# Skeletonizer Options

The main Network Skeletonizer Options dialog box is shown below.



## Dead-End Trim Options

Specify the Dead-End Trim Options:

- **Trim Diameter Smaller Than :** Remove dead-end pipes smaller than a specified pipe diameter.
- **Trim Length Shorter Than :** Remove dead-end pipes shorter than a specified pipe length.
- **Apply Maximum Trim Levels :** Select the maximum number of levels for iterative network trimming application. If unchecked, the network trim routine will continue until no further levels are found.
- **Apply Elevation Difference :** Retain (will not be trimmed) pipes that have an elevation difference between their two end (terminal) nodes greater than the value specified.

## Series Pipe Reduction Options

- **Pipe ID/Attribute Retain Choice :** Select Pipe ID to be retained after reduction of series pipes with similar attributes. Six options are available to choose from including maintaining the ID of the longer pipe, shorter pipe, larger diameter pipe, smaller diameter pipe, larger friction factor pipe, or smaller friction factor pipe.
- **Demand Distribution Method :** Select method for re-allocating demands from all dissolved interior junction nodes to their respective end nodes. Five options to distribute demands are available to choose from including a distance weighted or evenly distributed approach, to the nearest or furthest junction, or proportional to the existing demand.
- **Re-calculate Pipe Length** Automatically compute lengths of all the pipes being reduced from their corresponding graphical representations.
- **Apply Max. Reduction Levels :** Select the maximum number of levels for iterative network reduction application. If unchecked, the network reduce routine will continue until no further levels are found.
- **Apply Elevation Difference :** Retain (will not be reduced) pipes that have an elevation difference between their end (terminal) nodes greater than to the value specified.
- **Apply Diameter Difference :** Retain (will not be reduced) pipes that have a difference between their diameters greater than to the value specified.

## Hydraulic Equivalency Options

The Skeletonizer allows you to reduce series and parallel pipes to a simple pipe by the equivalent pipe concept. An equivalent pipe is defined as a pipe of uniform diameter such that its headloss and flow rate are the same as the headloss and flow rate in the series and parallel pipe combination. The equivalent replacement pipe may be of some specified diameter or specified roughness coefficient.

Skeletonizer provides two options to define the equivalent replacement pipe:

- **Equivalent Diameter** Compute the equivalent replacement pipe diameter. If this option is selected, the Skeletonizer will calculate the diameter of the equivalent replacement pipe.
- **Equivalent Roughness** Compute the equivalent replacement pipe roughness coefficient. If this option is selected, the roughness coefficient (Hazen-Williams or Manning) of the equivalent replacement pipe will be computed.

Once you have specified the equivalent pipe replacement option, specify the other Hydraulic Equivalency options.

- **Pipe ID/Attribute Retain Choice :** Select the pipe ID and its corresponding data (i.e., length, roughness and minor loss coefficients) to be retained when parallel and/or series pipes are merged into an equivalent replacement pipe. Six options are available to specify the replacement pipe: Longer Pipe, Shorter Pipe, Larger Diameter, Smaller Diameter, Larger Friction Factor, and Smaller Friction Factor.

> ⚠ The merging application is not available when the Darcy-Weisbach head loss equation is used.

## Common Options

The common options may be specified as below:

- **Confirm between Segmentation Levels** Display detailed pipe skeletonization processing status for each network reduction application level.
- **Exclude Pipes with Controls** Pipes with controls (Initial Status or Operational Controls) will not be considered as candidates for skeletonization.
- **History Report Filename :** Generate ASCII file containing the history of the skeletonization runs. It provides a detailed element report for removed pipes, junctions, and merge histories and allows you to track and view the incremental changes made to the current network model at specific milestones in the skeletonization process.

**OK** - Closes the Network Skeletonization Options dialog box with saving the changes.

**Cancel** - Closes the Network Skeletonization Options dialog box without saving the changes.