

Potential MSAG/GIS Tips and Tricks

Tip 1: Setting Up Your ArcMap Document .mxd to Prevent Topology Errors

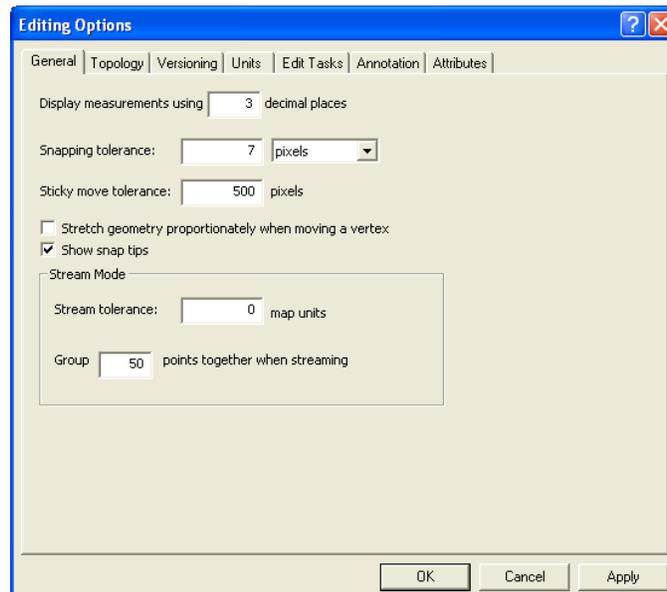
By enabling the following settings you can prevent connectivity issues in your centerline data.

- Snapping: 7 pixels
 - Snapping automatically “snaps” the vertex you are creating or editing to any feature vertex, edge, or end within the above snapping tolerance as long as that layer is checked in the snapping window (see below).
- Snap Tips: Enabled
 - As you’re moving or creating vertices, if you hover over a vertex, edge, or end, a snap tip will appear indicating which layer the vertex is being snapped to and whether it is snapping to a vertex, edge or end.
- Sticky Tolerance: 500 pixels
 - This means that your pointer must move 500 pixels on the screen before the selected feature or vertex will be moved. This prevents accidentally moving a feature or vertex with the edit tool.
EX: Double clicking a vertex and accidentally moving it.

To enable these settings:

Select the *Editor* dropdown menu

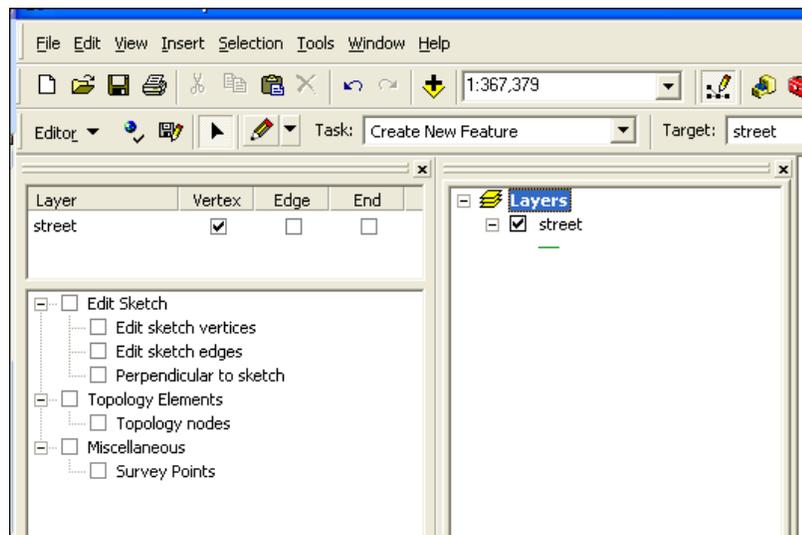
- Select *Options* and change the settings as needed



Tip 2: Using the Snapping Feature

Select the *Editor* Dropdown Menu

- › Select *Snapping*
- › The following window should appear. Select vertex for your centerline layer. This will activate the snapping functionality while you are editing.

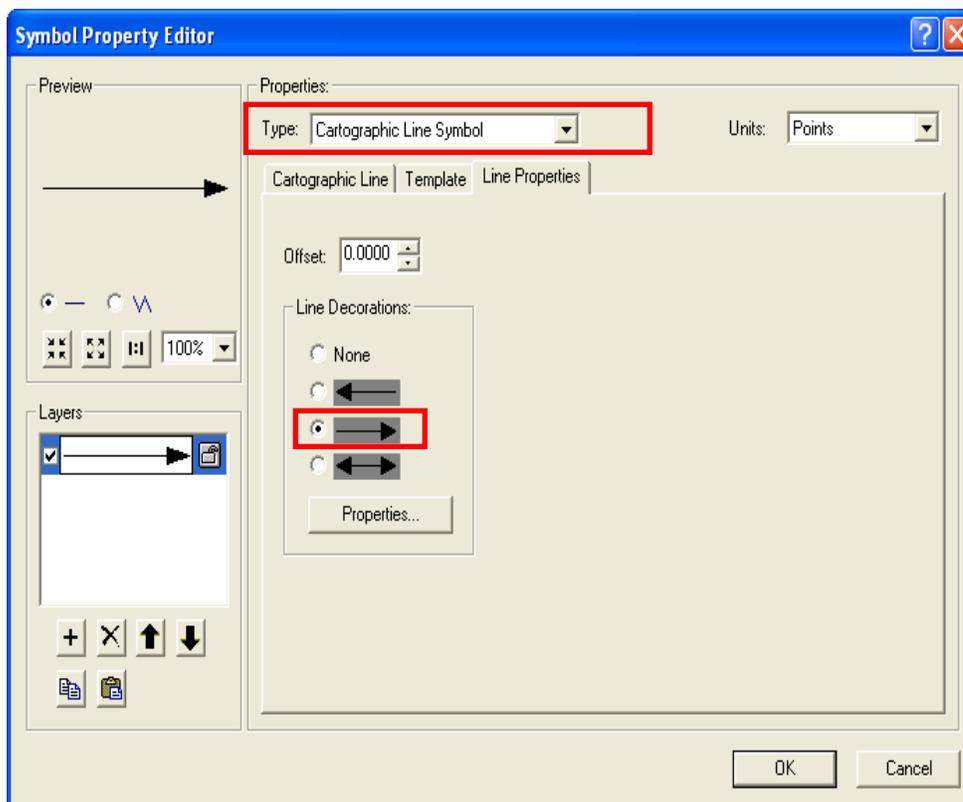


Tip 3: Fixing Segment Directions

The direction of your centerline needs to reflect the direction of addressing on the ground. The end point of your segment (symbolized by a red vertex) represents the high end of a range. An easy way to display this information is by adding an arrow at the end point of each segment.

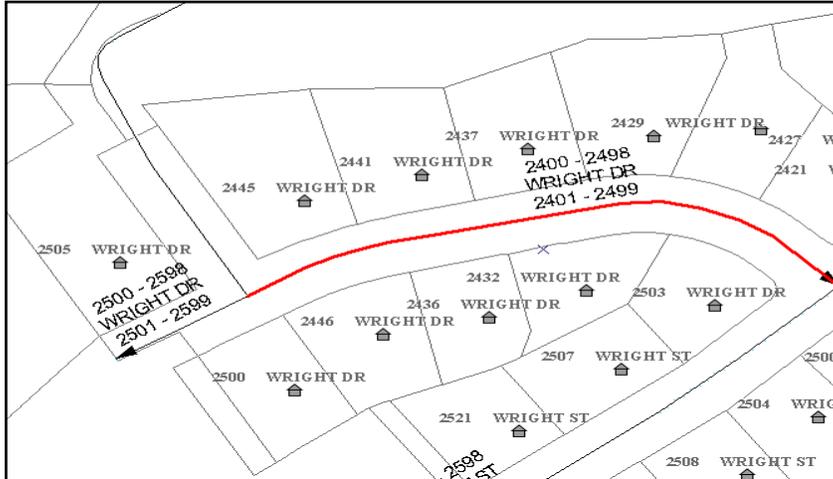
Symbolizing Streets:

- Select *Properties* from your centerline file, in the table of contents
- Select the *Symbology* tab
- Click on the symbol
- Select *Properties*
- Change the *Type* to *Cartographic Line Symbol*
- Select the *Line Properties* tab
- Select the arrow direction highlighted below
- Select *OK*



Now that your centerline data is symbolized with direction indicators, you can correct any streets that may be going the wrong direction

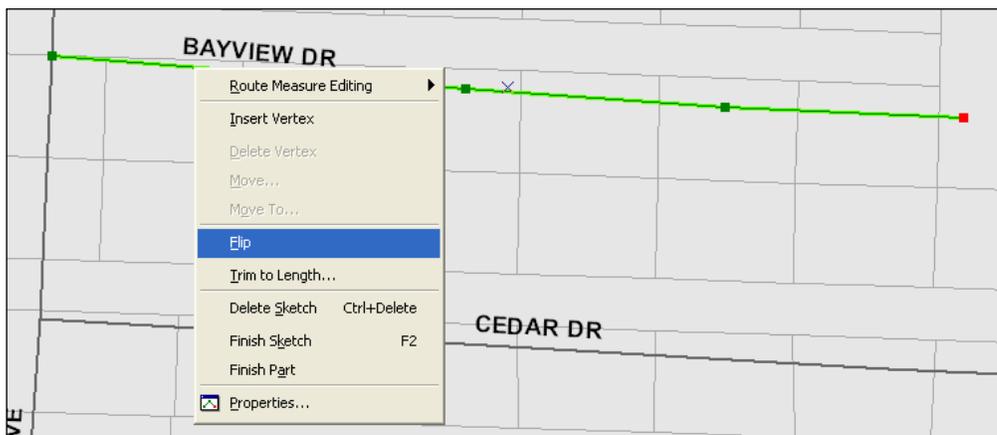
Below is an example of a street that needs to be going the opposite direction.



This can be corrected by flipping the street.

Start Editing:

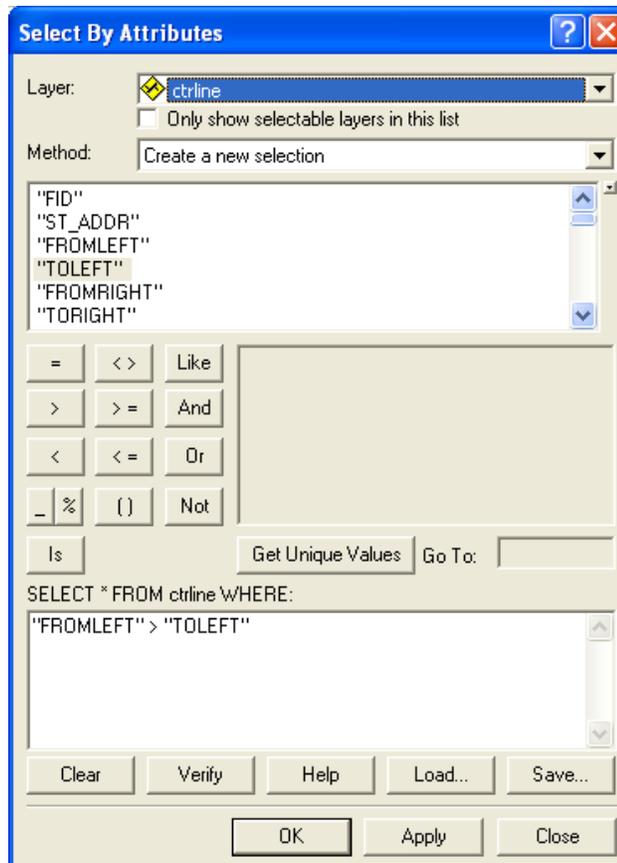
- › Using the Editor cursor, double-click on the segment to select it. You should see the vertices.
- › Right click anywhere on the segment and select flip. This will only change the end vertex to the opposite end. Your geometry will not change.



Tip 4: Correcting Centerline Range Attributes

To make sure your ranges are going from low to high:

- › Open the Select by Attributes tool.
- › Select the *From Left* and set it greater than your *To Left*.
 - “FROMLEFT” > “TOLEFT”
This will select any segments that have the low and high reversed.



- › Open the attribute table for the centerline layer
- › Show: Selected



- › Correct all selected roads.
- › Repeat this process for From Right and To Right
 - “FROMRIGHT” > “TORIGHT”

Tip 4: Tools to be wary of

- Arcs: These can create an unnecessary amount of vertices causing the time it takes to draw or trace features to increase significantly.
- Clip and Intersect: These can drop vertices causing topology errors.
- Auto Complete: This can shift vertices causing topology errors.

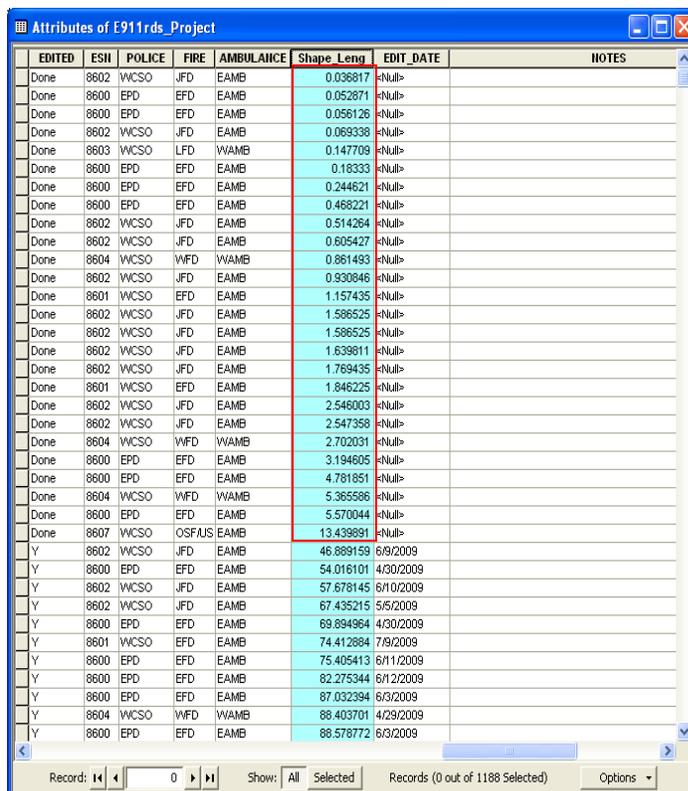
Tip 5: Getting Rid of Those Bits and Pieces

In the process of maintaining your data little bits and pieces of data will start showing up. These are usually junk that has crept in through out the process of editing. To find the majority of these:

Sort your data by the Shape length or area. Any value that looks unusual should be reviewed.

For Example

- Sort your centerline data by Shape_Length:



EDITED	ESN	POLICE	FIRE	AMBULANCE	Shape_Length	EDIT_DATE	NOTES
Done	8602	WCSCO	JFD	EAMB	0.036817		
Done	8600	EPD	EFD	EAMB	0.052871		
Done	8600	EPD	EFD	EAMB	0.056126		
Done	8602	WCSCO	JFD	EAMB	0.069338		
Done	8603	WCSCO	LFD	WAMB	0.147709		
Done	8600	EPD	EFD	EAMB	0.18333		
Done	8600	EPD	EFD	EAMB	0.244621		
Done	8600	EPD	EFD	EAMB	0.468221		
Done	8602	WCSCO	JFD	EAMB	0.514264		
Done	8602	WCSCO	JFD	EAMB	0.605427		
Done	8604	WCSCO	WFD	WAMB	0.861493		
Done	8602	WCSCO	JFD	EAMB	0.930846		
Done	8601	WCSCO	EFD	EAMB	1.157435		
Done	8602	WCSCO	JFD	EAMB	1.586525		
Done	8602	WCSCO	JFD	EAMB	1.586525		
Done	8602	WCSCO	JFD	EAMB	1.639811		
Done	8602	WCSCO	JFD	EAMB	1.769435		
Done	8601	WCSCO	EFD	EAMB	1.846225		
Done	8602	WCSCO	JFD	EAMB	2.546003		
Done	8602	WCSCO	JFD	EAMB	2.547358		
Done	8604	WCSCO	WFD	WAMB	2.702031		
Done	8600	EPD	EFD	EAMB	3.194605		
Done	8600	EPD	EFD	EAMB	4.781851		
Done	8604	WCSCO	WFD	WAMB	5.365586		
Done	8600	EPD	EFD	EAMB	5.570044		
Done	8607	WCSCO	OSFAUS	EAMB	13.439891		
Y	8602	WCSCO	JFD	EAMB	46.889159	6/9/2009	
Y	8600	EPD	EFD	EAMB	54.016101	4/30/2009	
Y	8602	WCSCO	JFD	EAMB	57.678145	6/10/2009	
Y	8602	WCSCO	JFD	EAMB	67.435215	5/5/2009	
Y	8600	EPD	EFD	EAMB	69.894964	4/30/2009	
Y	8601	WCSCO	EFD	EAMB	74.412884	7/9/2009	
Y	8600	EPD	EFD	EAMB	75.405413	6/11/2009	
Y	8600	EPD	EFD	EAMB	82.275344	6/12/2009	
Y	8600	EPD	EFD	EAMB	87.032394	6/3/2009	
Y	8604	WCSCO	WFD	WAMB	88.403701	4/29/2009	
Y	8600	EPD	EFD	EAMB	88.578772	6/3/2009	

- The first time you go through this process you will want to review any segments with a Shape_Length below 40.
- Generally you will want to review any segments with a Shape_Length below 10.