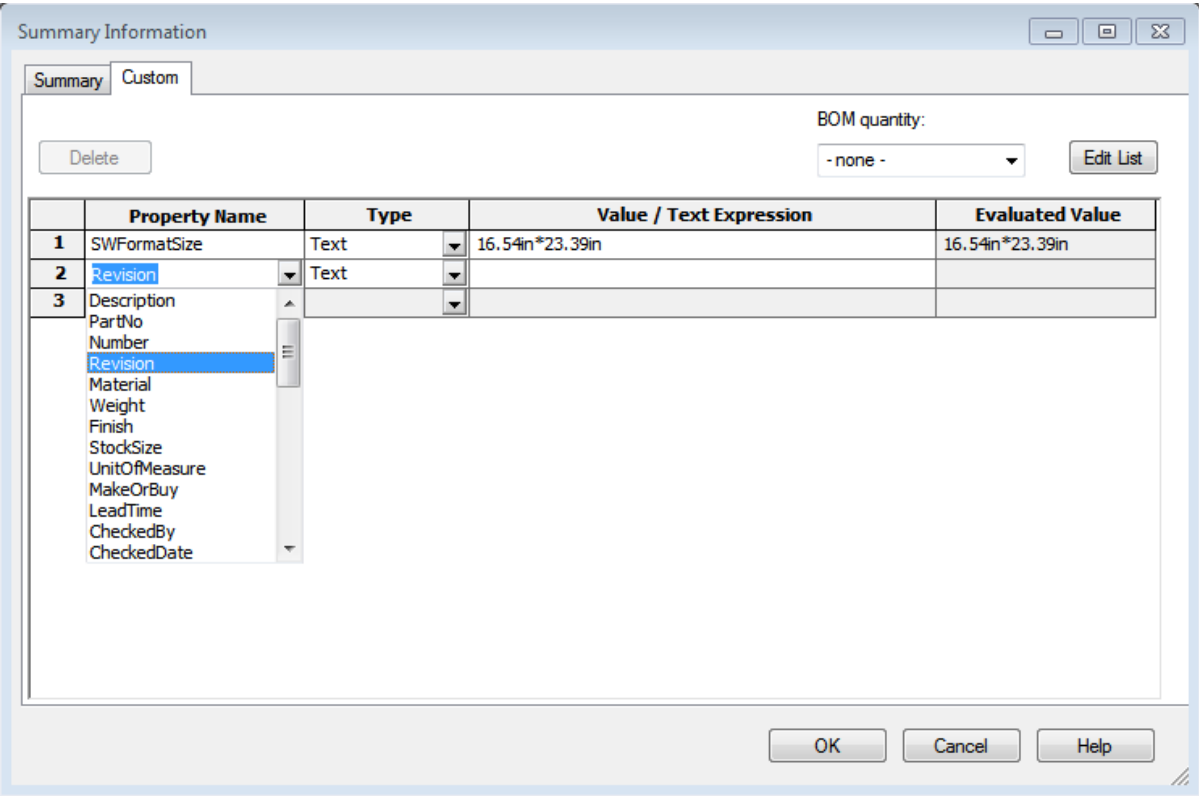
Displaying Revision on Drawing

One of the most typical requirements in any implementation is the ability to manage document release and revisions. As part of this, displaying the system managed revision on design documents is fundamental.

In the following example users should make these adjustments to their SolidWorks template files for consistent behavior.
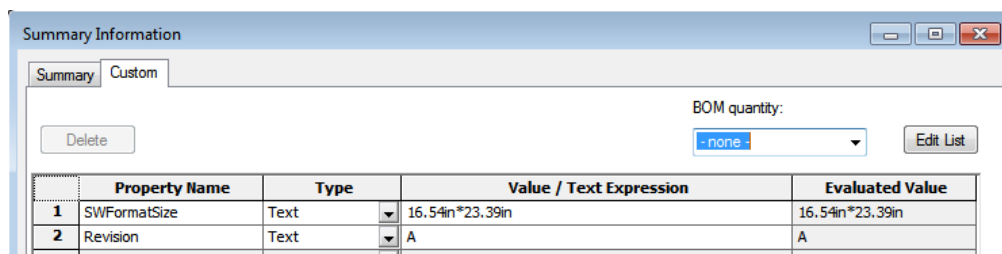
Create Custom Revision Property

From the CAD file, we need to add a custom property

- From the File menu select properties
- In the Summary Information tab select "Custom" and add a new property
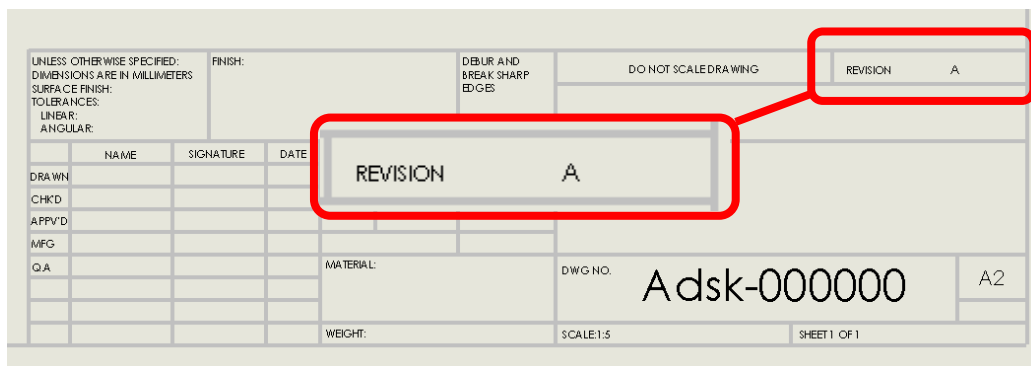- Select Revision from the drop down menu, set the type as Text

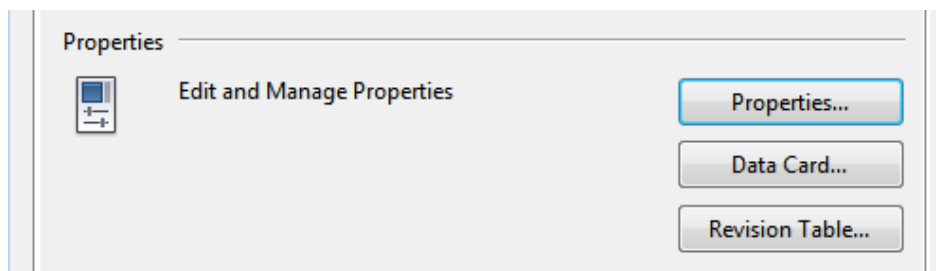- Enter an initial value for the property ("A", "1" or "-")

- If you are using a standard SolidWorks drawing title block should now display your initial value in the Revision field
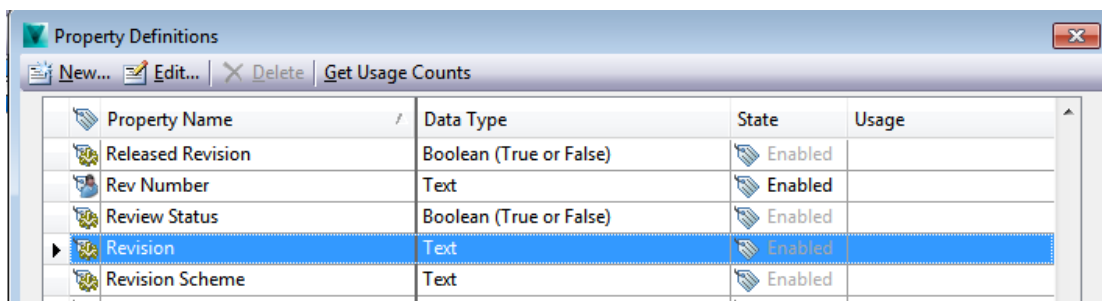

Map Vault Revision Property
Return to Vault Explorer and open the property definitions dialog from Tools > Administration > Vault Settings
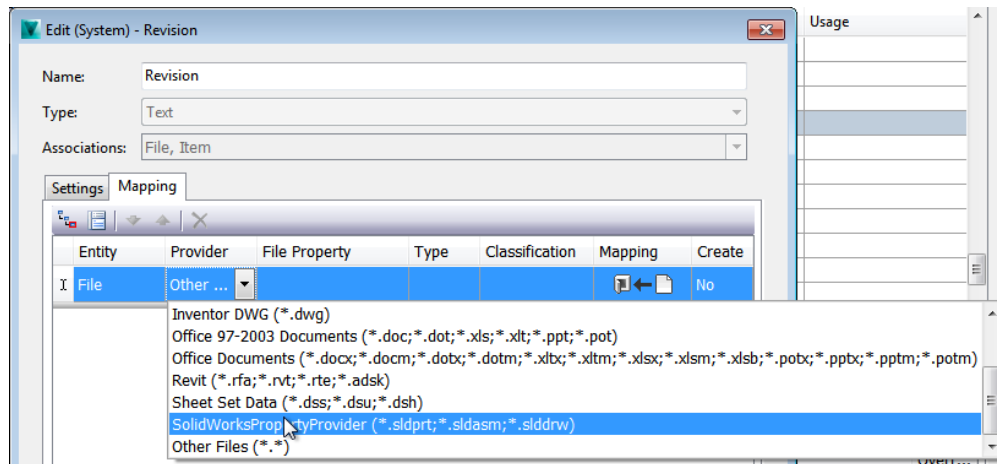
- Go to the Behaviors tab and select Properties

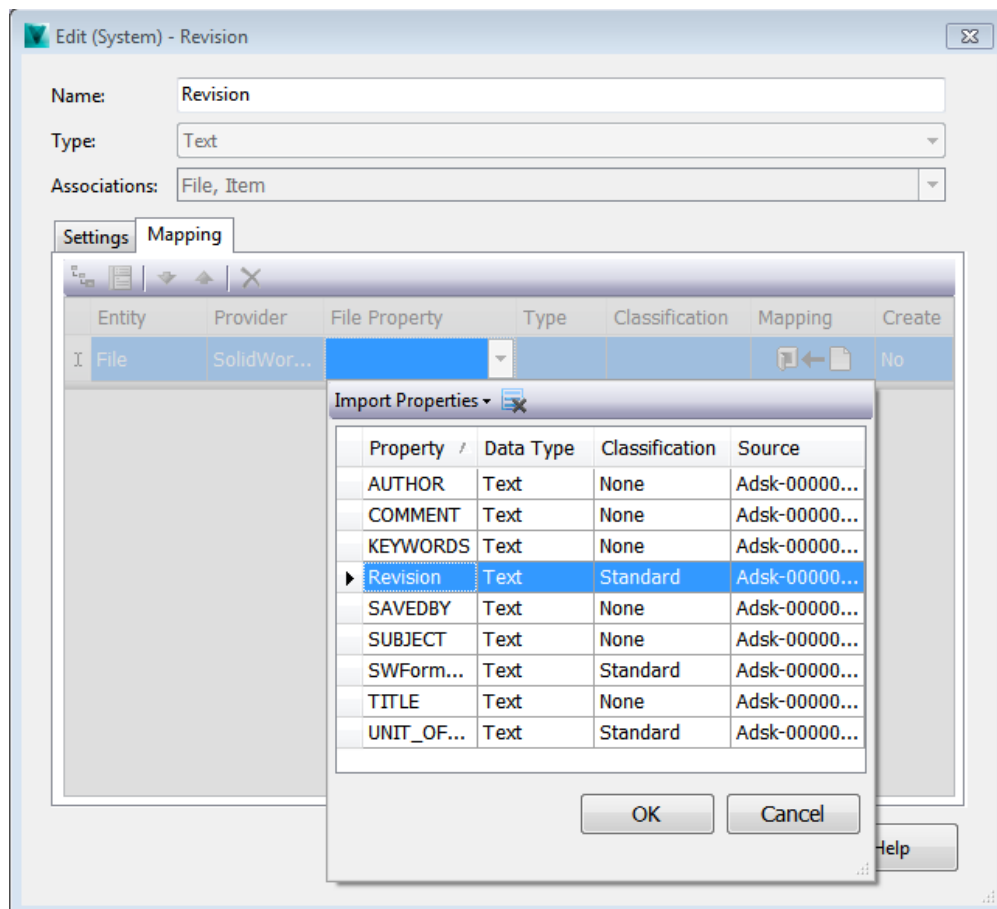- From the property list highlight the "Revision" property and select "Edit".

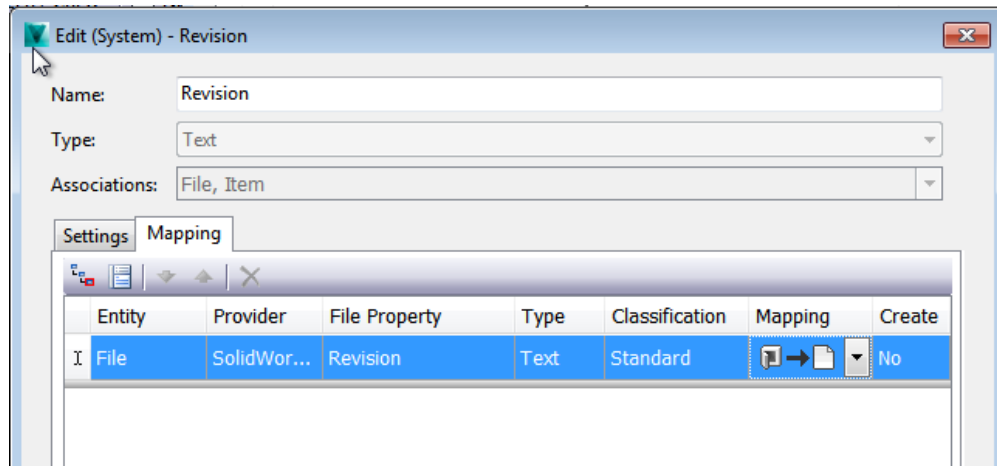- On the edit dialog select the mapping tab and "Add" mapping

- Select "File" as entity and for the property provider SolidWorksPropertyProvider

- From file properties select "Import from Vault" or "Import from file" – if you have not yet loaded the SolidWorks drawing into your Vault select "Import from file" for this first step.
- You will now be prompted to search your local drive for a supported SolidWorks file type
- Picking the modified drawing file you should now see the SolidWorks custom property "Revision"

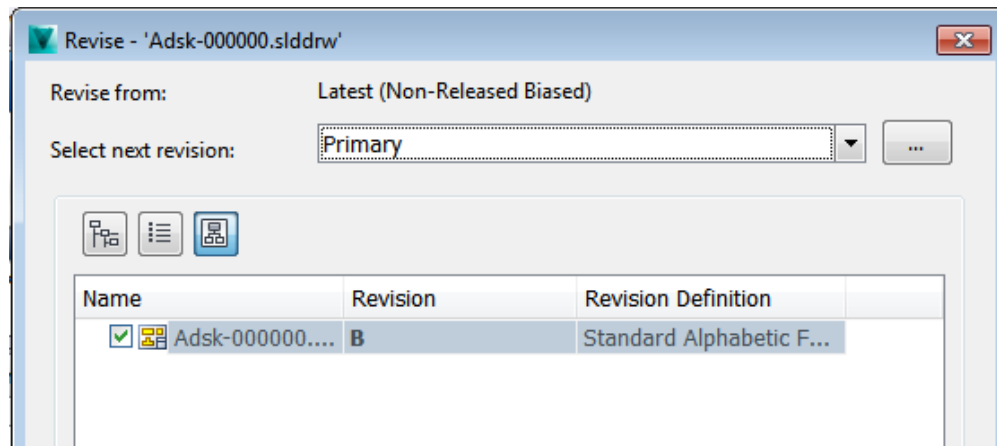- Select OK to save and complete the property mapping

Note that this system property is restricted to a one directional relationship from Vault to the File as Vault will now control the revision.

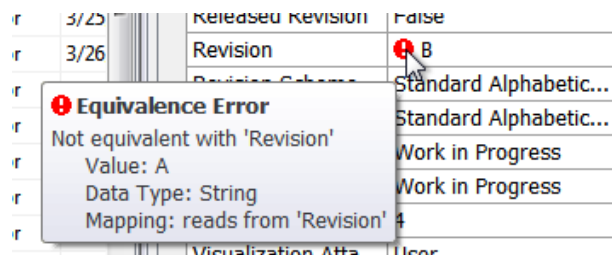- Your SolidWorks file should now display the Vault Revision.

Change Document Revision

Highlight a drawing file (slddrw) in Vault Explorer and from Vault the Vault Explorer menu bar select "Revise"

- In the revise dialog make sure the document is selected and from the Revision pull down menu select "Primary" – the revision will now bump to the next value.
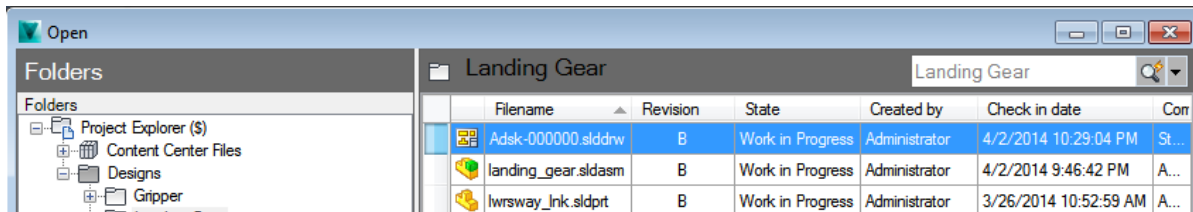
- Select OK to close the dialog.
- Looking at the Vault properties for the file we can see that there is now a "Non-Compliance" on Revision
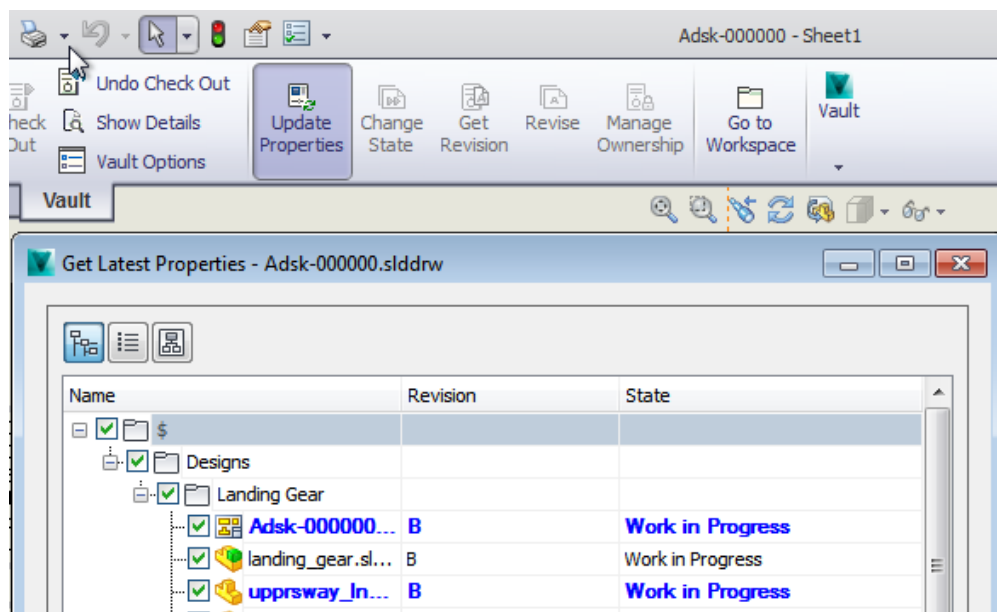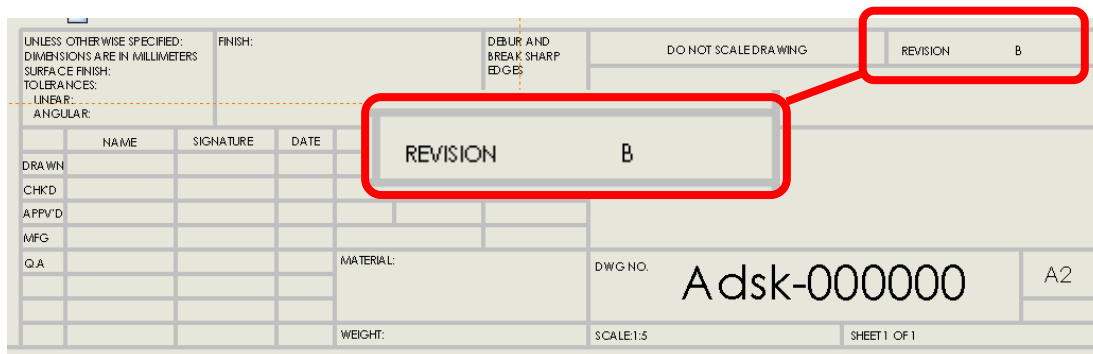
- To update the file property we can either sync properties from Vault Explorer or Update properties from inside Solidworks
- To update from Vault Explorer, highlight the file and select "Synchronize Properties" from the Actions Menu
- To update from SolidWorks, return to SolidWorks and open the slddrw file from Vault

- After opening select "Update Properties" from the Vault tab

- The file will be checked out and updated and you should now see the new Revison value in the title block

Bidirectional Custom Property Mapping

As well as mapping system properties it is common for user to create User Defined Properties which can be mapped to Vault allowing users to populate the field from a CAD document and then edit in Vault and write back to the CAD file.
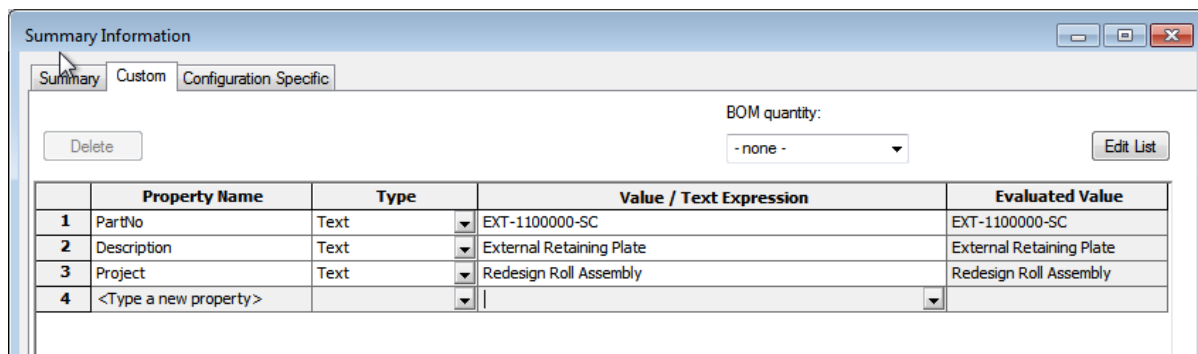
There are many examples of these but they often include properties such as Part Number, Title, Description, Project, Department etc.

For more information on User Defined Properties and Property Mapping please see Vault help.
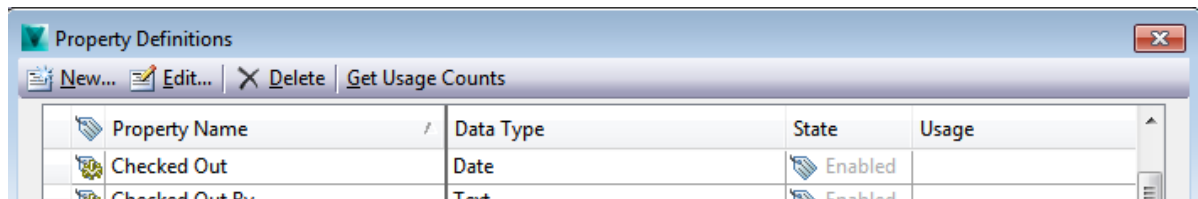
Create Custom Properties in SolidWorks file
As we did in the last example, open a SolidWorks file and from the File menu select "Properties"

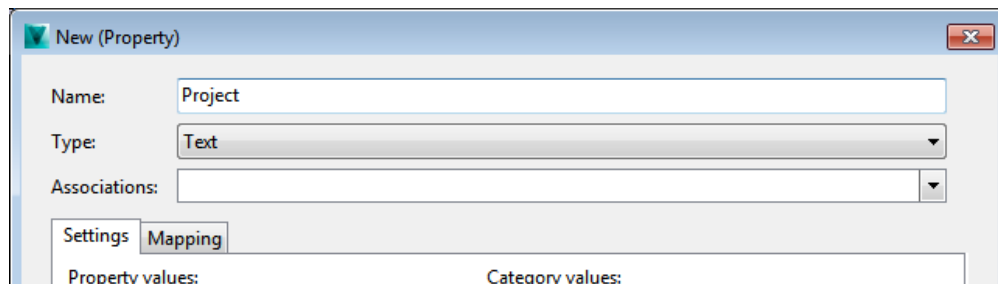- From the summary tab create your new custom SolidWorks properties

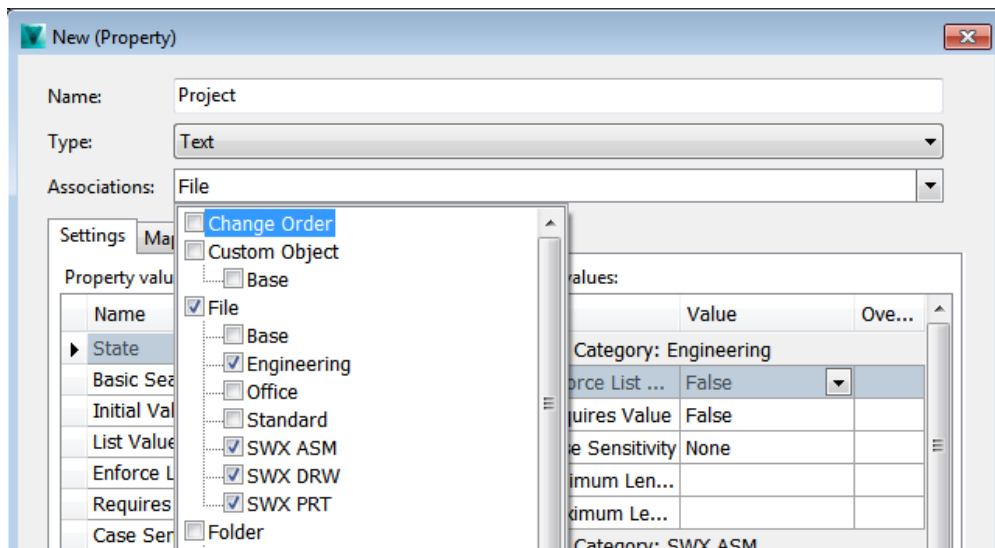Make sure you provide an initial value for the properties

- Return to Vault Explorer, from the Tools menu select Administration and "Vault Settings".
- On the behaviors tab select the properties section.
- Here we can either select to map our SolidWorks custom properties to an existing UDP or create a new one
- To create a new User Defined Property select "New" from the menu at the top

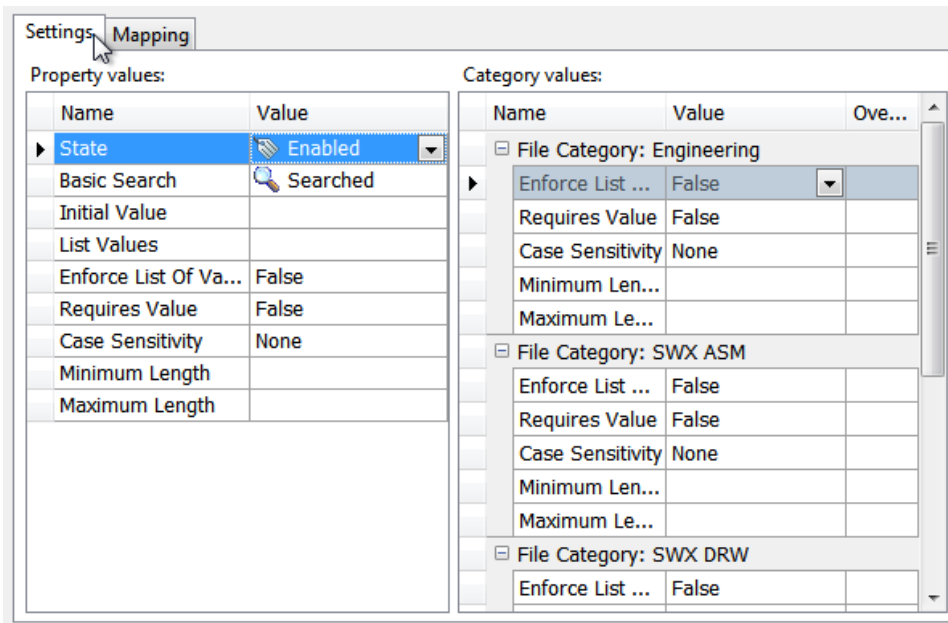- The new property dialog will appear – enter a name and type, select to make this a file property

- Under the association select the categories you require

Note, for more details on categories and property association, please see Vault help
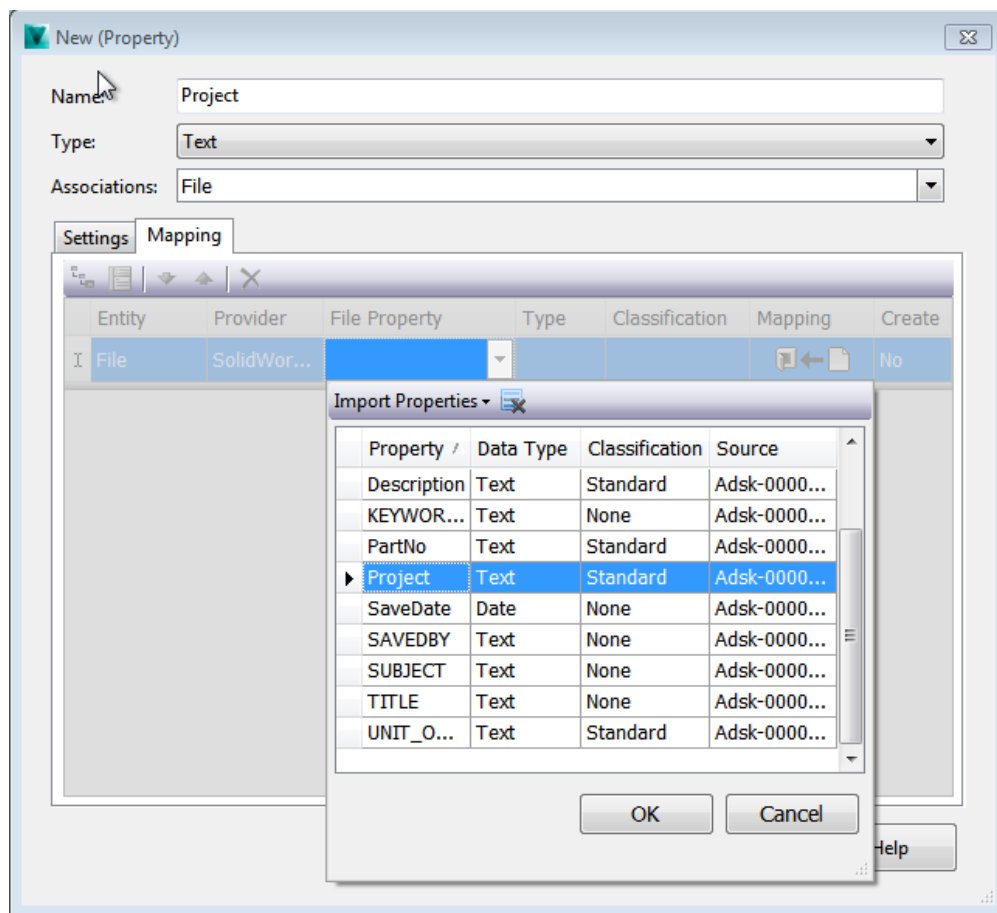
- Under settings configure your property behavior (Minimum and maximum lengths, required or not, case sensitive and even predefined lists or default values)
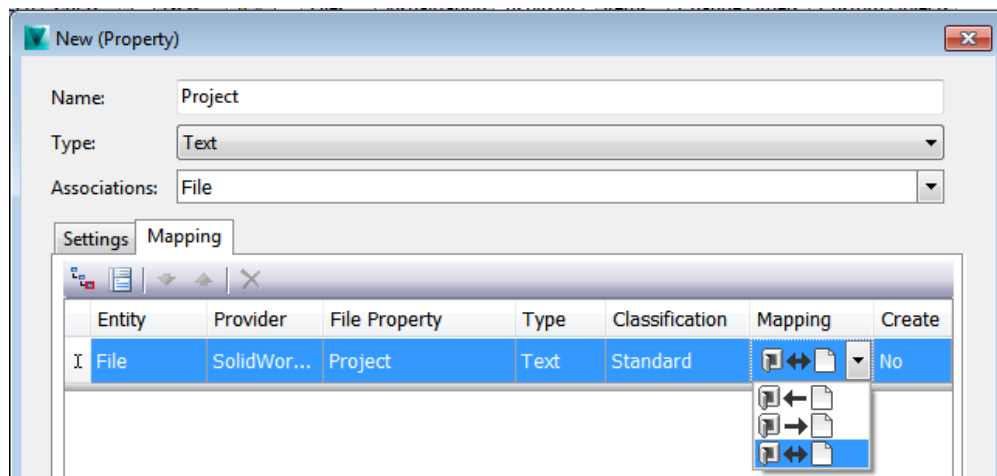

Note that property behavior can be set for all category types or overridden. For more information on property setting and property compliance please see Vault help.

- On the Mapping tab – select once again file mapping, the content source provider as SolidWorksPropertyProvider
- Select to Import properties from file and select the file with the newly added Custom Properties

- From the list now select the correct Custom Property for mapping

- Select the mapping option – here we are selecting bi-directional so we can edit the property in Vault or CAD

- Select OK to save your new property with its settings and CAD mapping.
- Return to SolidWorks and Add your file to Vault using Check In

- You will now see the newly created User Defined Property with the Correct SWX Custom Property

Edit a User Define Property
Once the property is mapped and the file added to Vault we are able to edit this directly inside Vault Explorer

- From Vault Explorer, select one or more files and from the Edit menu click on "Edit File Properties"
- The edit file properties dialog comes up with a property set ready to edit for the selected files, users can add or remove properties from this grid that they wish to modify

- Enter the new property values

- You will now see the property edit results

Note that the results of the edit properties can be output to a report or saved to Vault

- Hit close to continue and you will see the User Defined property is updated

- Open your file again from SolidWorks and you will see the Custom Property has updated

See the Vault help for more information on creating user defined properties, mapping and editing properties.