

*Plan Production –
Civil Geometry & Civil Cells for
2D FDOTSS4 OpenRoads*



Production Support Office | CADD



Vern Danforth

Session Topics

PowerGEOPAK SS4 Civil Tools in FDOTSS4

- ◆ Rule based design and why?
- ◆ Horizontal Geometry
- ◆ Civil Cells



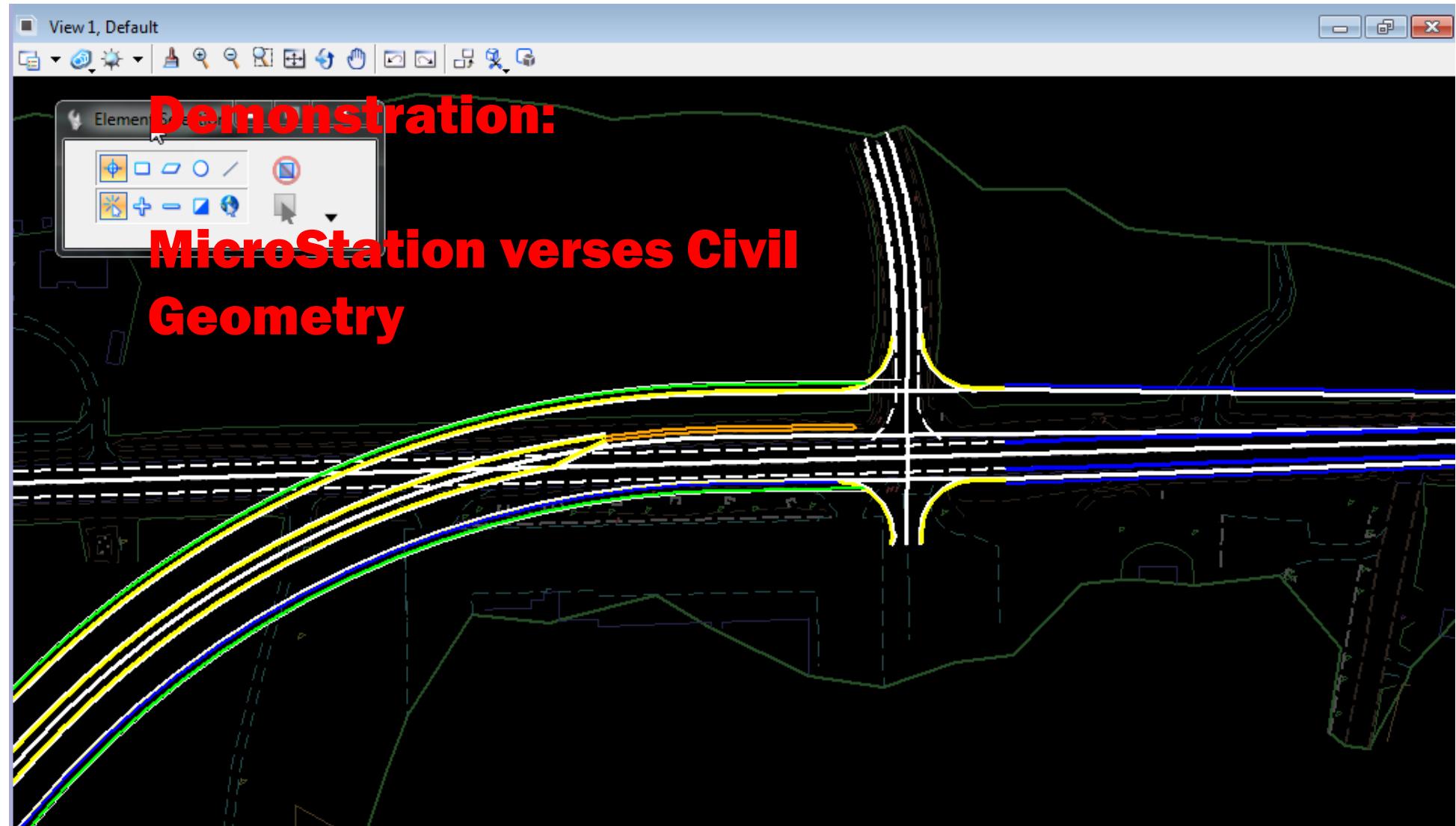
Rule based design and why?

- ◆ Design changes will update “heal”:
 - ✓ 2D geometry
 - ✓ Profiles (if ruled to the existing terrain or another profile)
 - ✓ 3D Model
 - ✓ Pay item elements
 - ✓ Plan Sheets via reference files
 - ✓ Cross Sections (future)
 - ✓ Labels (Labels)
 - ✓ Summary of Quantity tables (future)
 - ✓ Etc.

Learning these tools will improve productivity now and for future releases!

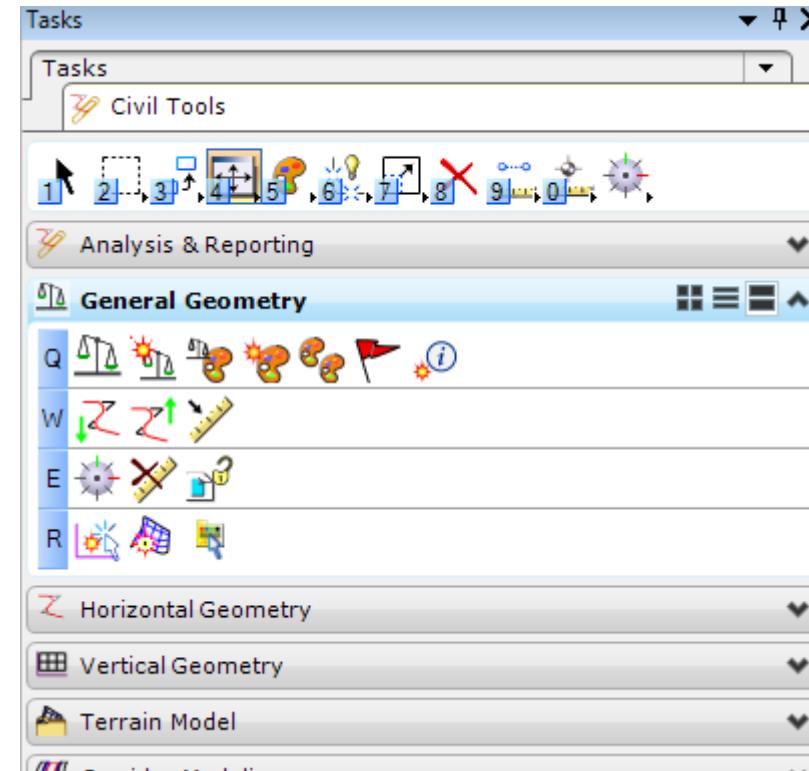


Rule based design and why?



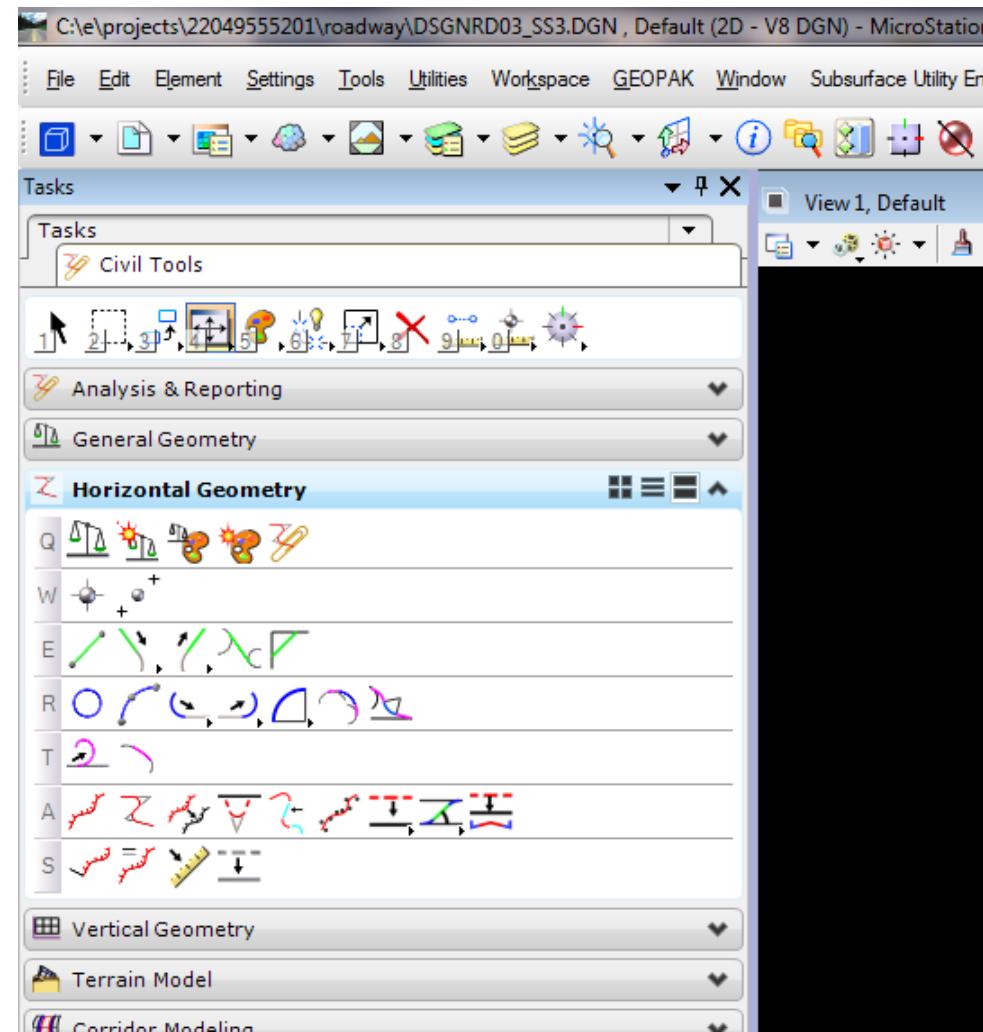
Civil Tools - General Geometry:

- ◆ Geometry Toggles
 - ✓ Design Standards
 - Feature Definitions
 - Civil Message Center
- ◆ Import/Export
- ◆ Create Civil Rule
- ◆ Civil Accudraw
- ◆ Set Active Profile/Terrain



Civil Tools – Horizontal Geometry:

- ◆ Lines Simple, To, From
- ◆ Arcs Between Elements
- ◆ Offsets and Tapers
- ◆ Complex by Elements
- ◆ Modify Civil Elements

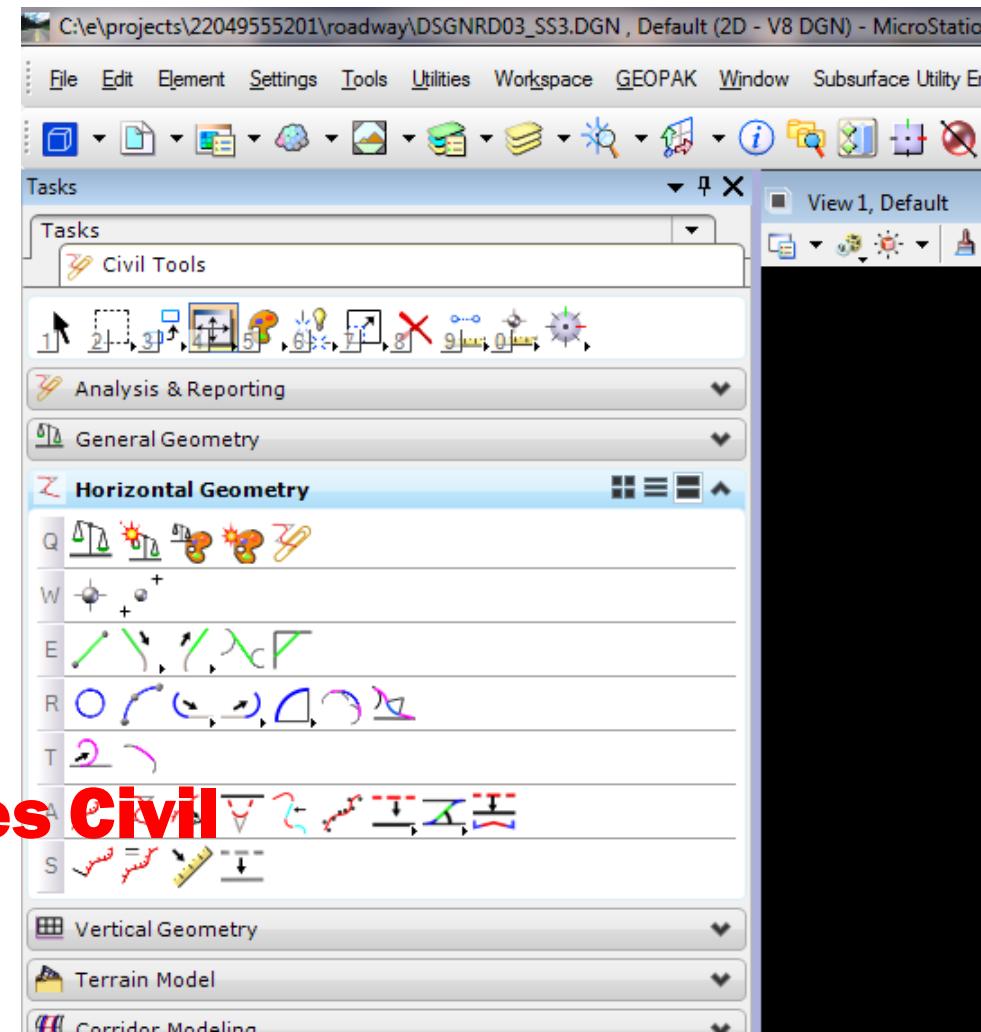


Civil Tools – Horizontal Geometry:

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- ◆ Complex by Elements
- ◆ Modify Civil Elements

Demonstration:

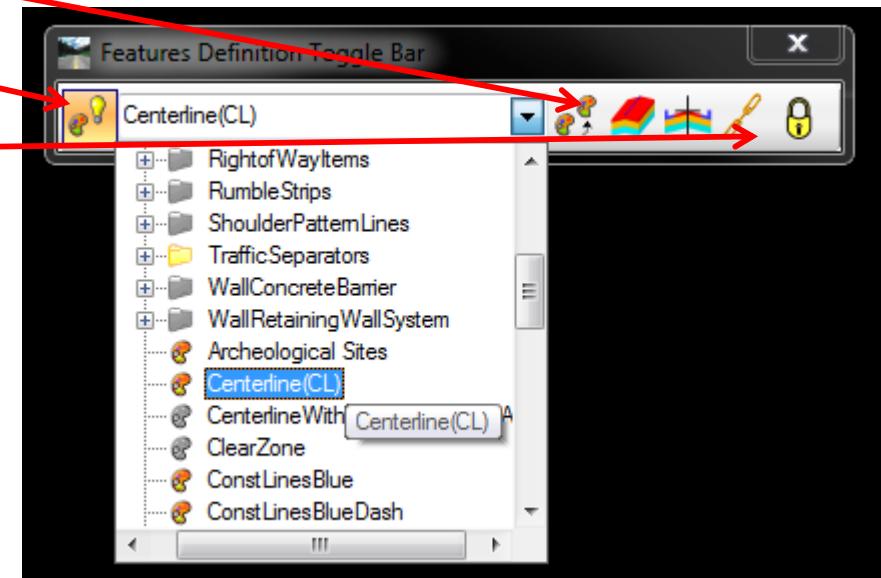
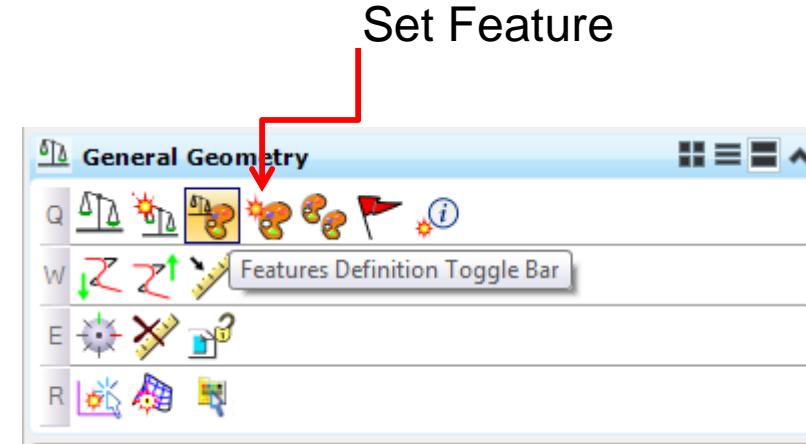
MicroStation verses Civil Geometry



Geometry Toggles

Feature Definition Toggle Bar

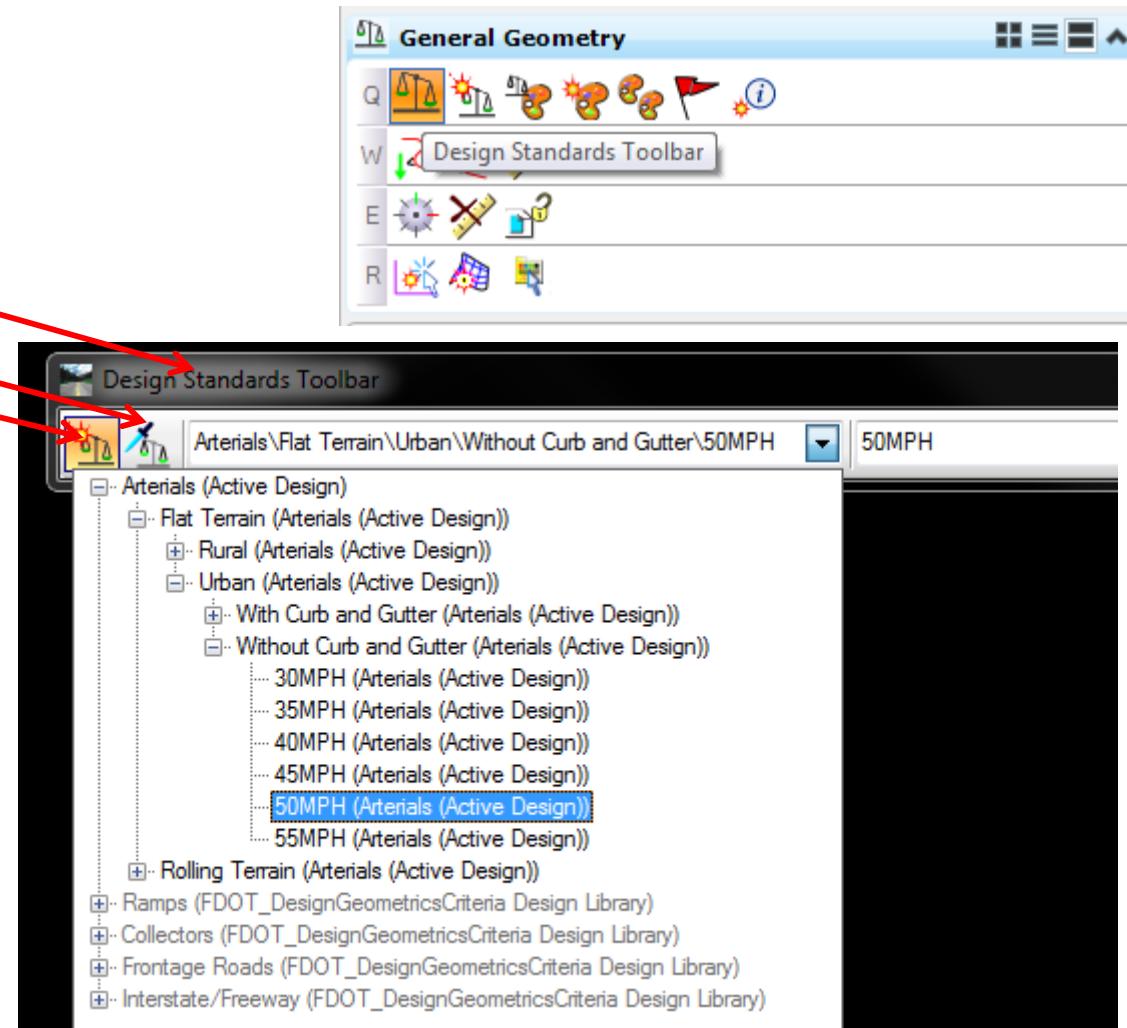
- Match
- Use Active
- Chain Feature



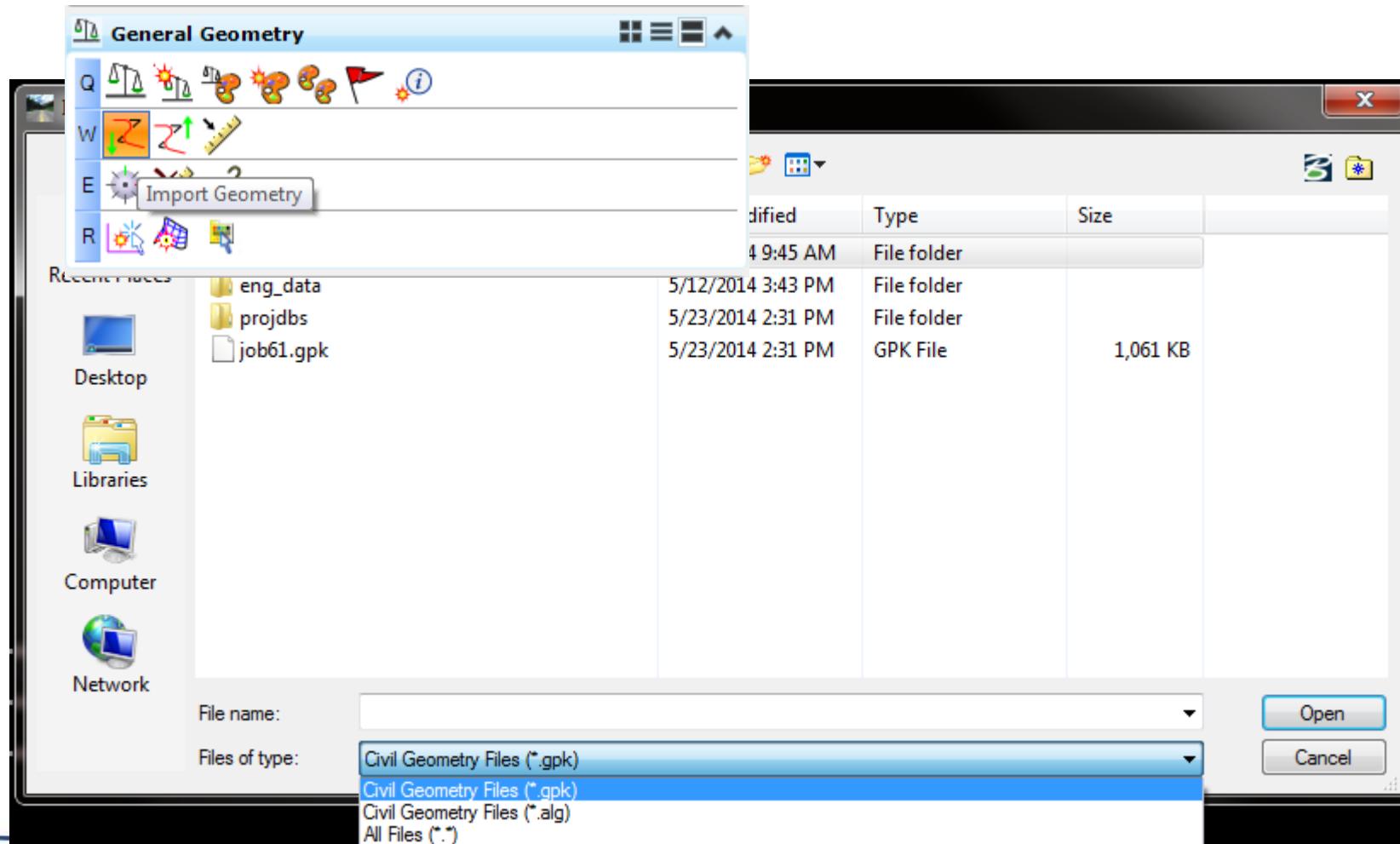
Geometry Toggles

Design Standards

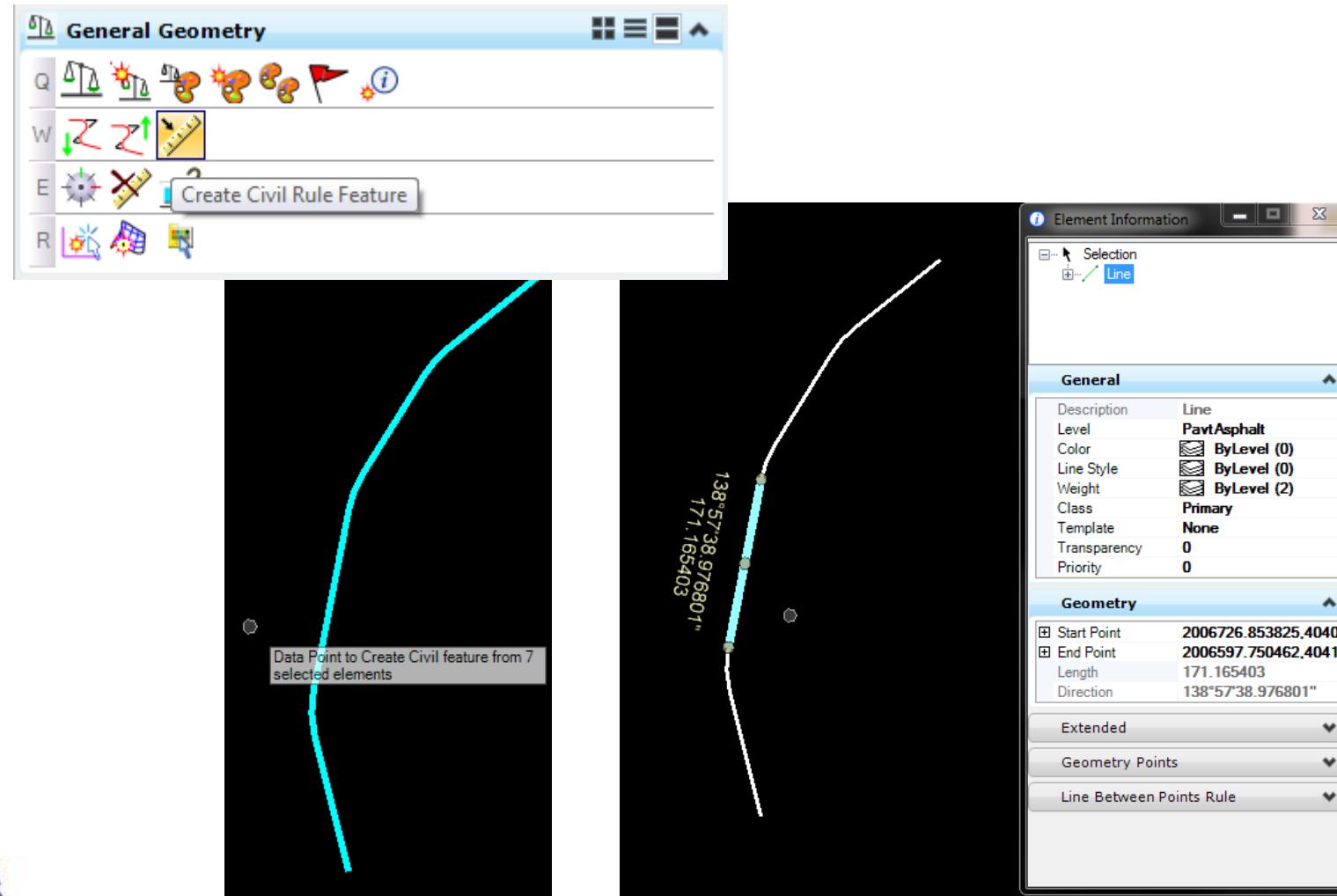
- Toolbar
- Match
- Set Active



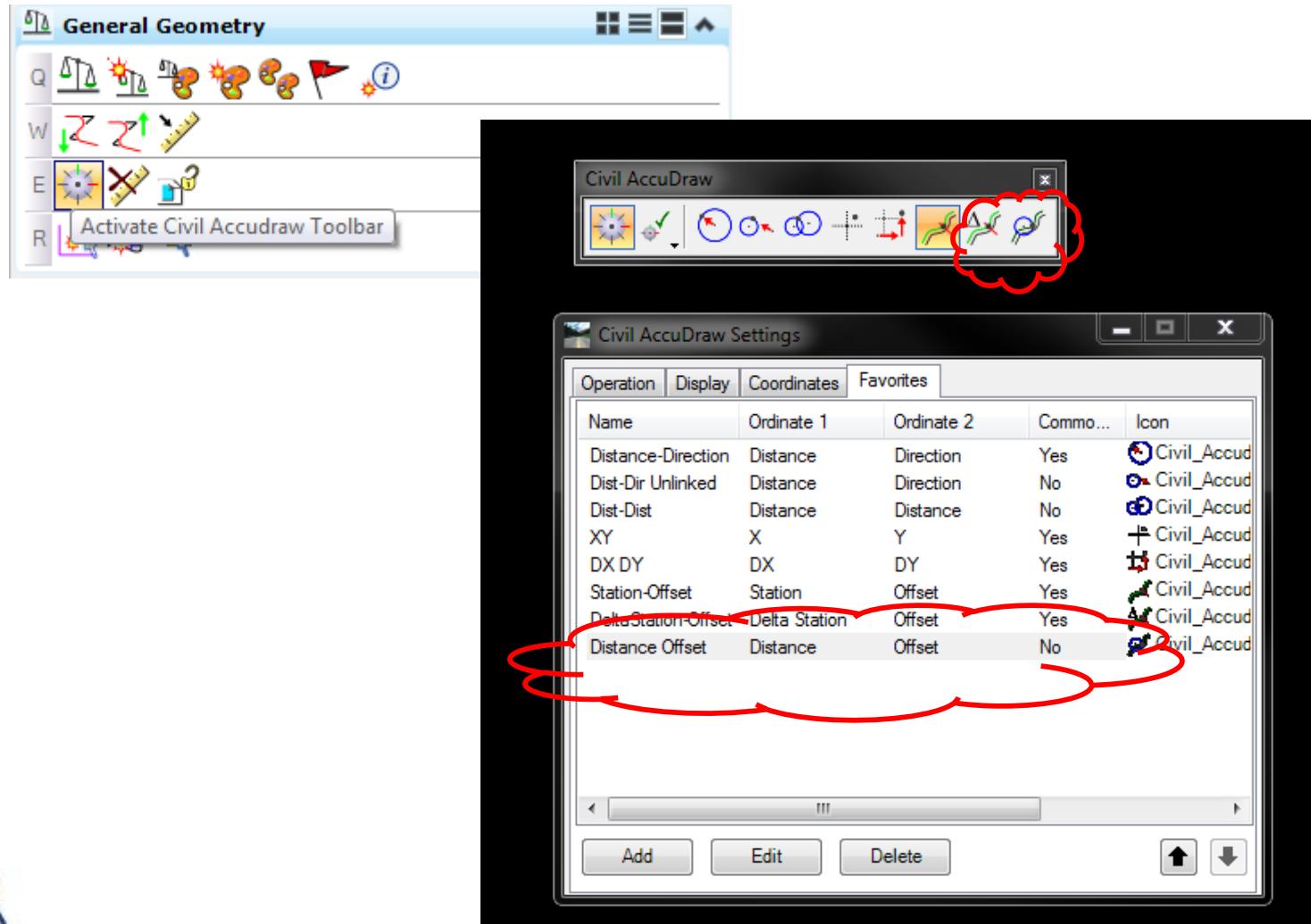
Import/Export



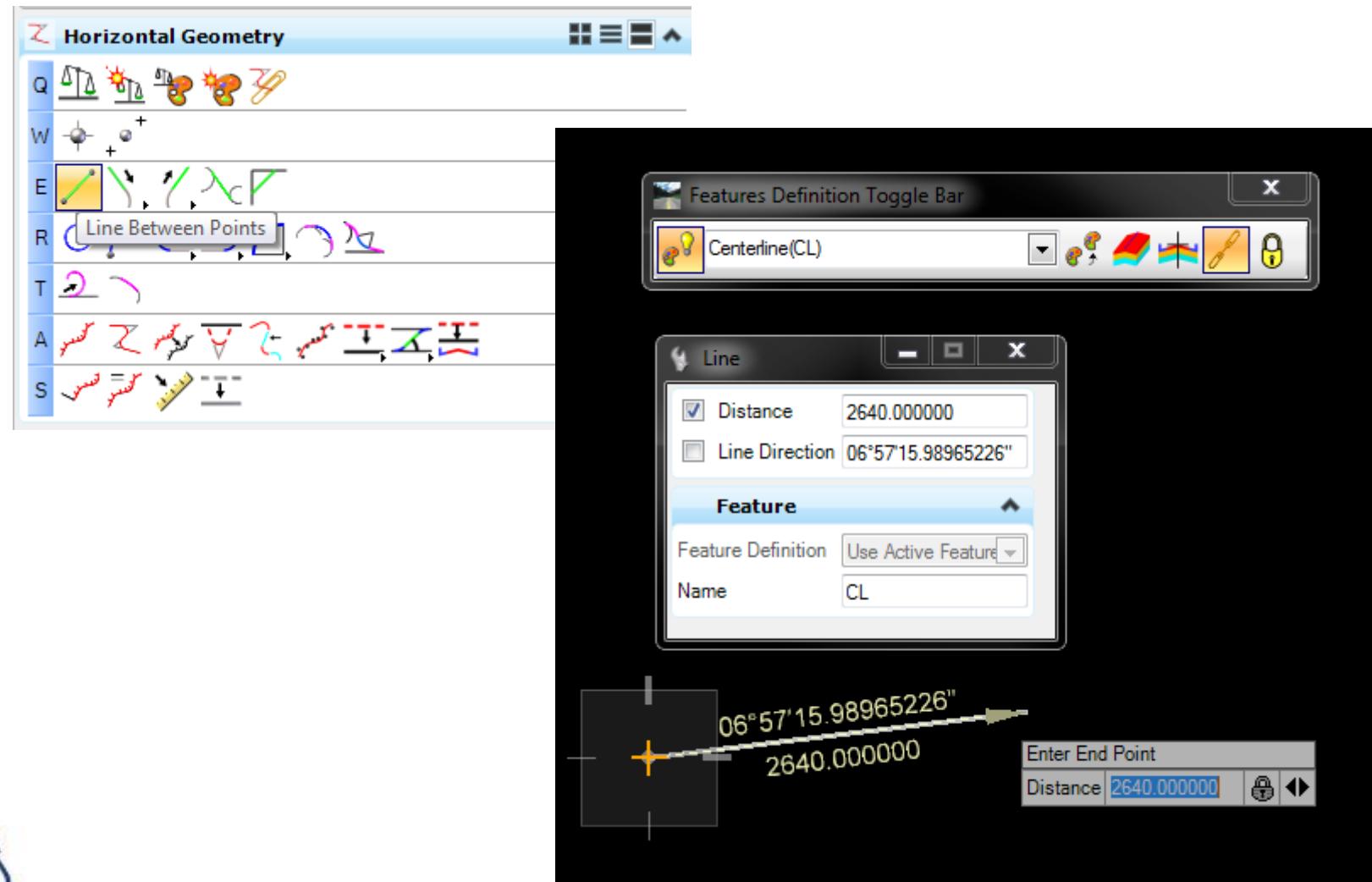
Create Civil Rule



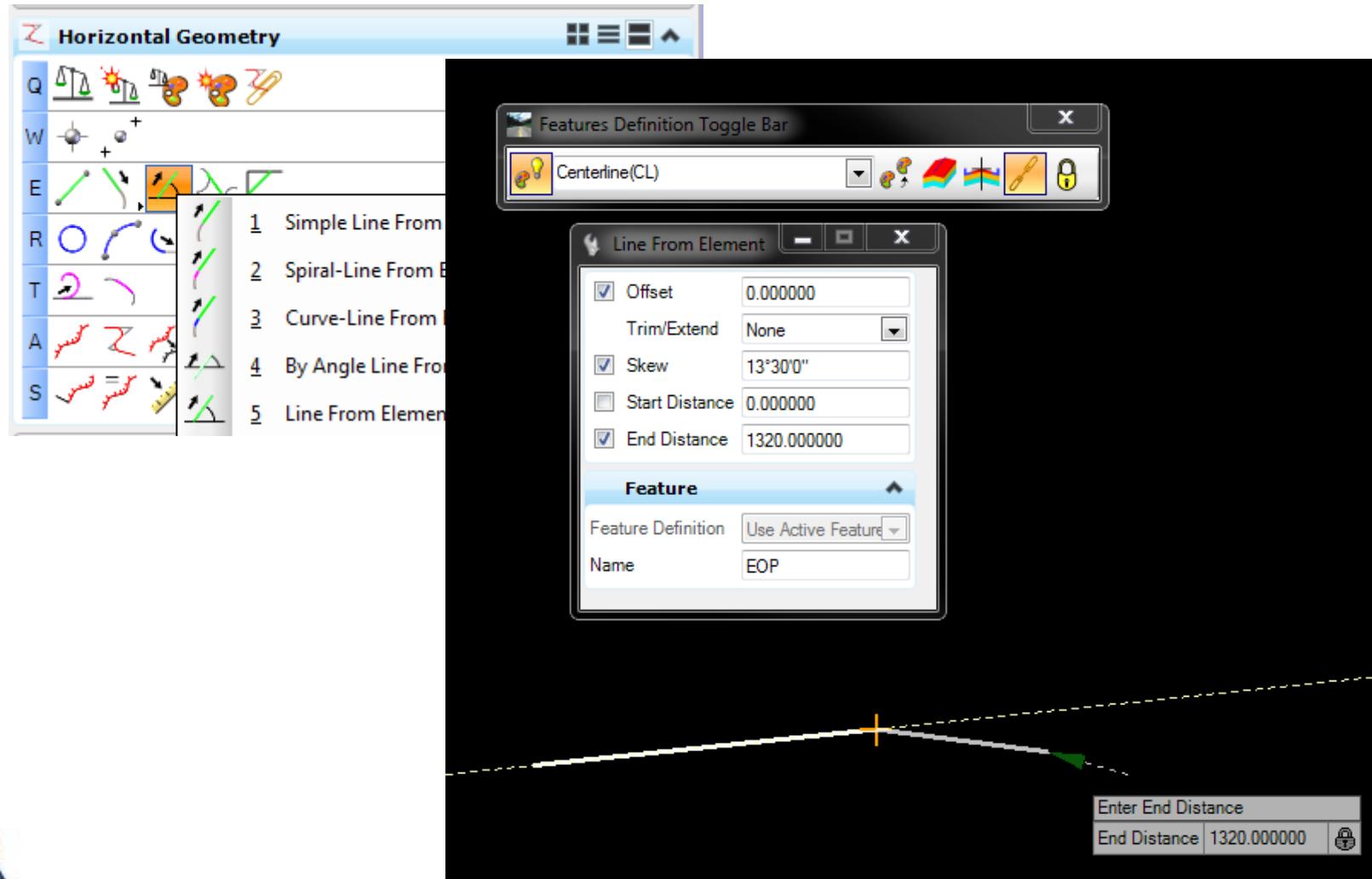
Civil Accudraw



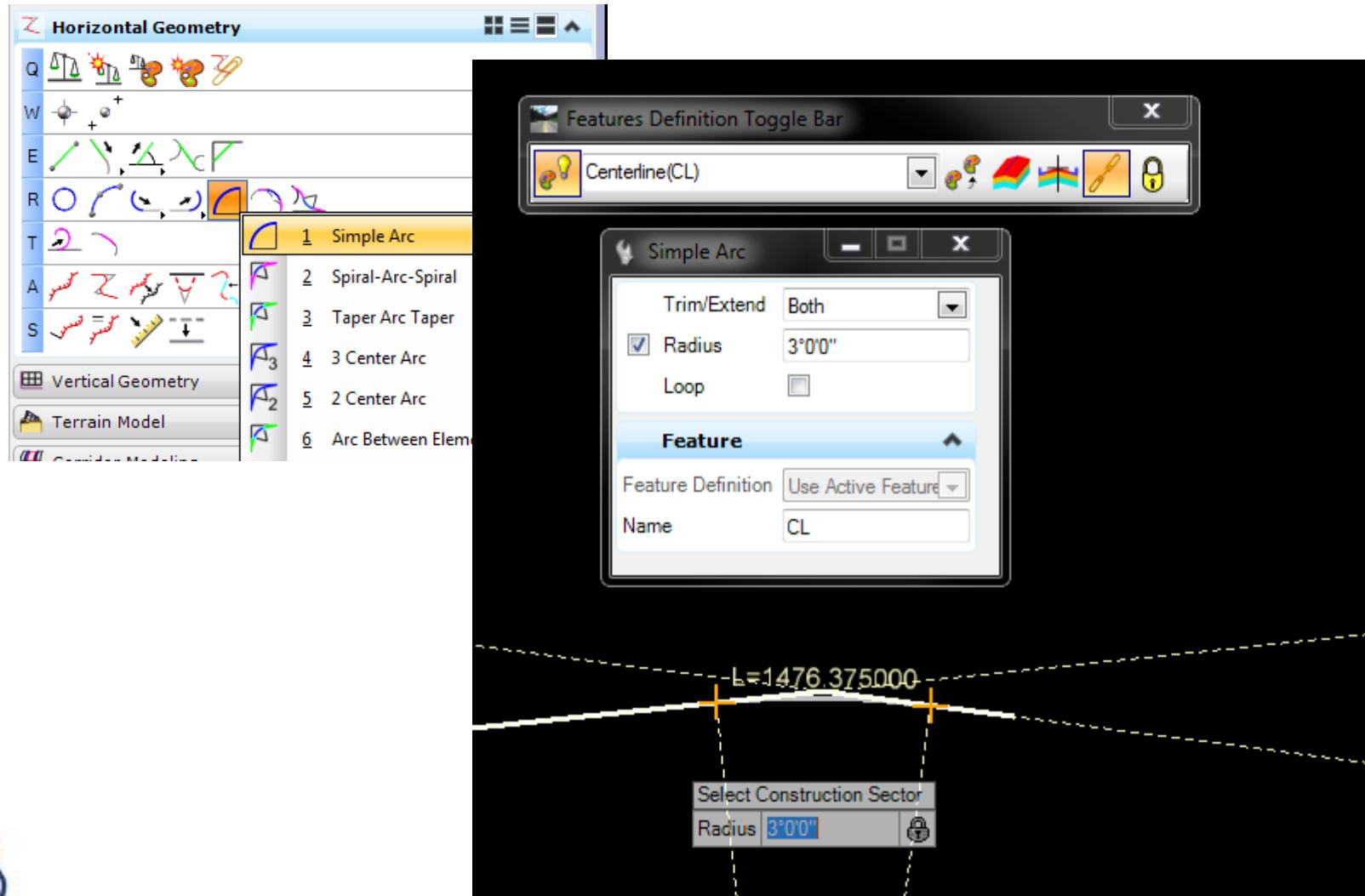
Lines; Simple, To, From



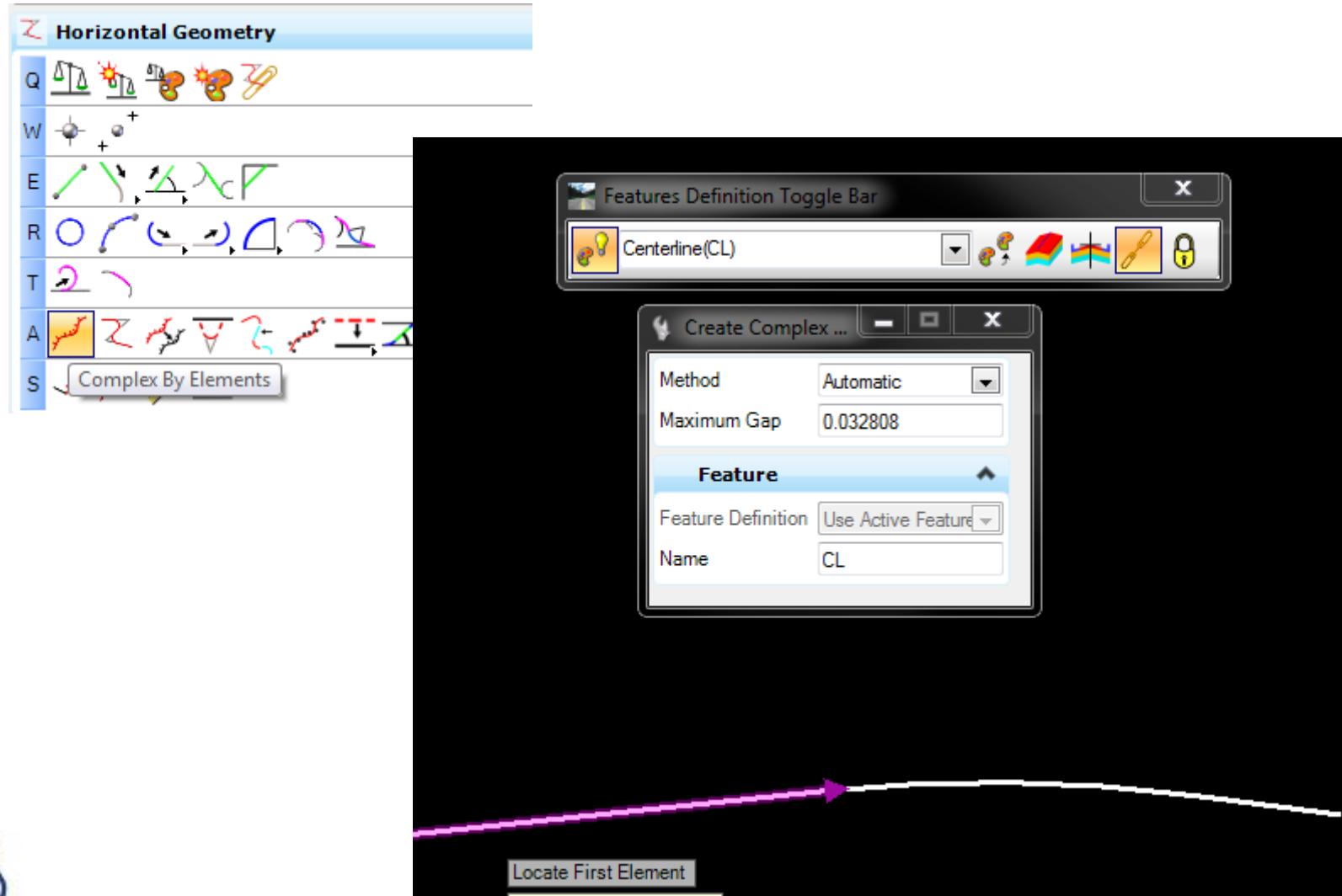
Lines; Simple, To, From



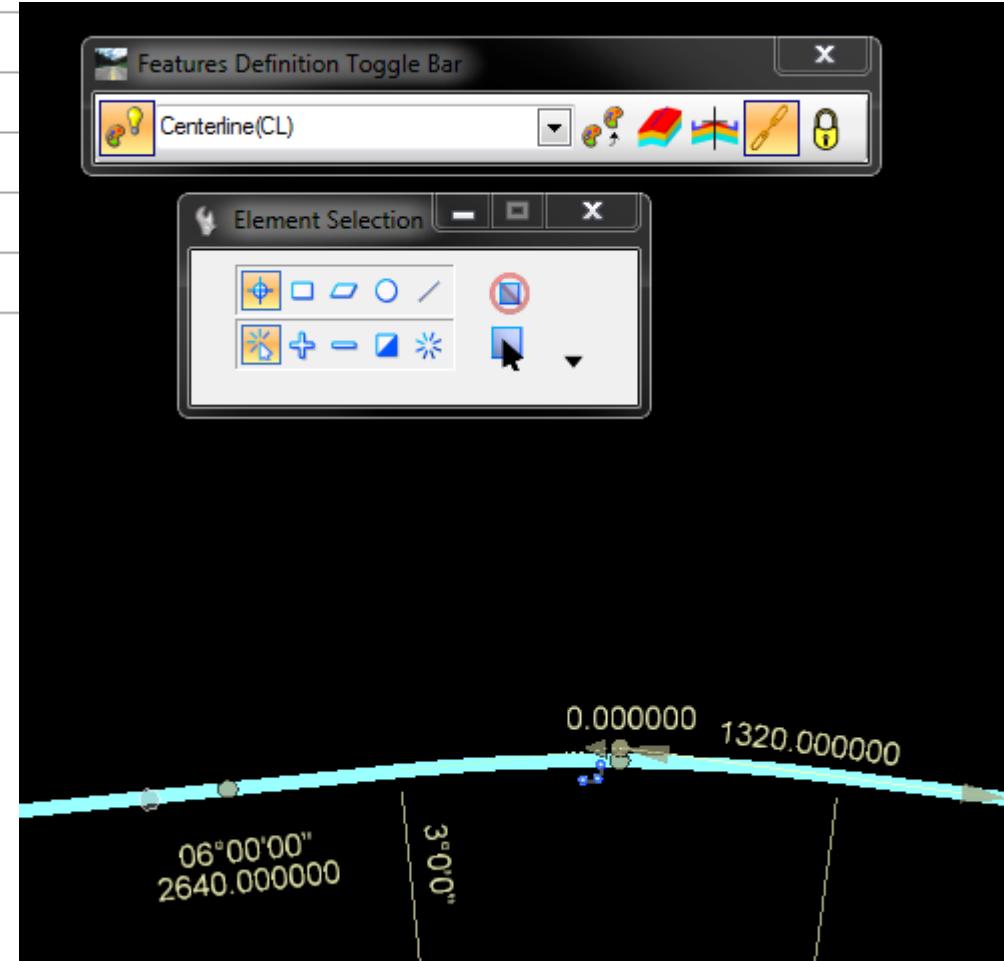
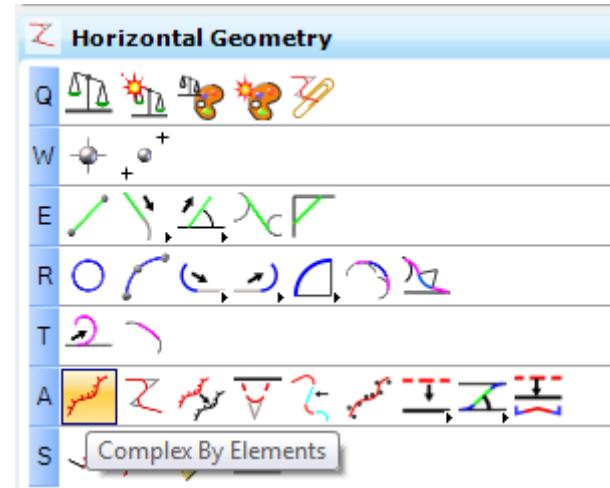
Arcs Between Elements



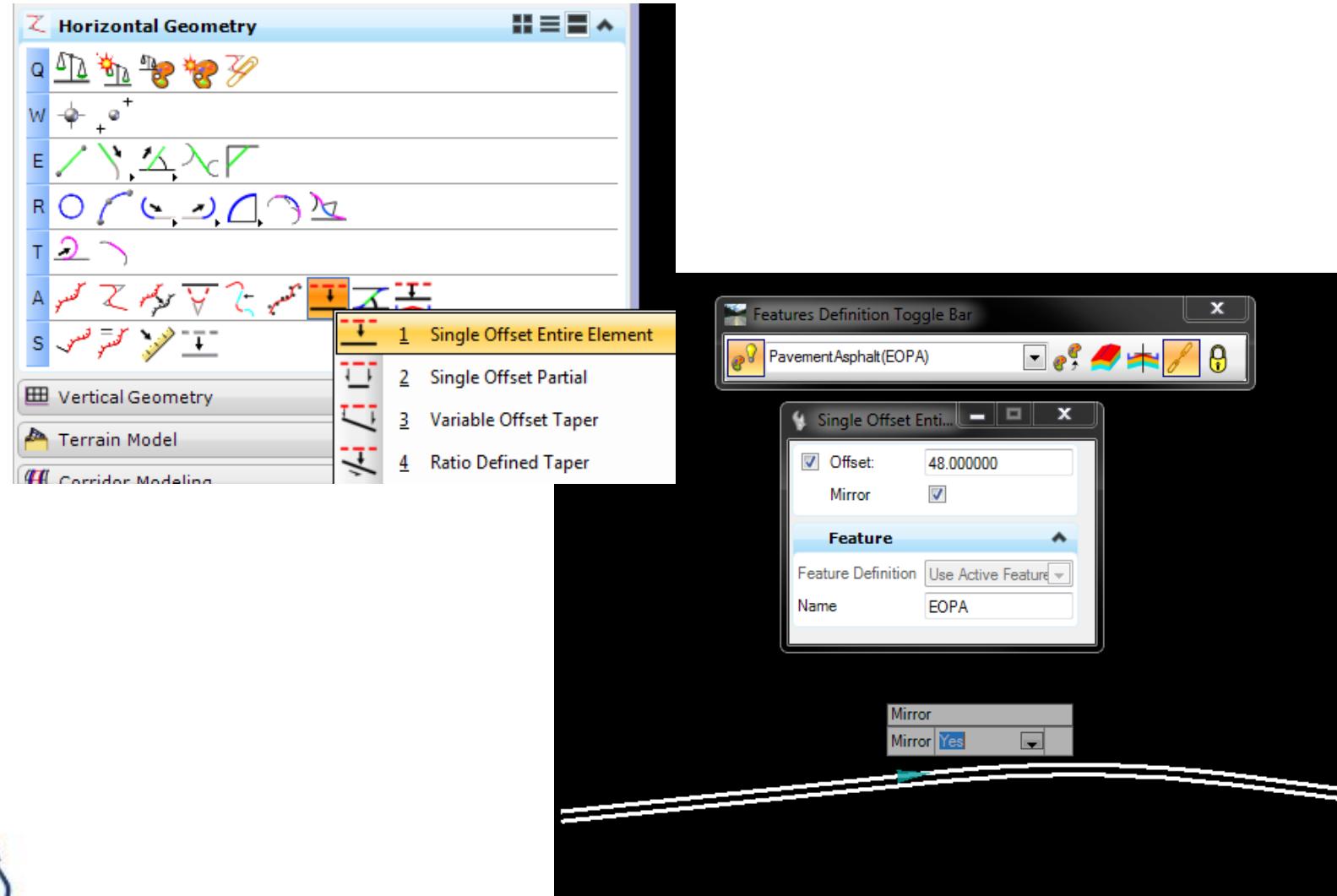
Complex by Elements



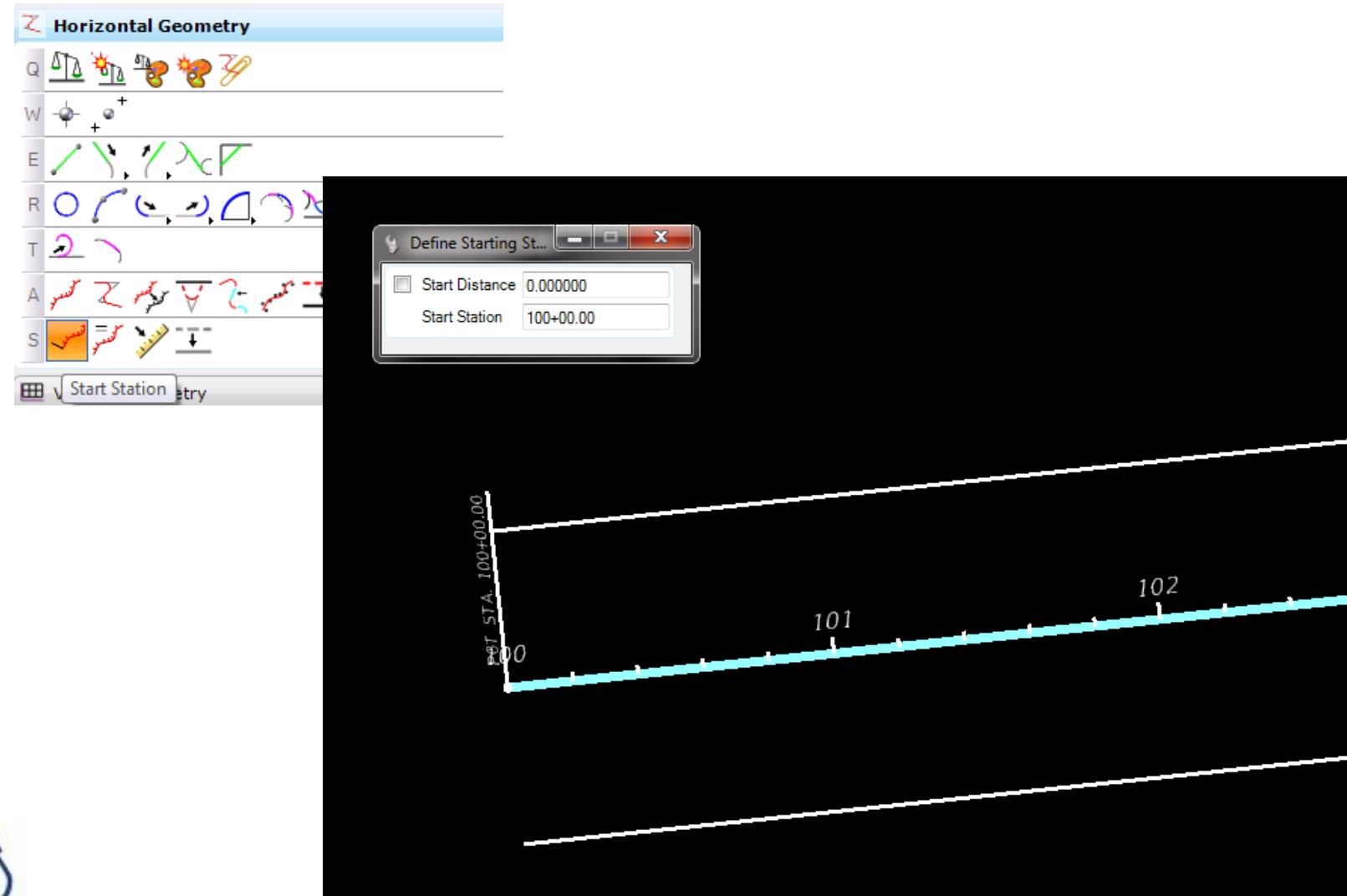
Complex by Elements



Offsets and Tapers

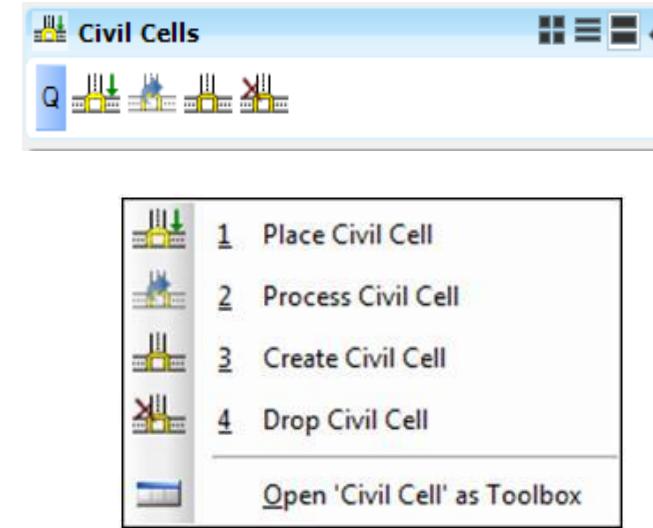


Modify Civil Elements



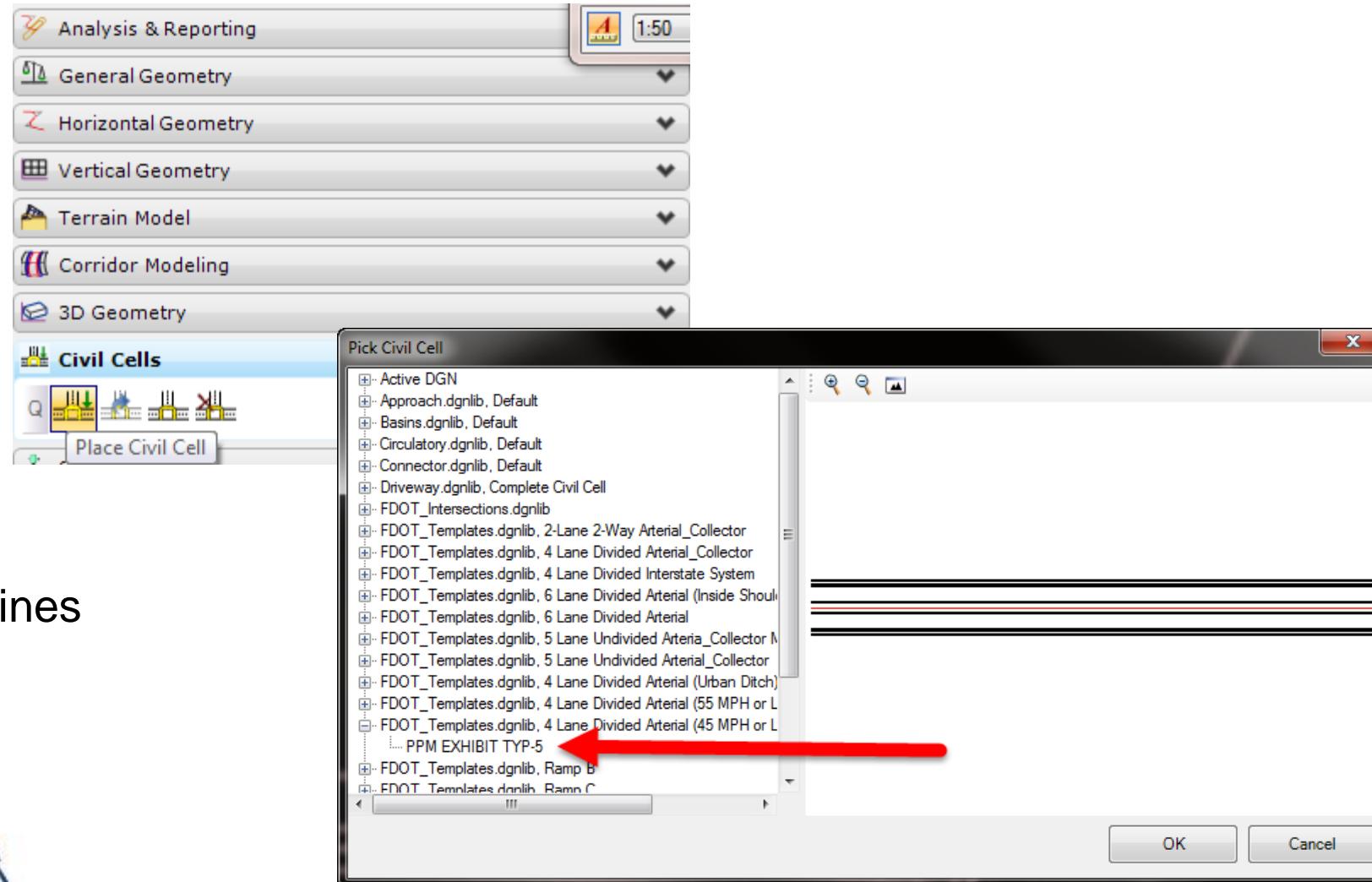
Civil Tools – Civil Cells

- ◆ Place Civil Cells
 - Draw 2D Template Lines
 - Left Turn with TS
 - Right Turn
 - Rural Sideroad
 - Urban Driveway

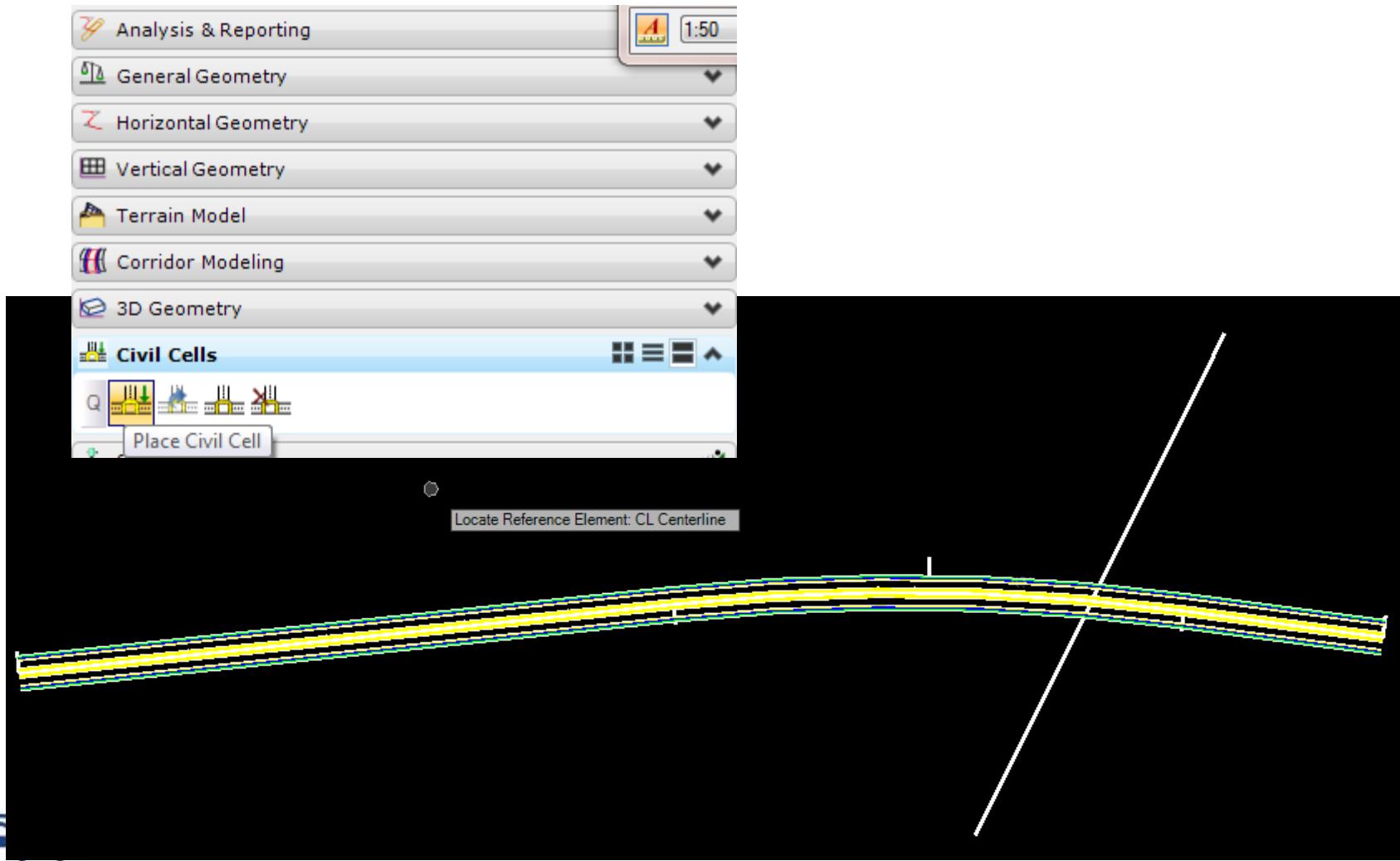


Place Civil Cells

2D Template Lines

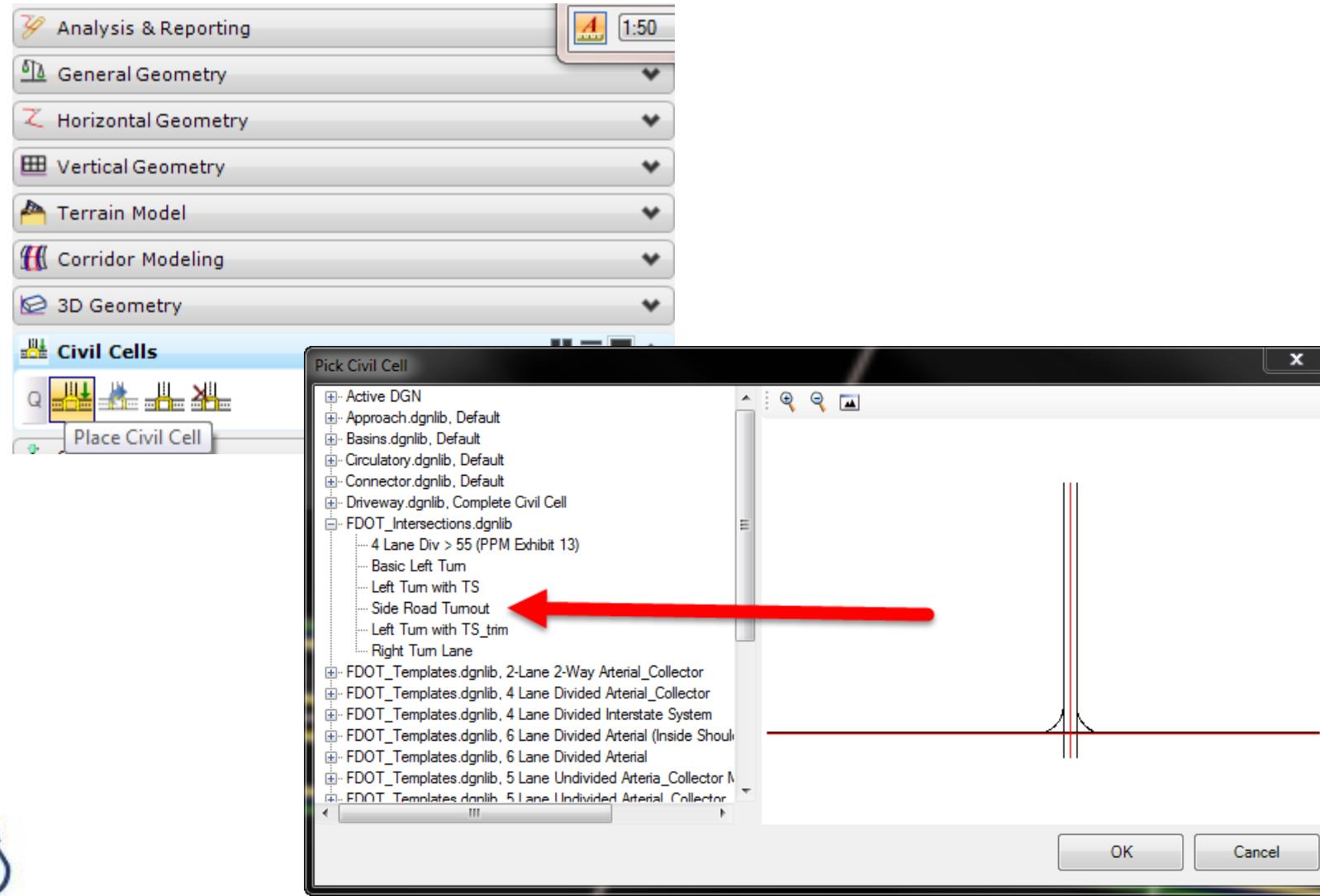


Place Civil Cells



Place Civil Cells

Side Road



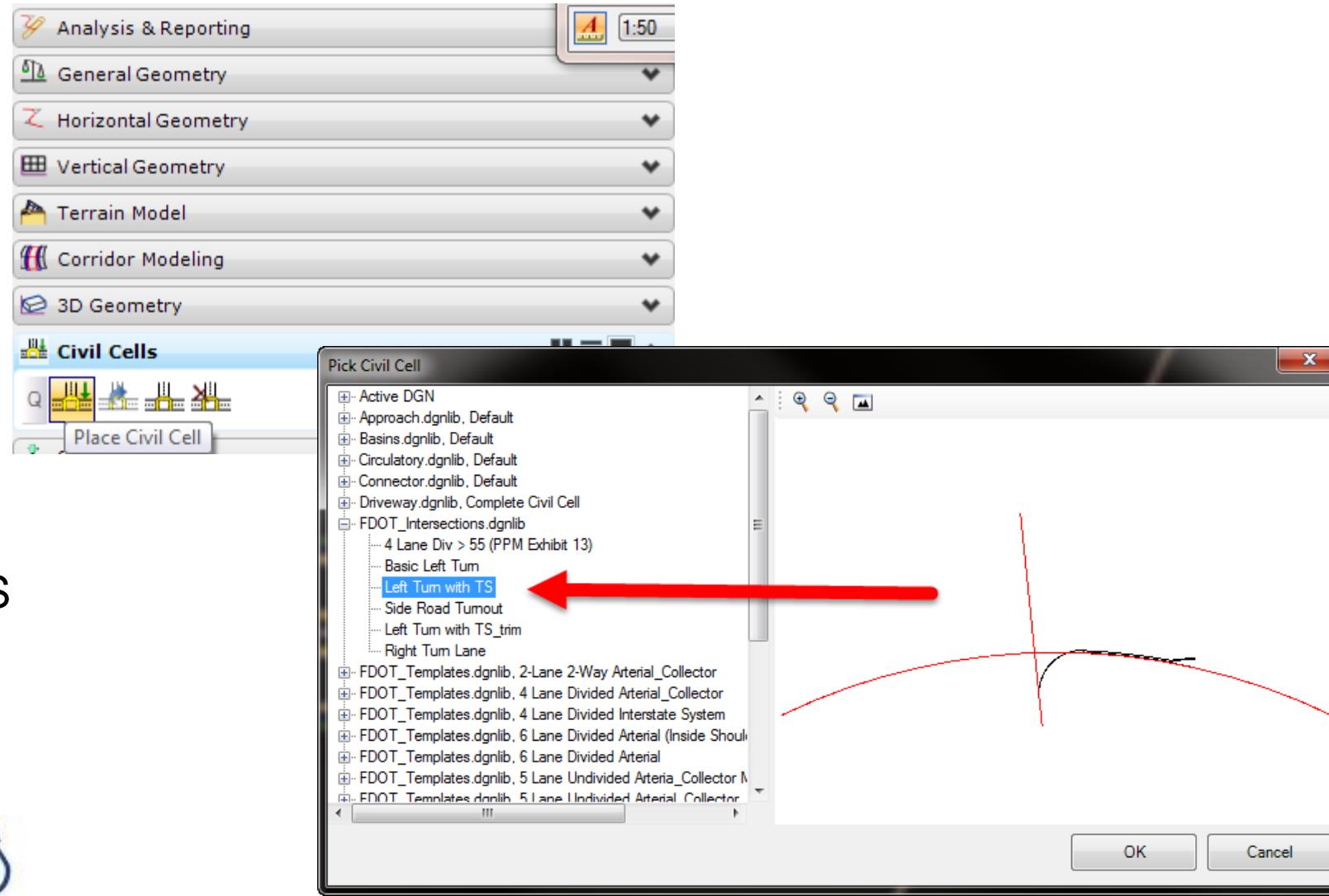
Place Civil Cells



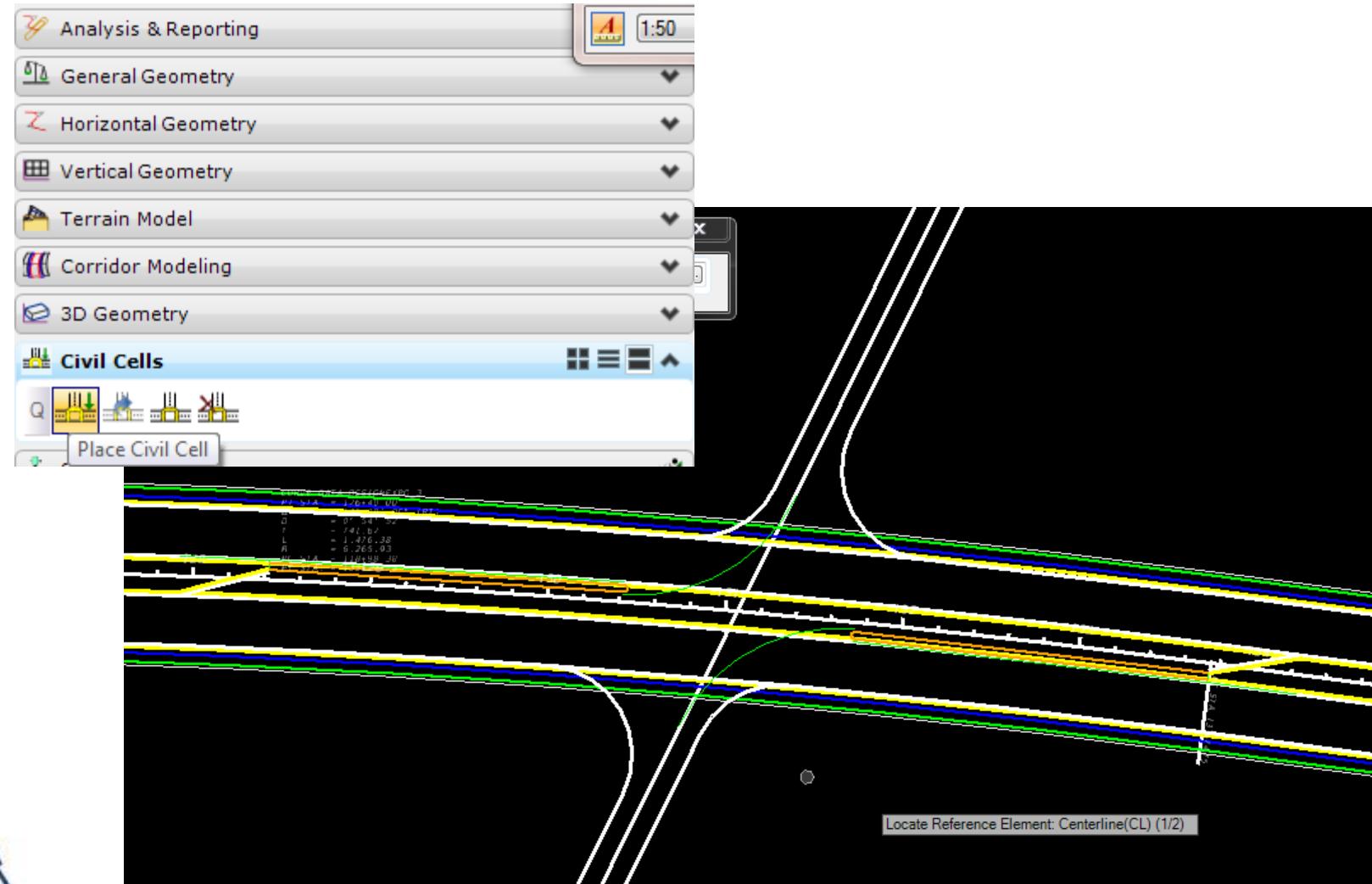
Place Civil Cells



Left Turn w/ TS

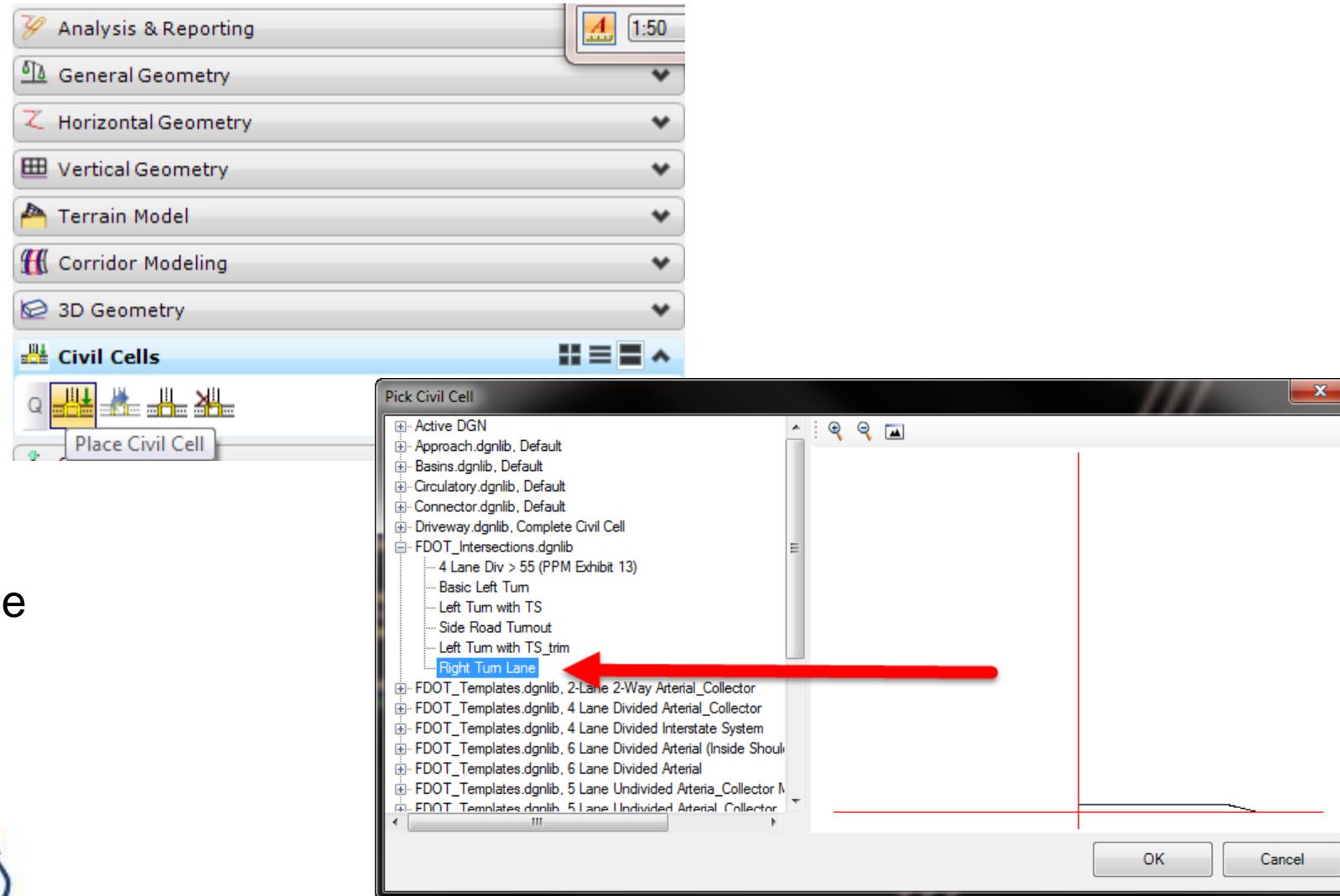


Place Civil Cells



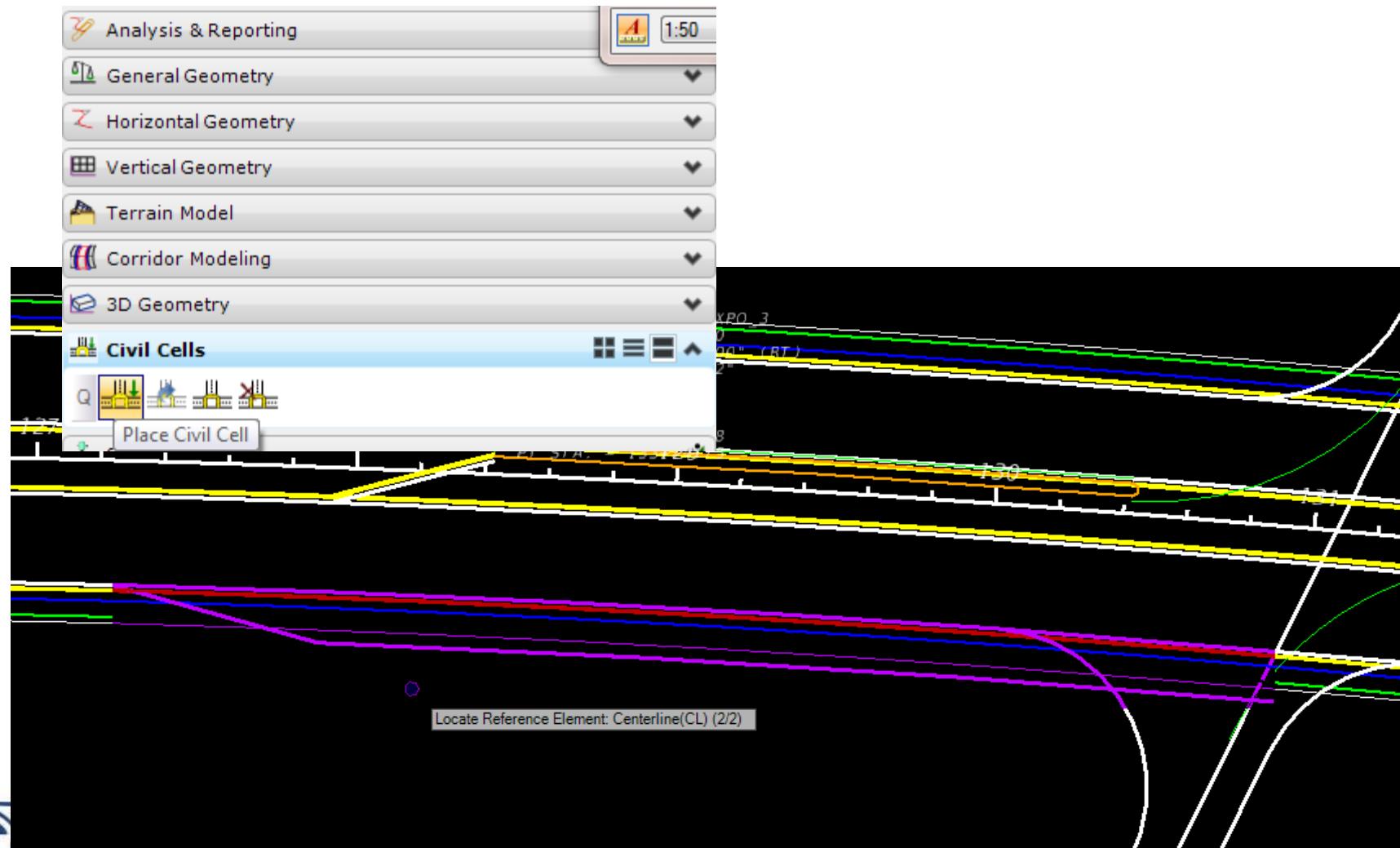
Place Civil Cells

Right Turn Lane

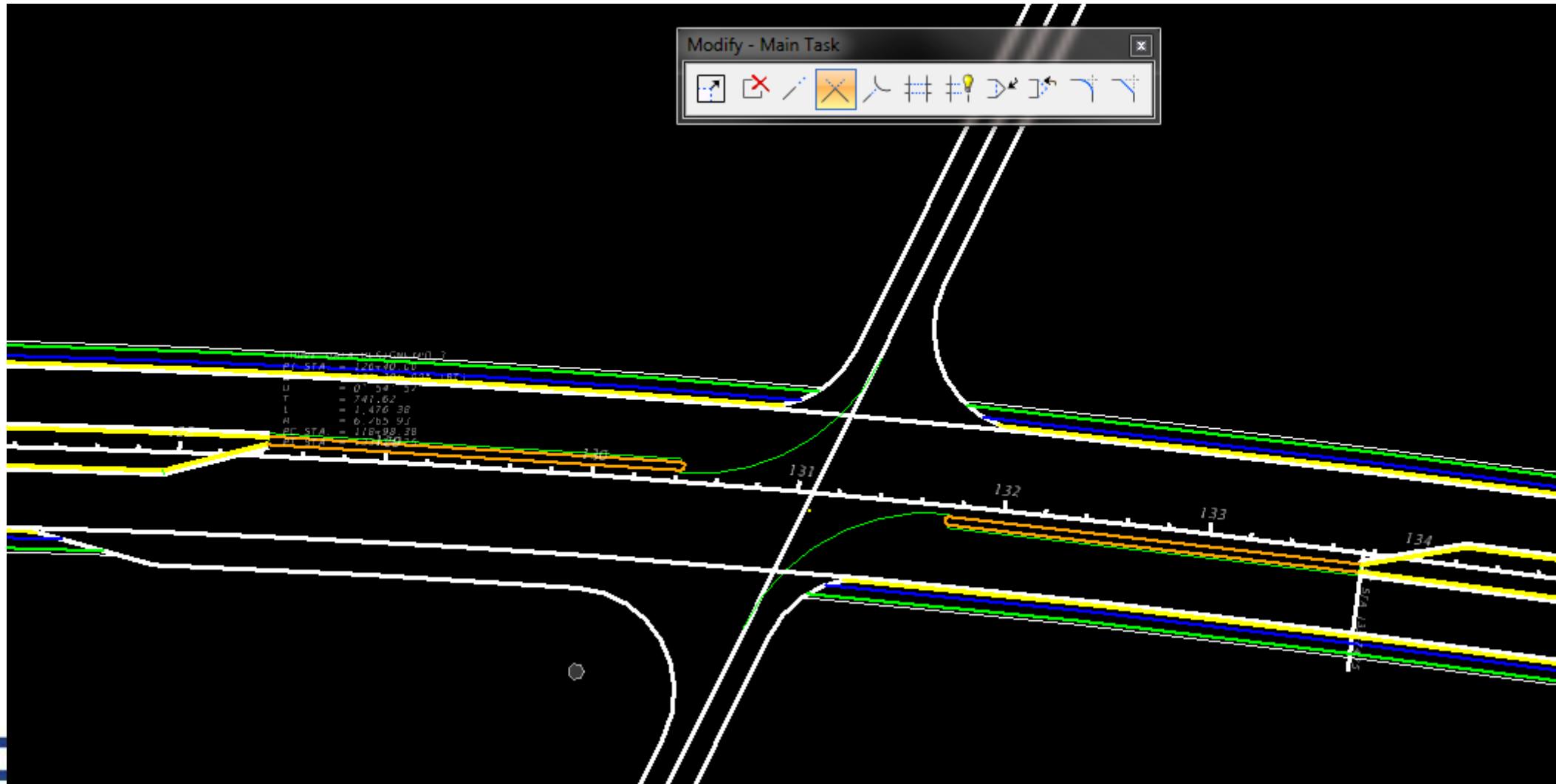


- ⊕ Active DGN
- ⊕ Approach.dgnlib, Default
- ⊕ Basins.dgnlib, Default
- ⊕ Circulatory.dgnlib, Default
- ⊕ Connector.dgnlib, Default
- ⊕ Driveway.dgnlib, Complete Civil Cell
- ⊕ FDOT_Intersections.dgnlib
 - 4 Lane Div > 55 (PPM Exhibit 13)
 - Basic Left Turn
 - Left Turn with TS
 - Side Road Turnout
 - Left Turn with TS_trim
- ⊕ Right Turn Lane
- ⊕ FDOT_Templates.dgnlib, 2-Lane 2-Way Arterial_Collector
- ⊕ FDOT_Templates.dgnlib, 4 Lane Divided Arterial_Collector
- ⊕ FDOT_Templates.dgnlib, 4 Lane Divided Interstate System
- ⊕ FDOT_Templates.dgnlib, 6 Lane Divided Arterial (Inside Shoulder)
- ⊕ FDOT_Templates.dgnlib, 6 Lane Divided Arterial
- ⊕ FDOT_Templates.dgnlib, 5 Lane Undivided Arterial_Collector M
- ⊕ FDOT_Templates.dgnlib, 5 Lane Undivided Arterial_Collector

Place Civil Cells



Modify Civil Elements

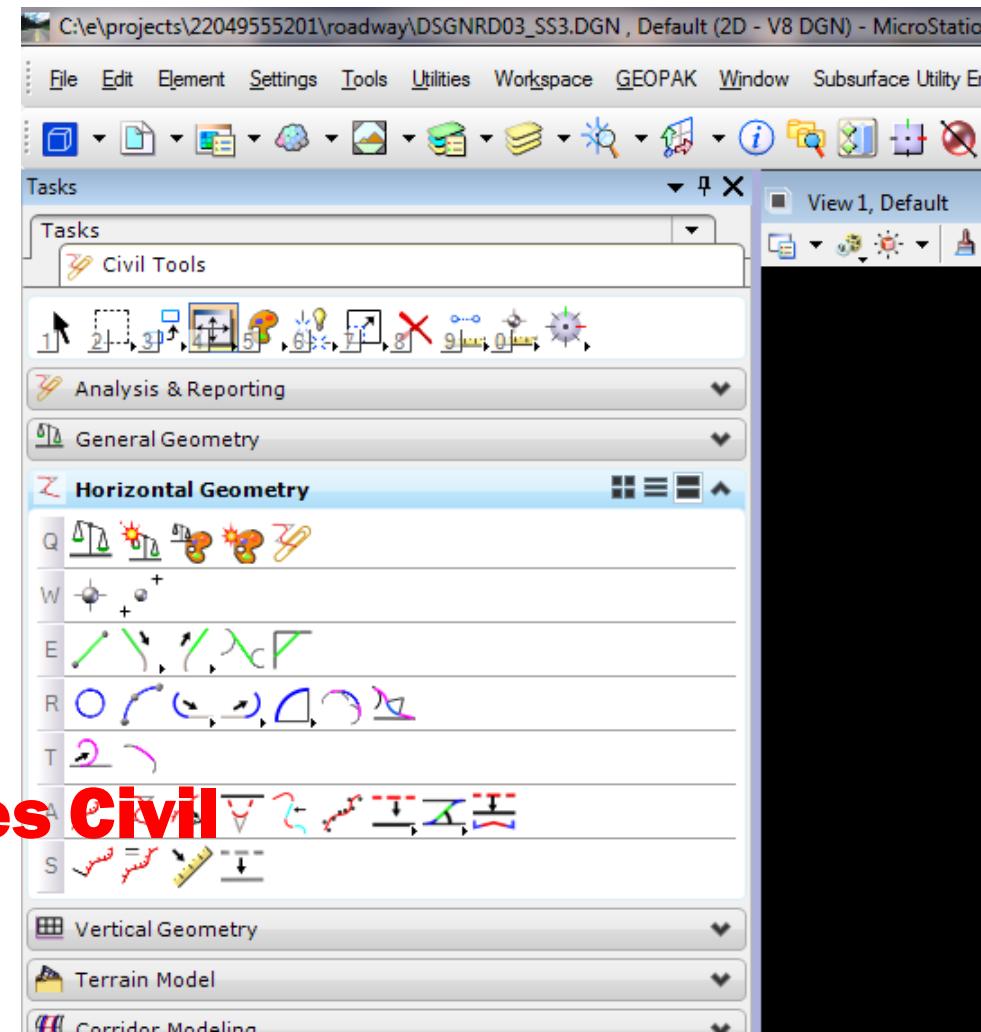


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MicroStation verses Civil Geometry



Contact Information

Vern Danforth P.E.
CADD Office Engineer/ Coordinator
Phone no: (850) 414-4897
Toll Free no: (866) 374-3368 extension 4897

Florida Department of Transportation
Production Support CADD Office
605 Suwannee Street, Mail Station 69
Tallahassee, Florida 32399-0450

Email: vern.danforth@dot.state.fl.us

Alternate: cadd.support@dot.state.fl.us

