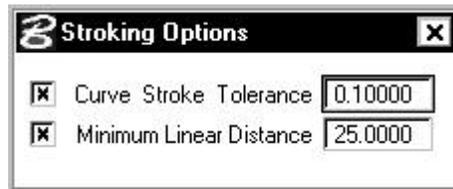


## Stroking Options

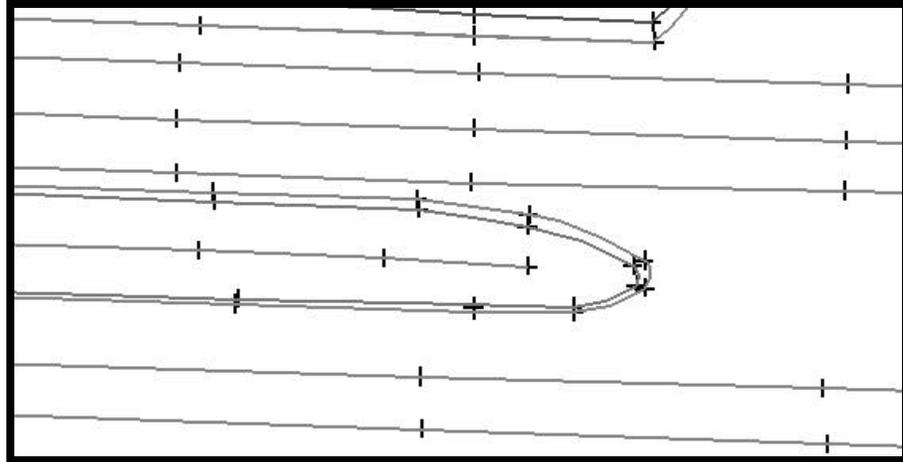
### 3.1 Overview

<b>Feature / Function</b>	Setting stroking options utilized in the Extraction and TIN editing tools.
<b>Tools</b> 	
<b>DTM Menu Bar</b>	Settings > Stroking

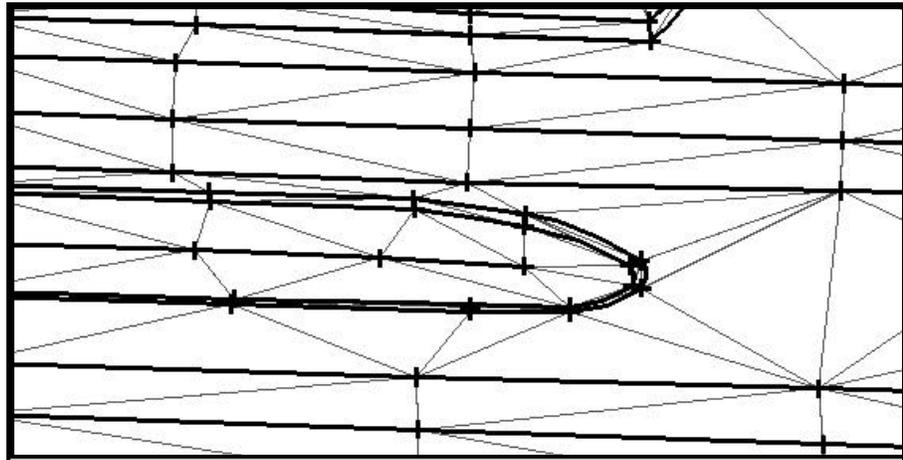
Two user-defined values need to be defined before the extraction or TIN editing procedure commences. The Stroking Options dialog is depicted below.



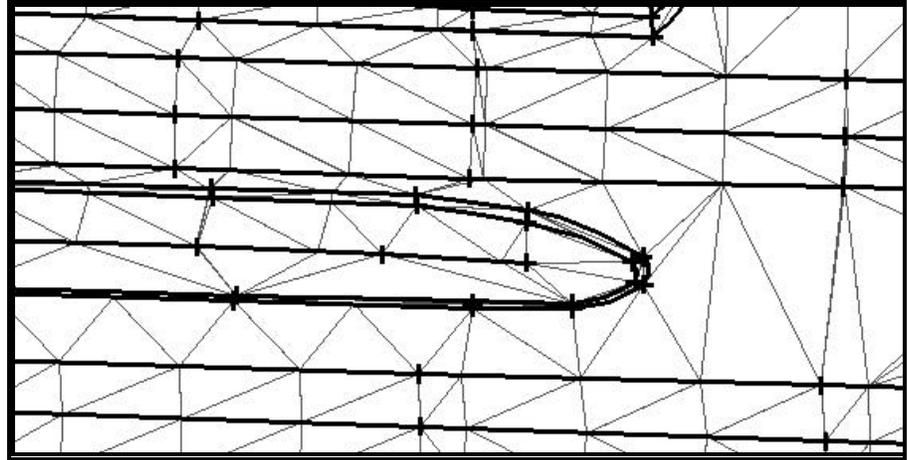
If the source data is mapped in a 3D-design file, Stroking may be applied to the data. Stroking is not available if the data resides in a 2D-design file. Stroking is the process of automatically adding shots to the DTM Input file by interpolating new shots from the linear and curved sections of the data. Review of the triangles generated from the DTM input files utilizing the various stroking options best illustrates these stroking options. The graphic below illustrates median nose break lines.



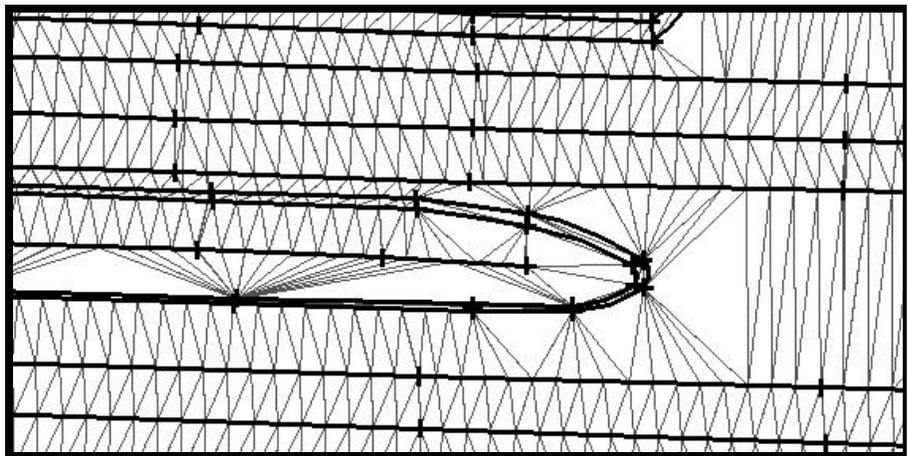
The vertices of the break lines are depicted by the +s. The illustration below depicts the triangles generated from the break lines above utilizing no stroking options.



Activate the **Minimum Linear Distance** toggle if you wish to densify portions of linear elements. The **Minimum Linear Distance** is utilized to interpolate new shots from the linear elements. For instance, if survey data was taken approximately every 50 master units and this distance was set to 25 master units, then a new shot would be interpolated every 25 master units. In this example, twice as many shots would be used to create the DTM in the linear sections of the break lines. Still utilizing our original median nose, the following graphic depicts the generated triangles when the toggle is activated and the **Min. Linear Distance** is set to 25. Interpolated vertices have been added whenever the distance between survey vertices is greater than 25 master units.

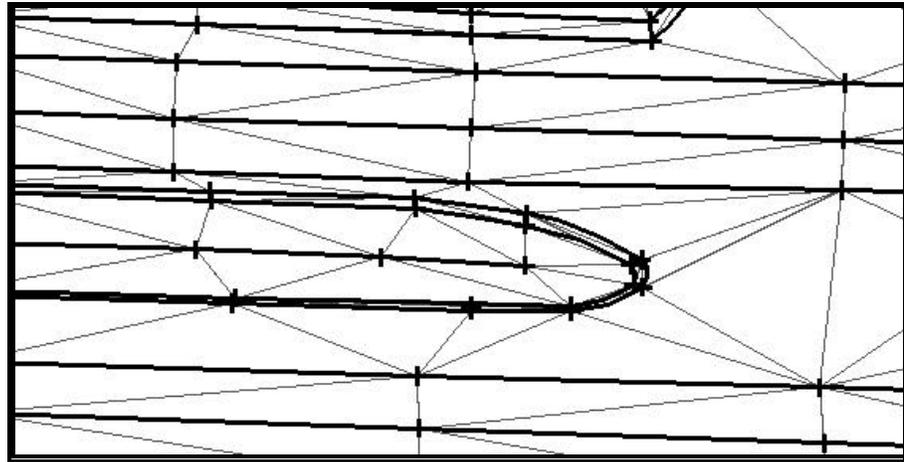


The graphic below depicts the generated triangles when the toggle is activated and the **Minimum Linear Distance** is set to five. Notice the increased number of triangles due to the increased number of vertices on the linear break lines. Also, note there is no change in the number of vertices in the curved area as the linear toggle has no effect on curves or arcs.

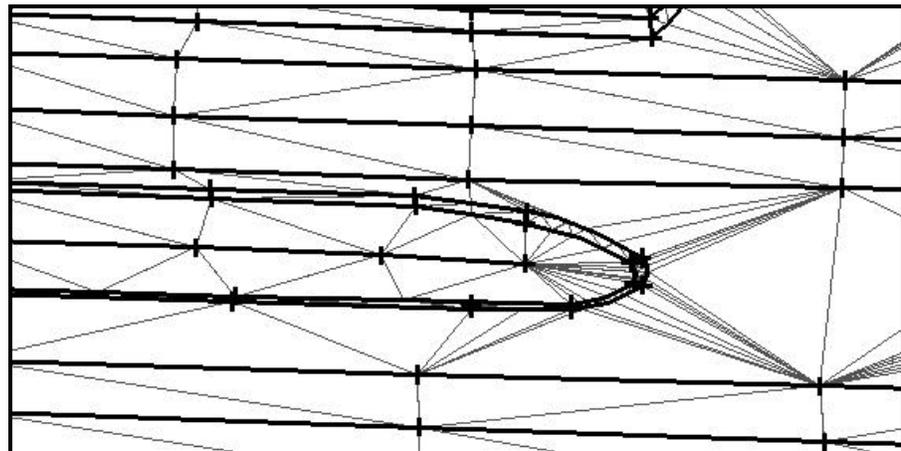


Activate the **Curve Stroke Tolerance** toggle to densify the curved portions of the break lines. Curved break lines in GEOPAK are handled by segmenting the curve into small chord segments. The length of the chord segments can be determined by setting the **Curve Stroke Tolerance**. This distance is used to interpolate new shots from the curved break lines. This value is used as a perpendicular minimum distance from chords generated along the arc. Chords are drawn along the arc and the perpendicular distance is measured from the middle of each chord to the arc. If this distance is larger than the **Curve Stroke Tolerance**, the process is repeated with a shorter chord length. This process is repeated until the end of the curve is reached. The flatter the curve, the fewer number of points will be calculated. The steeper the curve, the greater number of points that

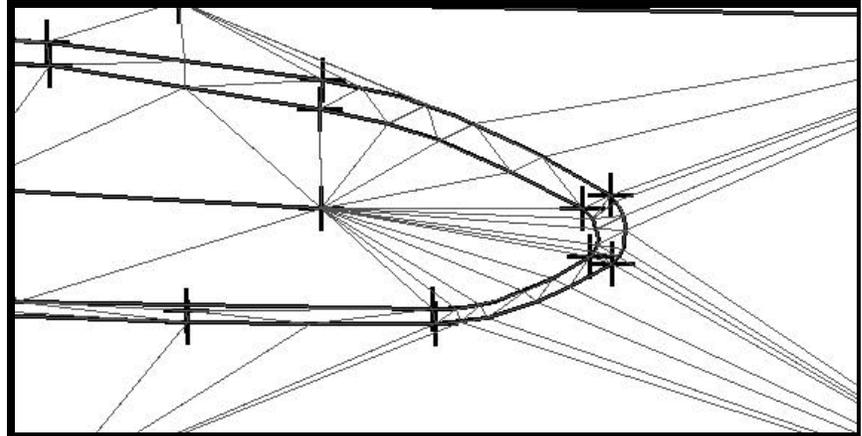
will be calculated. Let's review a few examples utilizing the same median nose. Again, the original break line and generated triangles are illustrated below.



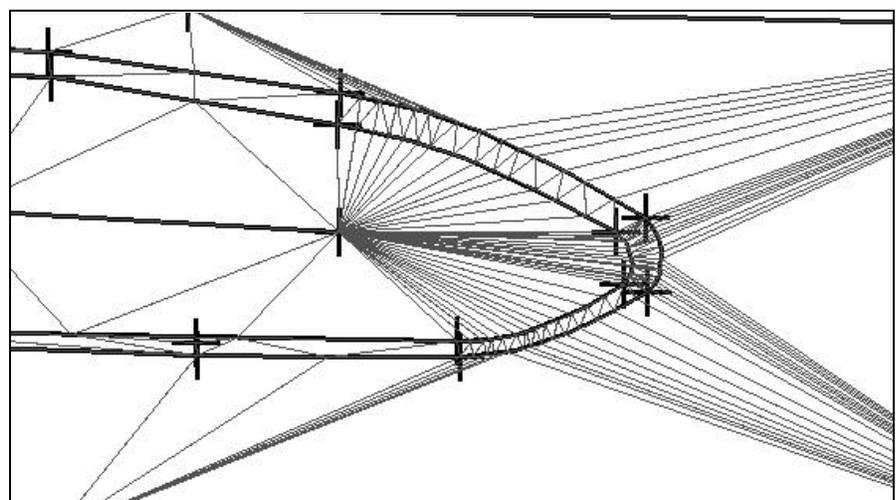
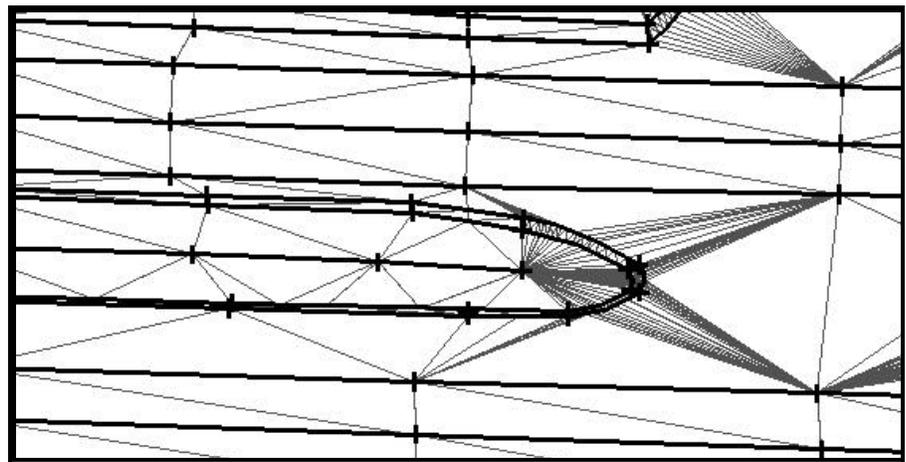
Now if the **Curve Stroke Tolerance** toggle is activated and the **Curve Stroke Tolerance** is set to 0.1 master units, the following triangles would be generated.



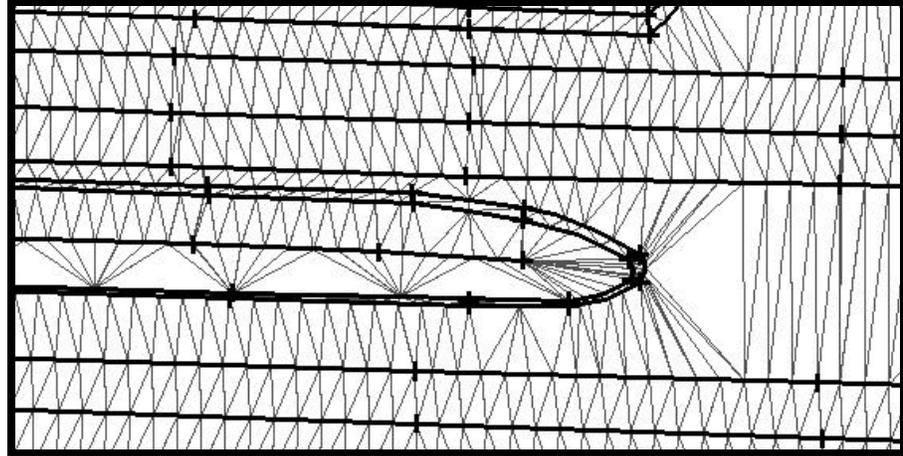
Looking at a close-up of the median nose, the following would be viewed on the screen.



Now, let's set the **Curve Stroke Tolerance** to 0.01. The results for the entire median and the close-up are depicted in the illustrations below.



The **Curve Stroke Tolerance** and **Minimum Linear Distance** toggles can be activated simultaneously. The illustration below depicts the same median nose when both toggles are activated.



In the example above, the **Curve Stroke Tolerance** was set to 0.01, while the **Minimum Linear Distance** was five.