





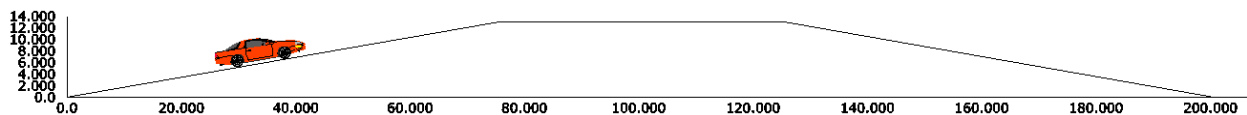
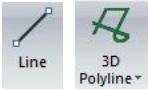

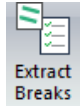
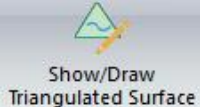
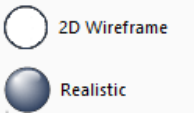




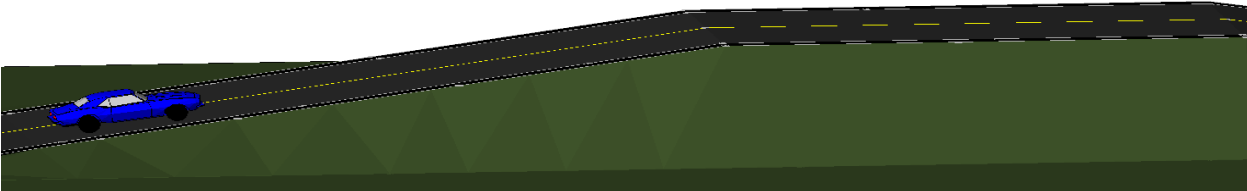
Map360 Surfaces and Road Profiles






Simple Steps to Create a Road Profile – No Surface Required	
<ul style="list-style-type: none"> • Zoom In and Out with the middle button of your mouse • Zoom Extents by double clicking your middle mouse button • Pan by holding down your middle mouse button • Orbit by holding down your middle mouse button and the shift key • Escape Key is your Friend! Press ESC to cancel commands. 	
Draw Ribbon 	In order to create a road profile, you need 3D points in your drawing. These points can be from a data collector, point cloud, or any other source. Use a 3D Polyline to connect the point. Note: Turn Node snap on first to snap accurately to the points.
Draw Ribbon 	Create a new layer called Profile and make it current. This allows you to organize the drawn entities and freeze the layer if you'd like.
Surface Ribbon 	Select Profile Drape Line . It will prompt you to select entities – select the 3D Polyline. The status bar will display a series of defaults. Select enter to accept the defaults. Select origin point is the last prompt. The profile will be inserted from the bottom left corner.
Place a vehicle on the road profile	
Draw Ribbon 	Rotate cursor to match the road profile
Draw Ribbon 	Insert a side view of a 2D vehicle symbol from the Symbol Librarian . The vehicle will be aligned to the road profile. Click on the screen to insert it and right click for zero rotation.
Draw Ribbon 	Don't forget to Reset the Cursor



Creating Surfaces	
<p>Draw Ribbon</p> 	<p>Connect the 3D points with lines or 3D polylines and create a 3D boundary around the general area of the surface.</p> <p>Note: Check the lowest elevation of the 3D points and adjust the Data Extraction Settings from the Configuration Settings</p>
<p>Surface Ribbon</p> 	<p>Extract points to a surface.</p> <p>Name the surface or use the default name GROUND.</p> <p>Note: If you need to make changes and redraw your surface, check the option to clear before extract otherwise red circles will appear indicating duplicates.</p>
<p>Surface Ribbon</p> 	<p>Extract breaklines to a surface.</p> <p>Select the same surface used in the previous step.</p>
<p>Surface Ribbon</p> 	<p>To draw the TIN, select Show/Draw Triangulated Surface</p> <p>Hit Enter for the current surface</p> <p>Type D from Draw</p> <p>To accept the defaults, hit enter for the next prompts.</p>
<p>Home Ribbon</p> 	<p>The triangles are shown in 2D Wirefram. Switch the visual style to Realistic to see the surface filled in.</p> <p>By default the colors are based on elevation. Switch back to 2D wireframe and Explode the surface so we can change the colors to represent the roadway and ground.</p>
<p>WELD</p>	<p>Select triangles to be joined together. Type WELD to join them. Set these triangles to a specific color from the properties panel.</p>
Place a 3D vehicle on the road profile	
<p>Draw Ribbon</p> 	<p>Insert a 3D vehicle from the Symbol Librarian.</p> <p>Snap to the surface. The vehicle will not be aligned to the surface.</p>
<p>Animation Ribbon</p> 	<p>Select Adjust Symbol and choose the 3D symbol.</p> <p>A separate window will appear with your symbol and the surface.</p> <p>In the top view, adjust the x-y position of the vehicle Then totate to view the side profile and adjust the z positon and the pitch to align to the surface.</p>



Create a Road Profile – With a Surface	
<p>Draw Ribbon</p>  <p>Line</p>	<p>Draw a Line across the surface.</p>
<p>Surface Ribbon</p>  <p>Drape Objects</p>	<p>Select Drape Object Select the line. The line is now draped on the surface.</p>
<p>Surface Ribbon</p>  <p>Profile Drape Line</p>	<p>Select Profile Drape Line to use this line as the profile. The status bar will display a series of defaults. Select enter to accept the defaults. Select origin point is the last prompt. The profile will be inserted from the bottom left corner.</p>

Helpdesk link for movie regarding surface creation with point cloud data:

[Helpdesk Movies](#)