

Appendix 7-B

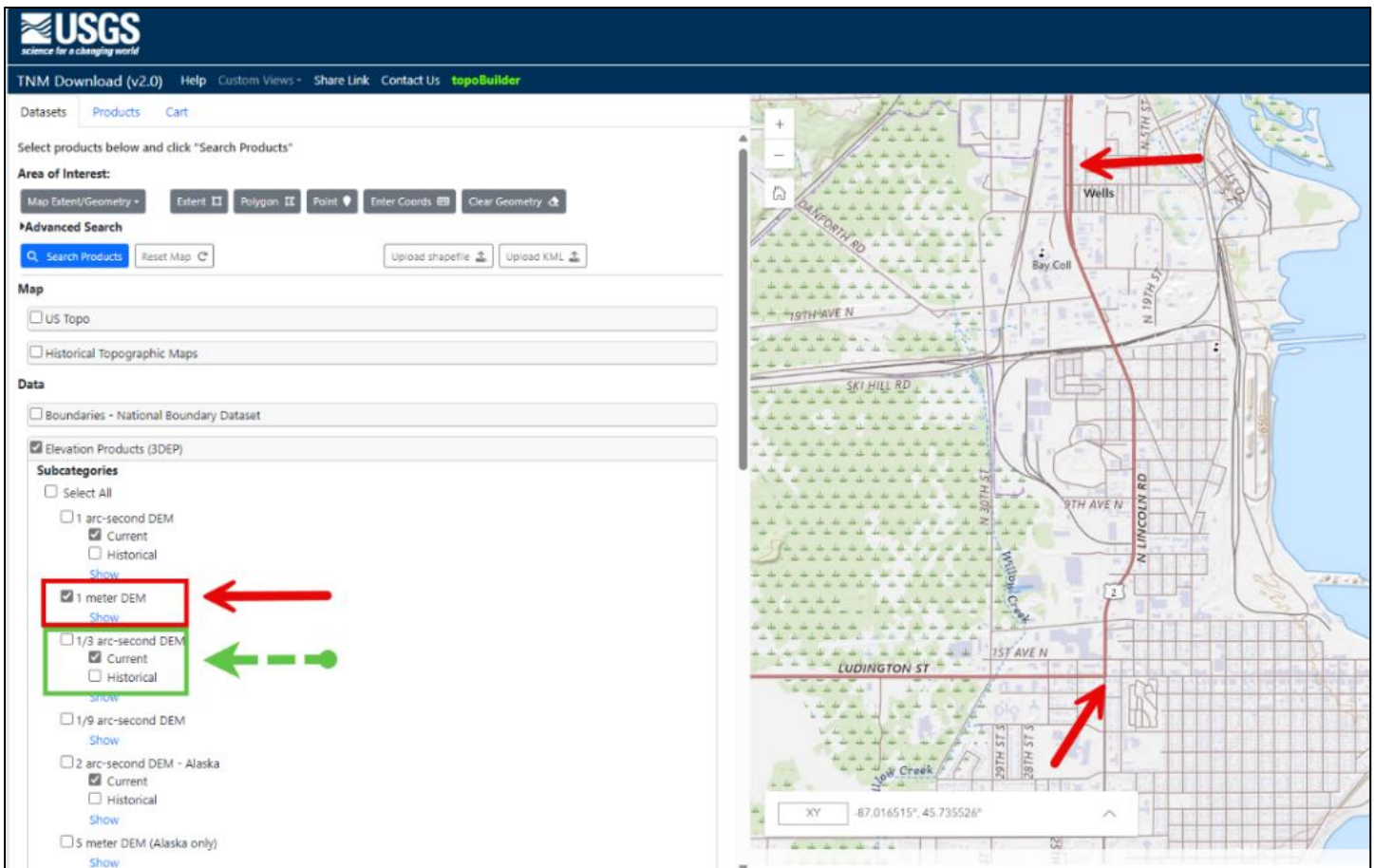
Importing DEM/Terrain Data into ORD

Revised September 2026

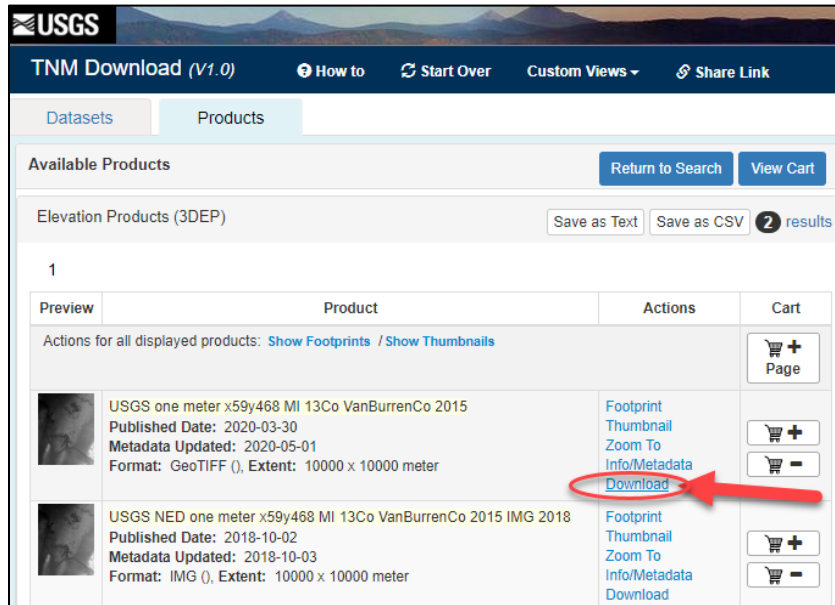
If you require assistance accessing this information or require it in an alternative format, contact the Michigan Department of Transportation's (MDOT) Americans with disabilities Act (ADA) coordinator at Michigan.gov/MDOT-ADA.

Importing DEM/Terrain Data into ORD

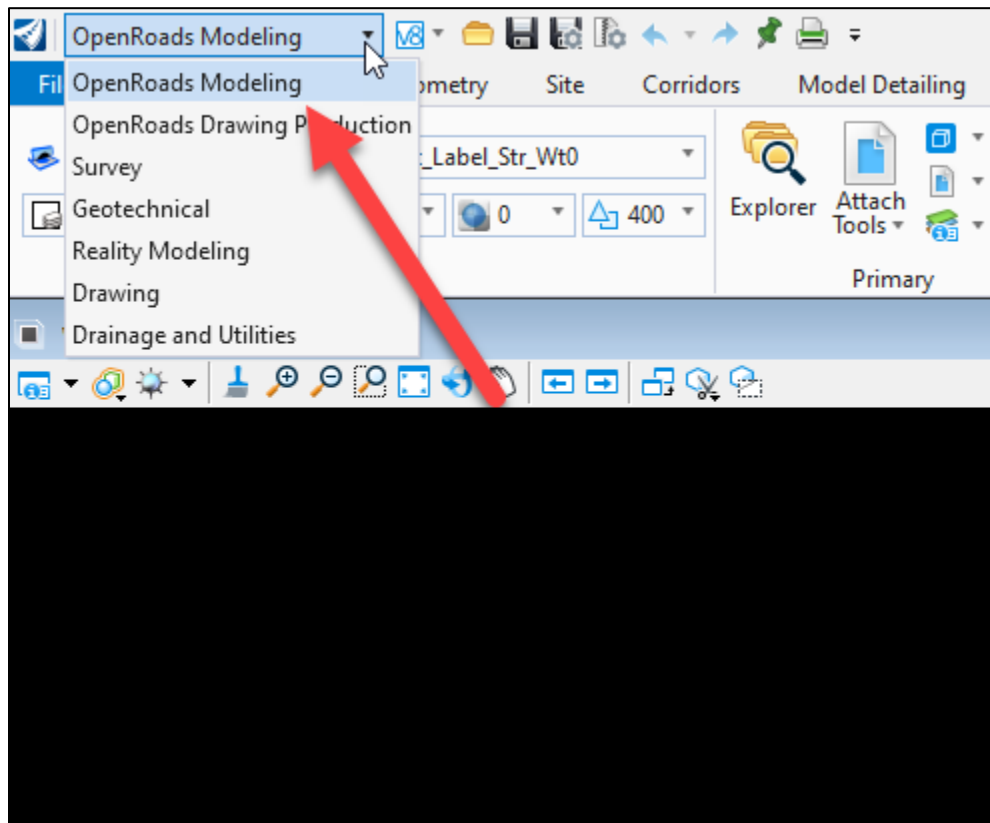
1. Download a 1 meter resolution Digital Elevation Model (DEM) from the USGS TNM Download website: <https://apps.nationalmap.gov/downloader/>
 - a. Zoom the map to the area of interest. Adjust the view extent so that it includes the entire contributing drainage area and is large enough to capture the maximum drainage area.
 - b. Select “Elevation Products (3DEP).”
 - c. Clear the selection for “1/3 arc-second DEM.”
 - d. Select for “1 meter DEM.”
 - e. Select “Search Products” button.



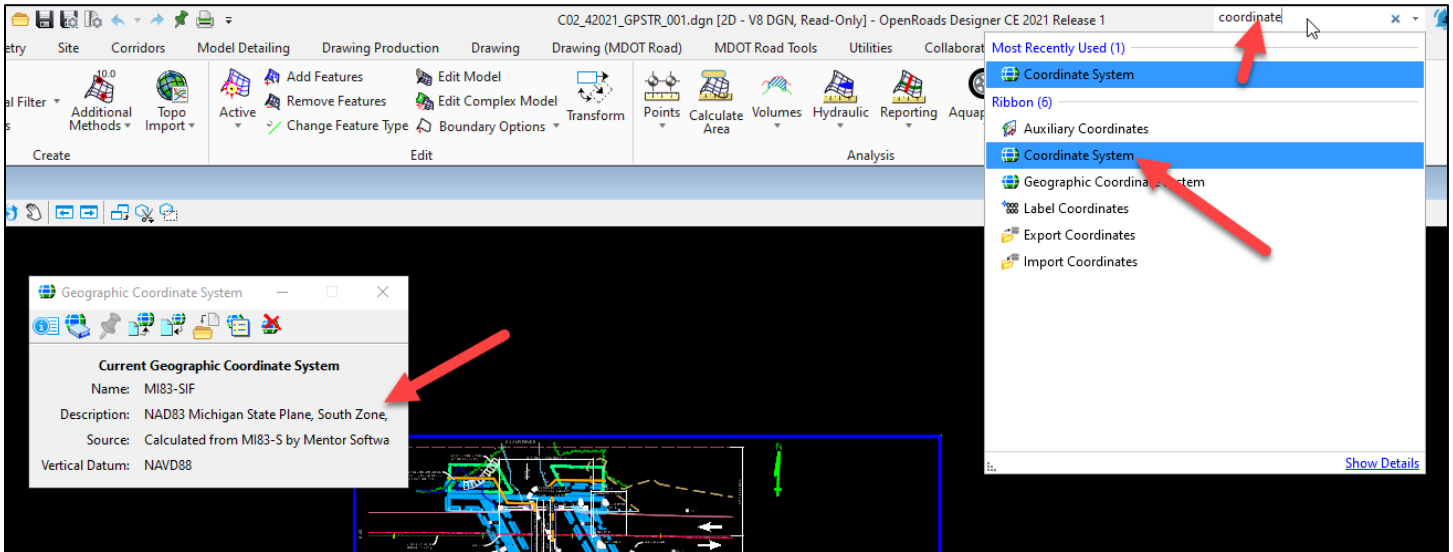
- f. Locate the most recent DEM dataset in the list of available products and select Download.



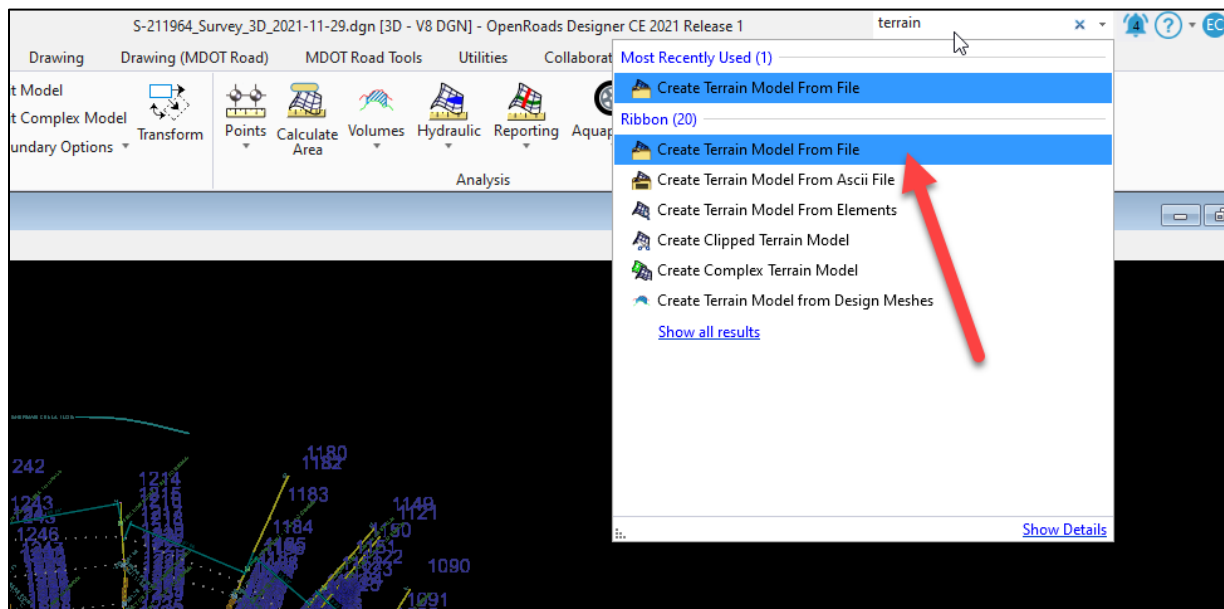
2. Return to ORD and import the Terrain. Confirm that “OpenRoads Modeling” is selected in the workflow drop down menu before proceeding.



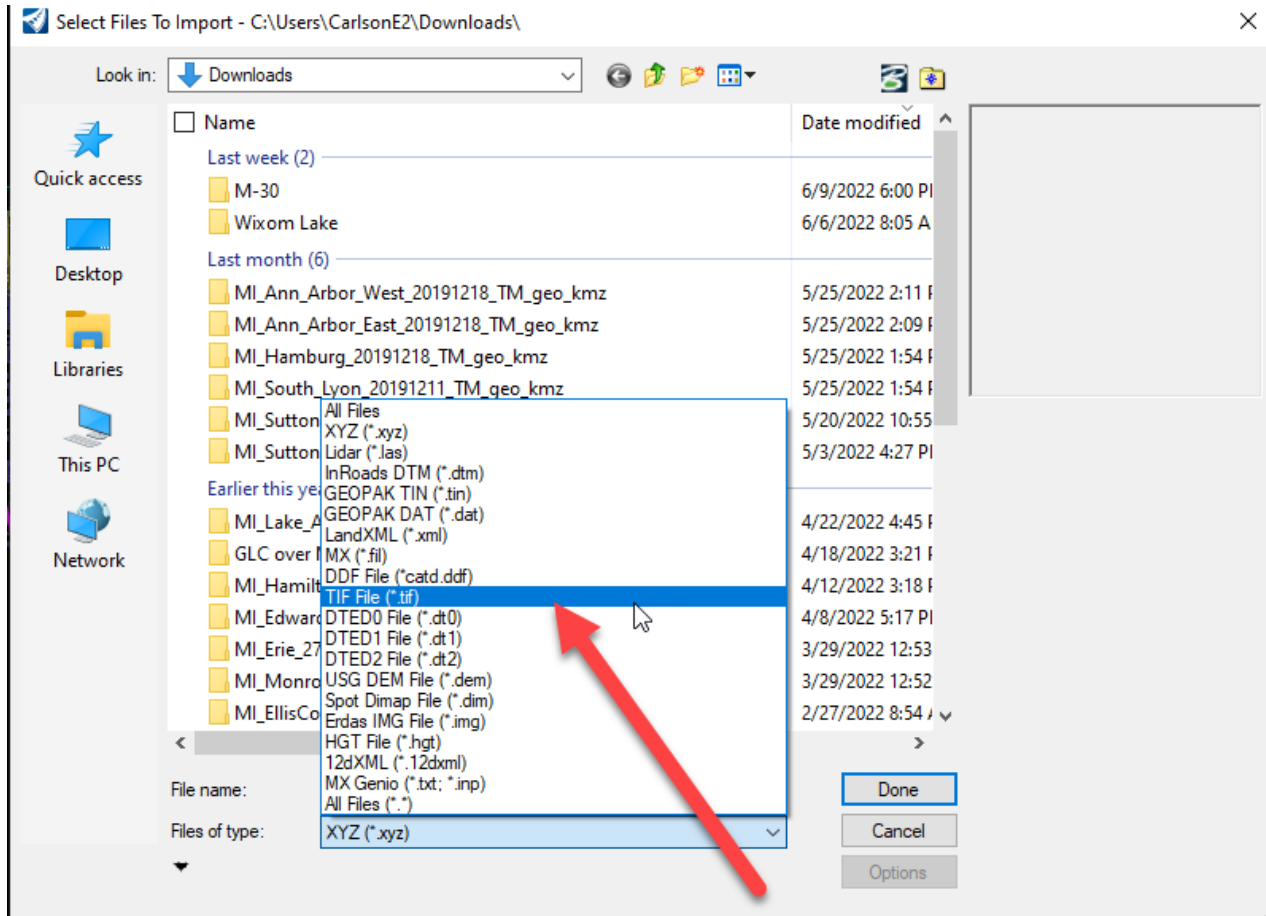
- Verify that the file is using the appropriate coordinate system. MDOT uses the Michigan State Plane Coordinate system. In the search box, enter “coordinate”, then select “Coordinate System.” Confirm that the coordinate system is set to the appropriate Michigan State Plane zone for the project location.



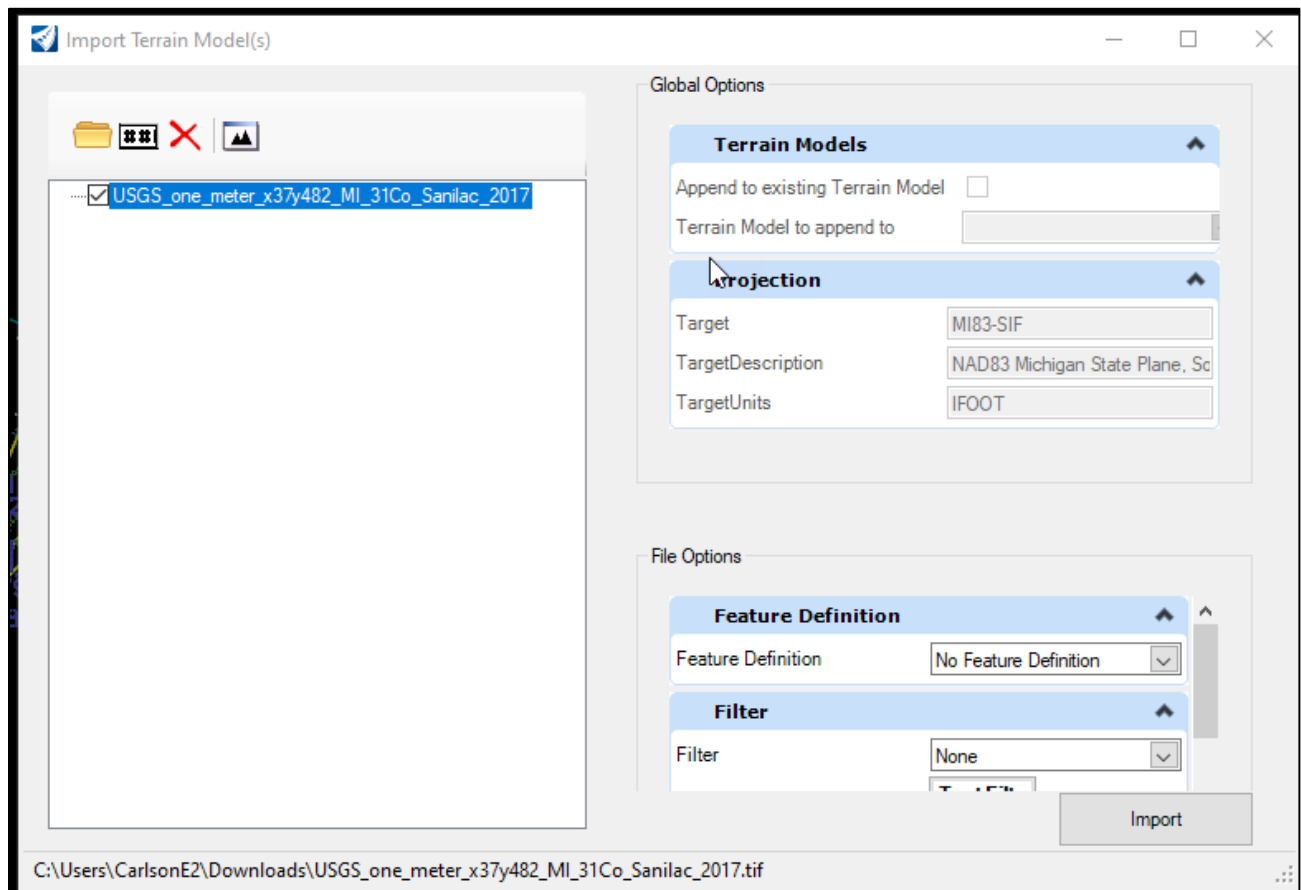
- After verifying the coordinate system, create a new terrain in ORD using the DEM .tif file downloaded in Steps 1 and 2. In the search box, enter “terrain” and select “Create Terrain Model From File.”



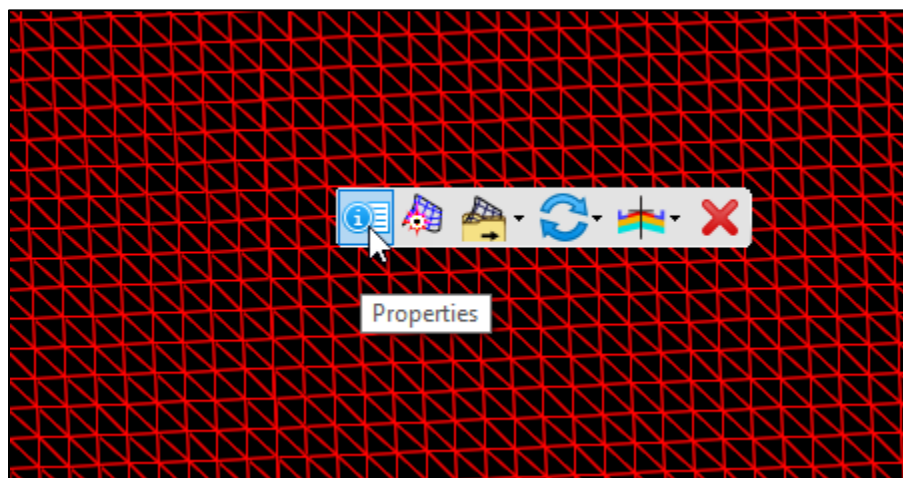
- a. In the file selection dialog box, select “TIF File (*.tif)”. Select the appropriate DEM (.tif) file, then select “Done”.



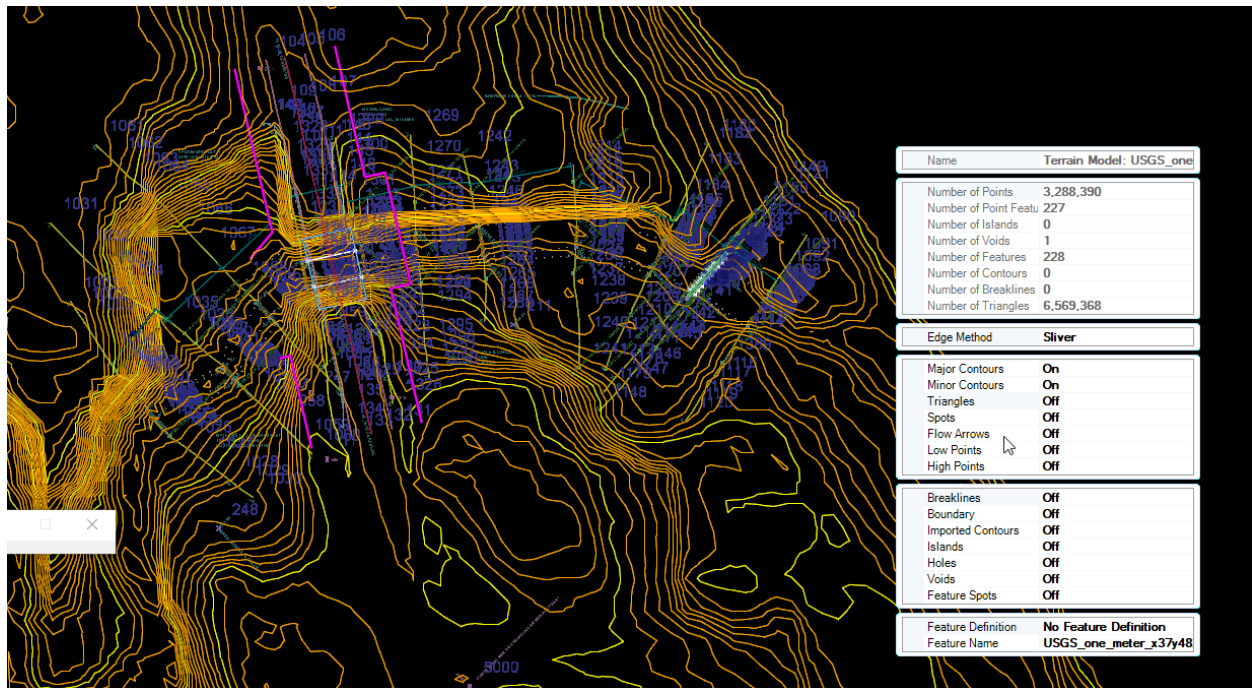
b. Select “Import.”



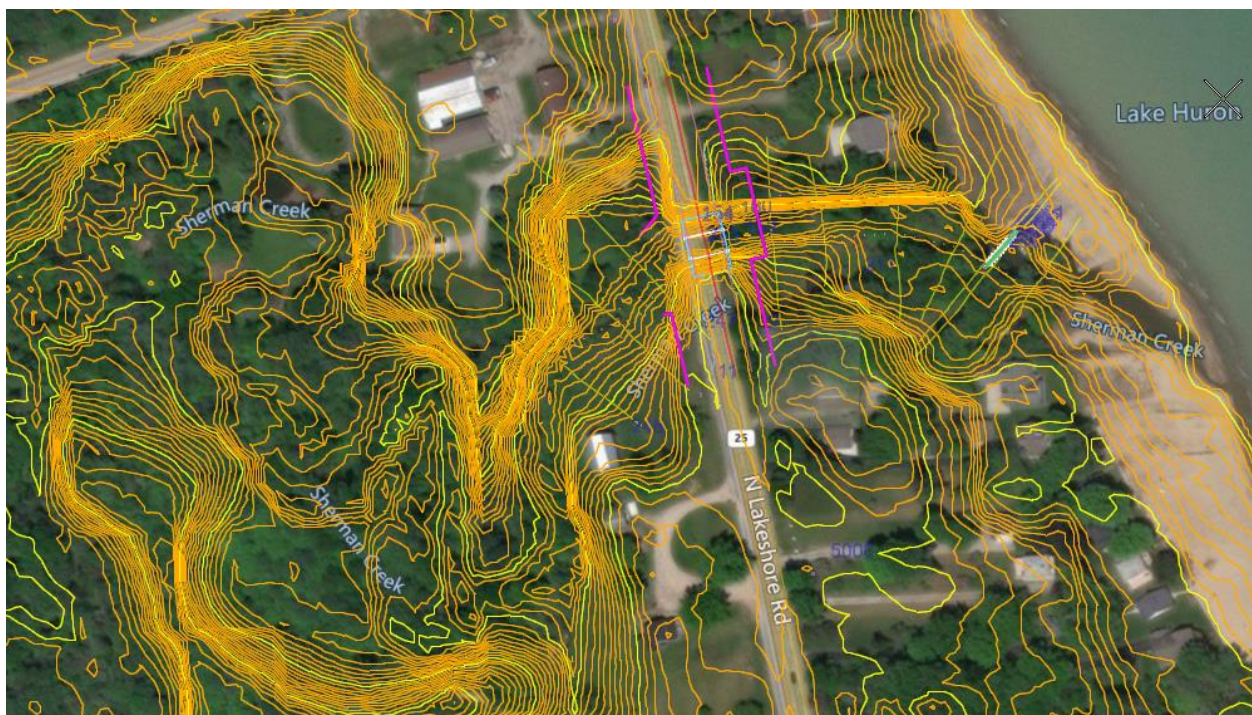
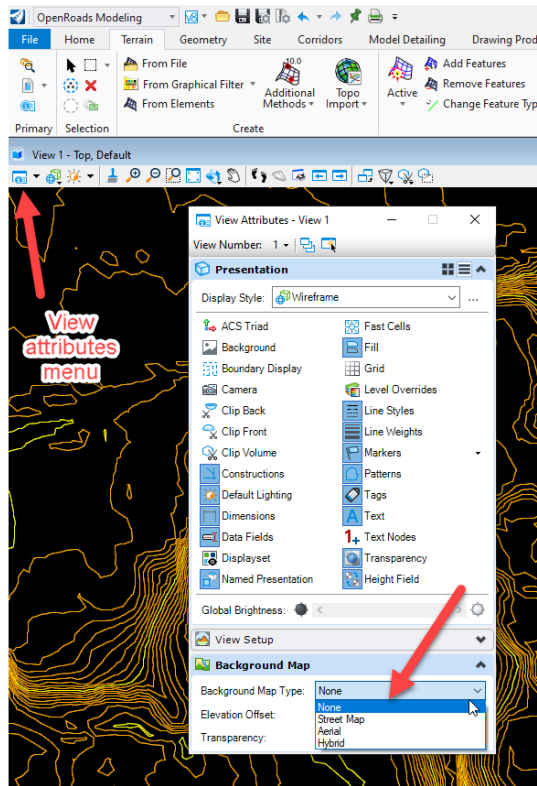
5. Select a triangle within the terrain model. When the shortcut toolbar appears, select Properties.



6. Turn Major and Minor Contours on and turn Triangles off to display the contours. To verify contour elevations using the elevation information provided when a contour is selected or pointed to.



- Open View Attributes and select the appropriate image from the Background Map Type list. Hybrid is recommended.



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