

Workflow IR 2 - InRoads Feature Filters

This document guides you through the use of InRoads feature filters.

InRoads Feature Filters

Purpose of using Feature Selection Filters

InRoads utilizes feature based digital terrain models (DTM). Often users find the need to sort, or filter, through the contents of various InRoads dialog boxes that allow the users to display, annotate, or review the contents of a DTM. By creating Feature Selection Filters, the user will more efficiently be able to:

- Identify or view different categories of features found in a DTM
- Create a selection set of specific features

Example Feature Filters

A variety of feature filters have been developed for the CDOT configuration. A user may elect to use the developed feature filters or build and/or refine filters to suit individual needs.

Feature filters have been created based on major categories such as Design, Hydraulics, Topography and pay item number. Additional filters have been developed to allow the filtering of select subsets within the major categories.

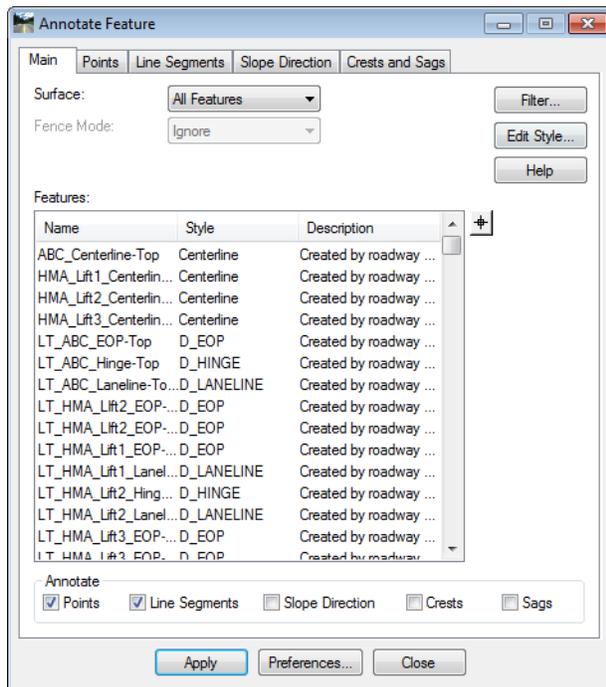
For example, the filter:

- T_* will display only features beginning with the T-under bar designation (all topography features)
- T_Gate* (ALL)..... will display all features that relate to Topo_Gate. (i.e. T_Gate Barbed Wire, T_Gate Combination, T_Gate Chain Linked etc.)
- Pay Items 403*..... pay items beginning with the primary number 403

Example 1 - No Feature Filter

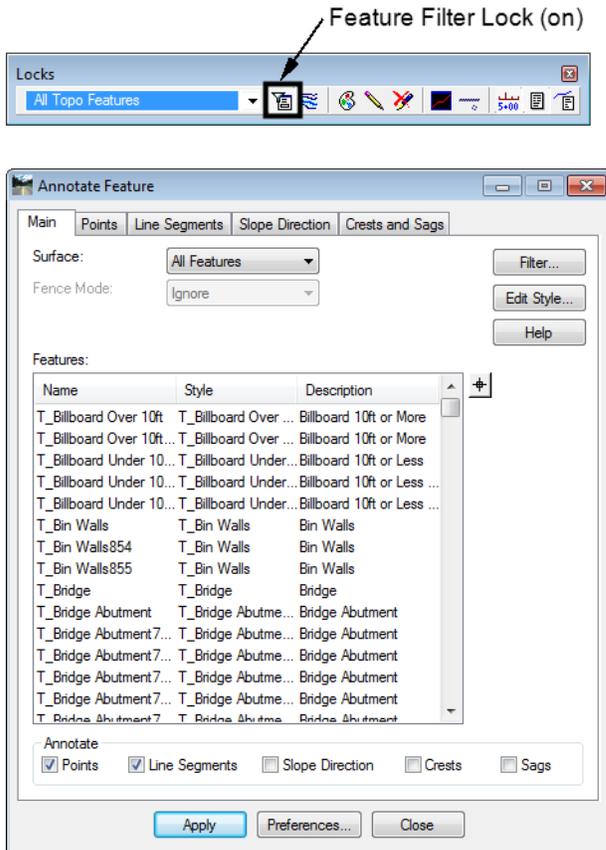
In the **Locks** toolbar shown below, the **Feature Filter Lock** is off, or deactivated, so the selected filter **_All Topo Features** is not active. If the **Surface > View Surface > Annotate Feature** command is selected, the **Annotate Feature** dialog box would display all features located in that particular DTM in the *Features* list.

Note: Features within a Feature Filter can be verified by executing the **View Features**, **Edit Feature**, or **Annotate Feature** commands.



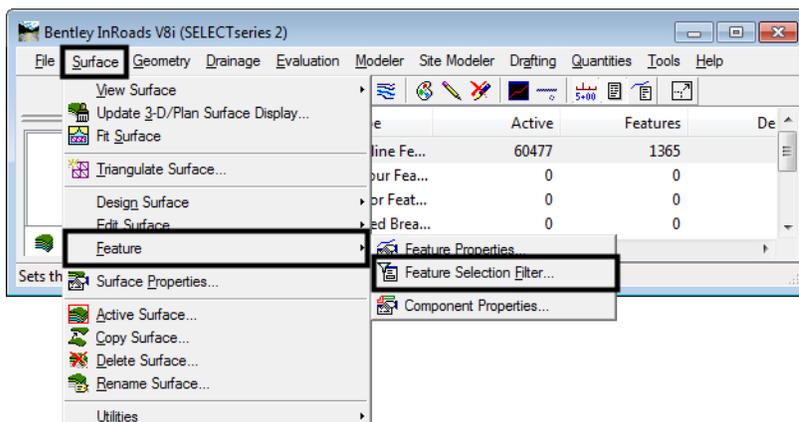
Example 2 - Applied Feature Filter

To display the results of the selected Feature Filter, in this case **All Topo Features**, the Feature Filter Lock is simply toggled **on**, or activated, and the filter will then sort the assigned features. Notice in the **Annotate Feature** dialog box shown below, the features are displayed once the filter is activated, when compared to Example #1 when the filter was deactivated.

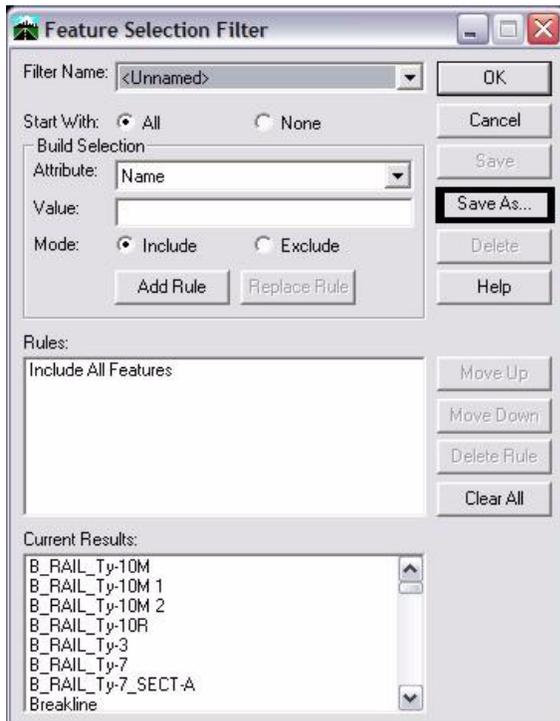


Creating a Selection Filter

1. From the Surface pull down menu **Surface>Feature>Feature Selection Filter**.



- In the **Feature Selection Filter** dialog box, create a name in the **Filter Name** field by <D> **Save As...**



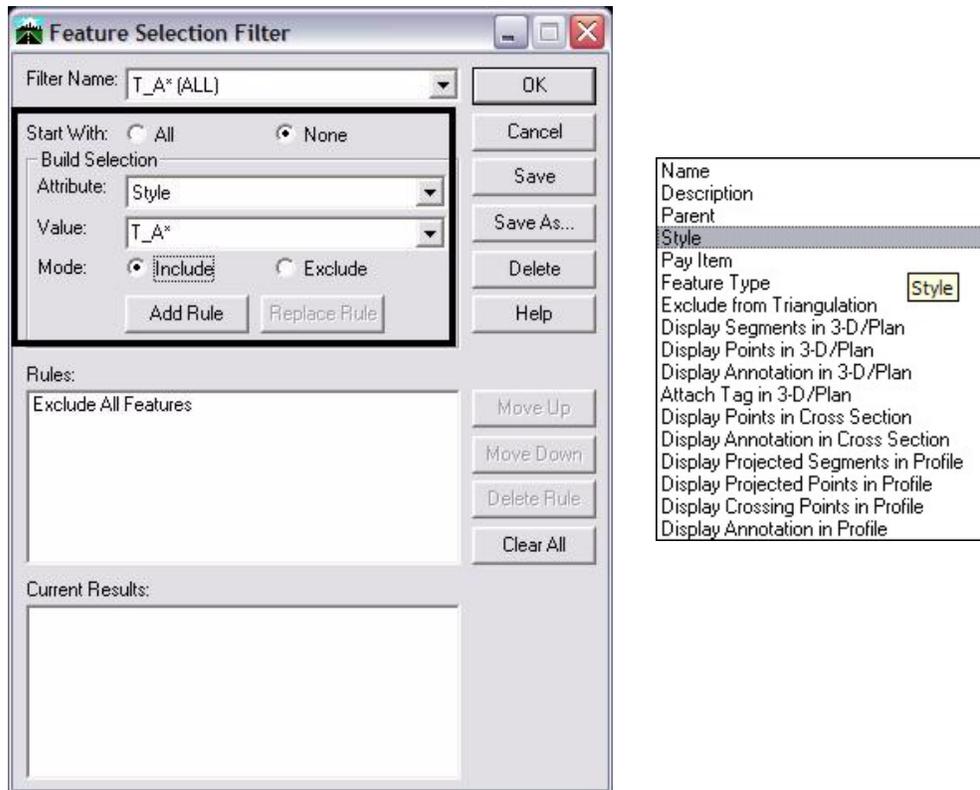
- In the **Save Filter As** dialog box, **key in** a name for the filter and <D> **OK**. The newly created filter name will appear in the **Filter Name** drop-down list in the **Locks** toolbar.

Note: The **Feature Filter** drop-down list in the **Locks** toolbar has a limited amount of viewing display capability, so the filter name should be created accordingly.



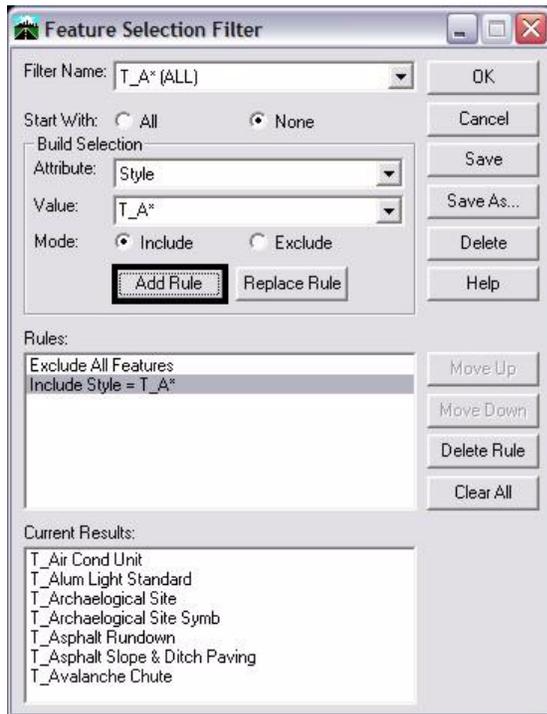
- The first step in defining any filter is the **Start With** toggle. Toggle either **All** or **None** on. This selection allows the user to build the filter by adding or removing features with subsequent rules.
- Complete the **Build Selection** section of the **Feature Selection Filter** dialog box by selecting an **Attribute** and keying in a **Value**, and selecting the appropriate **Mode**.

Note: A wide variety of Attributes are available as criteria for building filters. These include display properties as defined by the feature style assigned to the features.

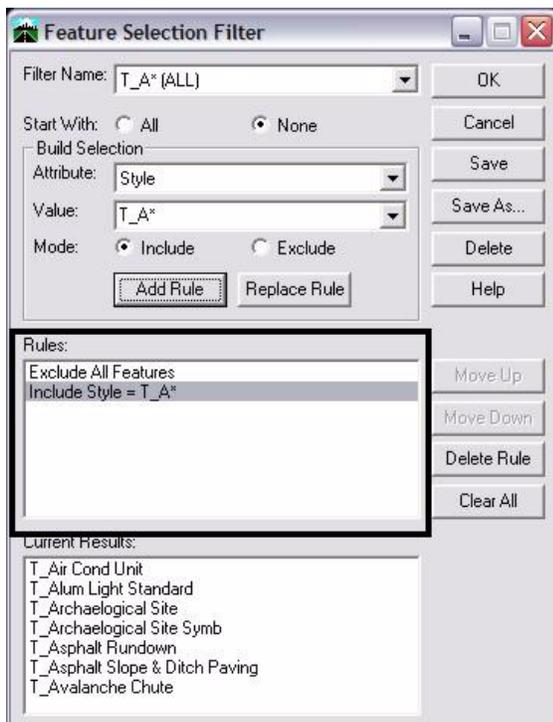


Note: The wild card symbol “*” is often used in filters created for CDOT. This particular symbol matches any number of characters at and following the location of the symbol.

- <D> **Add Rule**. The **Current Results** list box updates as rules are added, deleted, updated, or re-ordered.

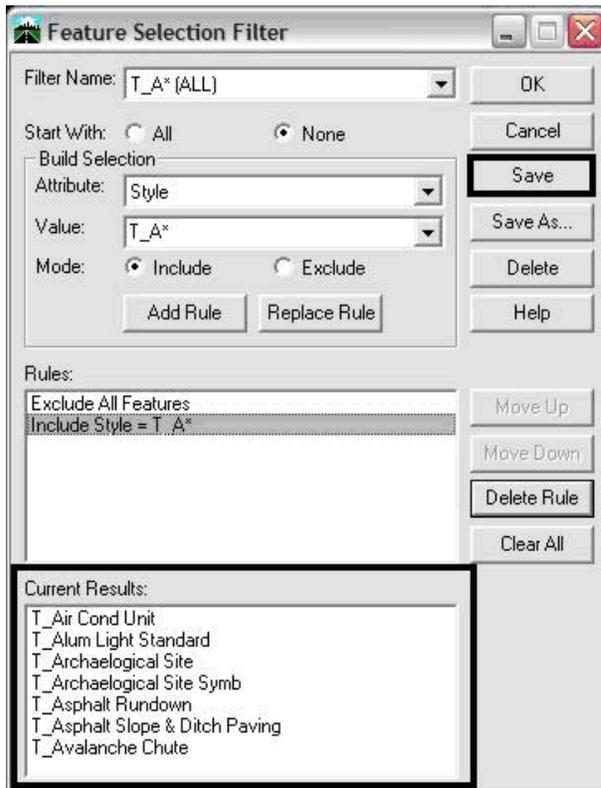


- Verify that the rule was added in the **Rules** list box.



- Verify that the correct Feature(s) were added in the **Current Results** list box.

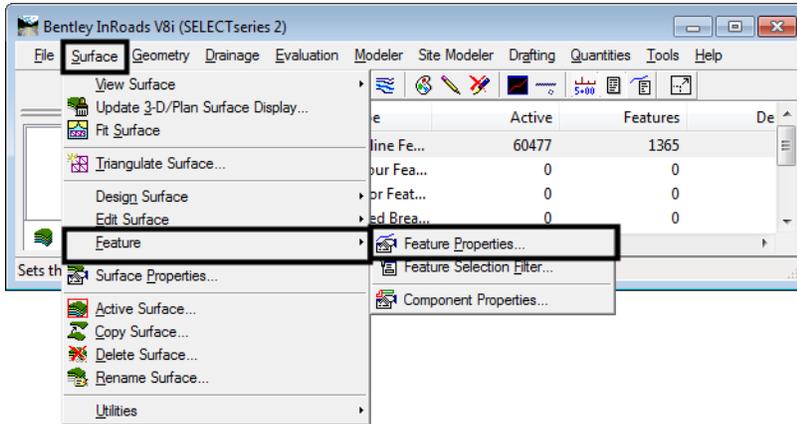
9. <D> Save.



Note: The previous Feature Filter example was created by the use of only two rules: **Exclude All Features** and **Include Style = T_A***. It should be noted that when creating rules, they can include any of the following attributes: style, name, description, parent, pay item, triangulation, etc. Multiple rules can be incorporated to further refine the filtering. The order in which the rules are listed in a filter is important. They are always read from top to bottom and build sequentially based on the Results that passed the previous rule. Also, be aware that when inputting value(s) as rules, the input is case sensitive.

Using a Feature Selection Filter

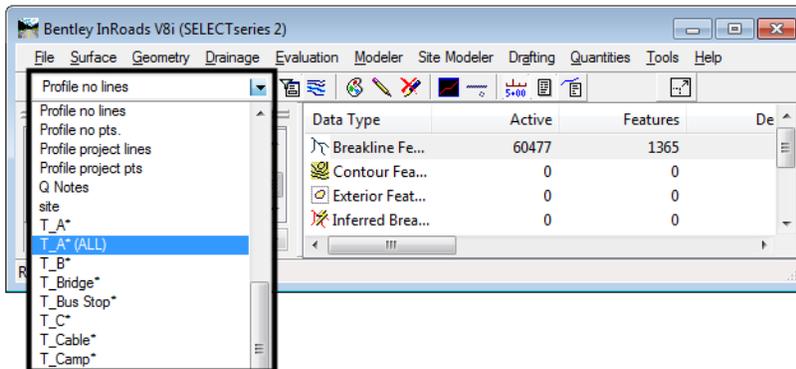
1. From the InRoads menu, select Surface>Feature>Feature Properties.



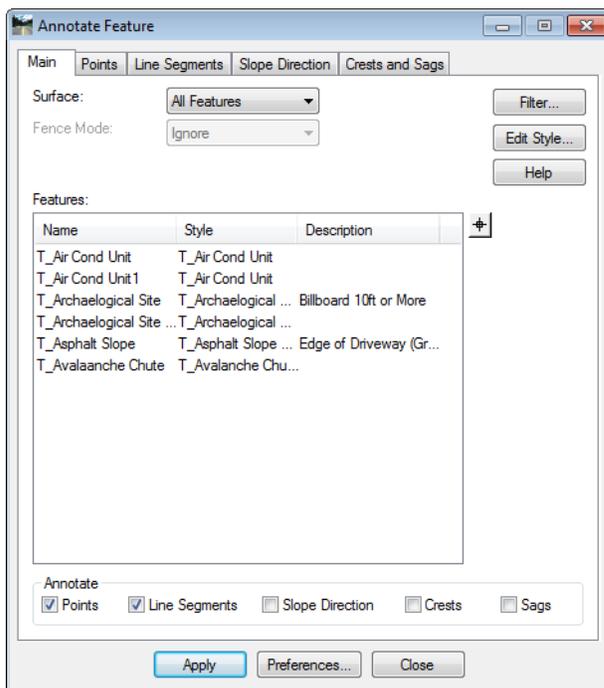
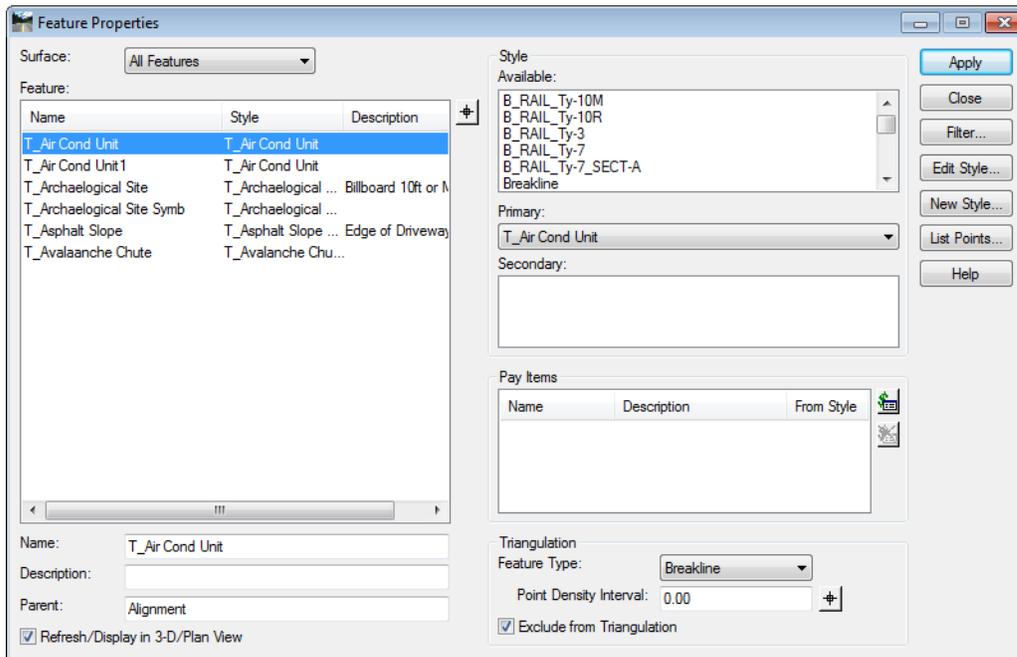
2. Verify that the Feature Filter Lock is toggled on.



3. In the **Locks Toolbar**, use the Feature Filter drop-down list to select a Feature Filter.



4. The selected Features will be displayed in the appropriate dialog boxes.



Note: Remember to disable the **Feature Filter Lock** when it is no longer needed.

