



Geometry Creation Made Simple



Intro

Geometry Creation Made Simple



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*Create complex geometry in a simple way
– use civil Accudraw*



Learning Objectives

After this session you will be able to:

- understand the difference between AccuDraw and Civil AccuDraw
- define what Civil AccuDraw is.
- identify examples where Civil AccuDraw can be effectively used.

What is AccuDraw?

“AccuDraw is a drafting aid that evaluates such parameters as your current pointer location, the previously entered data point, the last coordinate directive, the current tool's needs, and any directive you have entered via shortcut key-ins or AccuDraw options. AccuDraw then generates the appropriate and applies them to the active tool.”

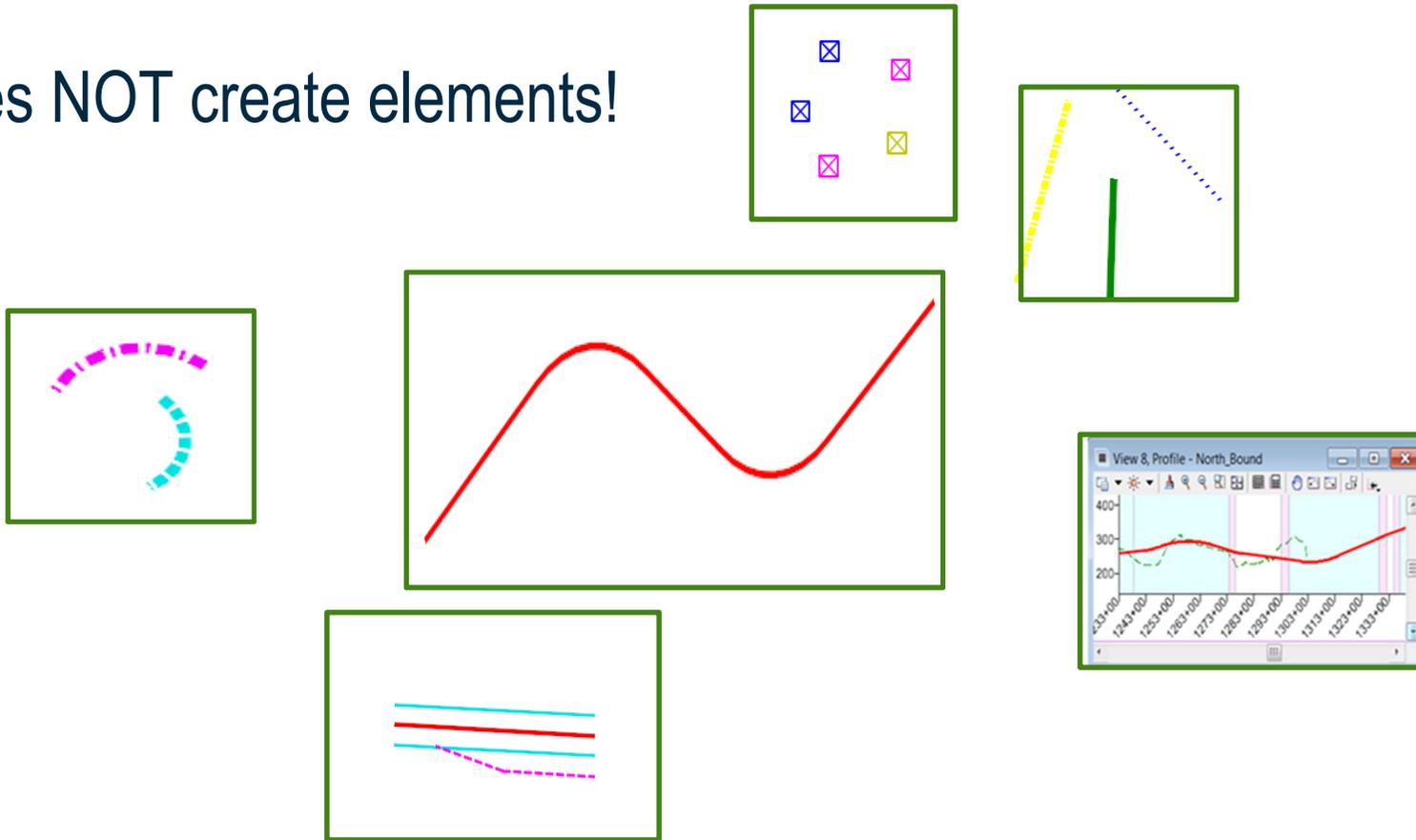
What does Civil AccuDraw do?

Drafting aid just like AccuDraw

- Provides point input to any Civil command or construction which needs a point.
- It does this in ways tailored to civil workflow.
- Any command which uses points as part of their input can be fed by Civil Accudraw.
- Civil commands can persist the Civil Accudraw data as rules on the points.

What Civil AccuDraw Does Not Do!

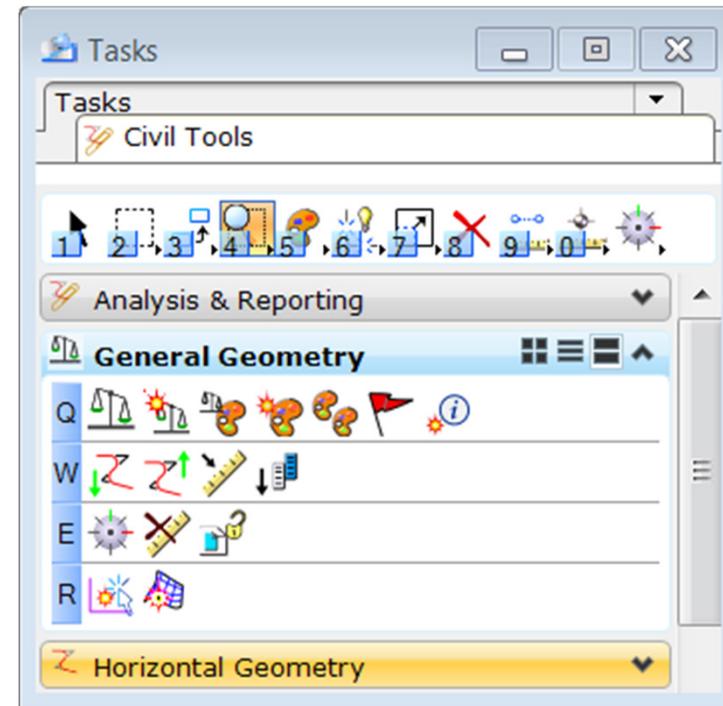
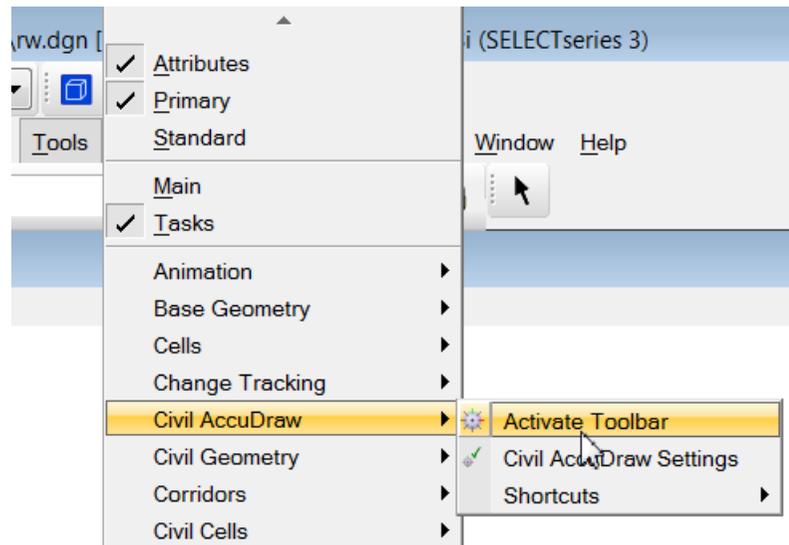
It does NOT create elements!



It feeds point input to other commands which make elements.

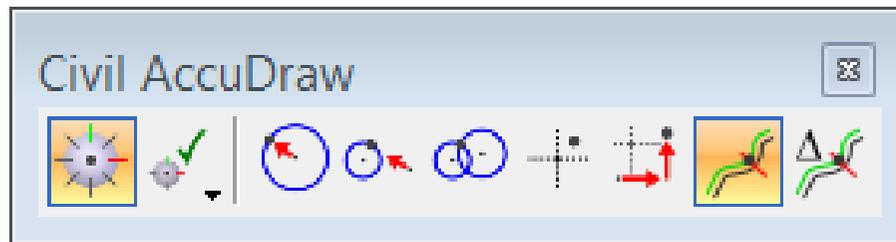
Start the Civil AccuDraw Tools

- Main Tools menu:
- Civil Tools Navigation:



The Toolbar

- Can be docked
- Provides access to all Civil AccuDraw functions

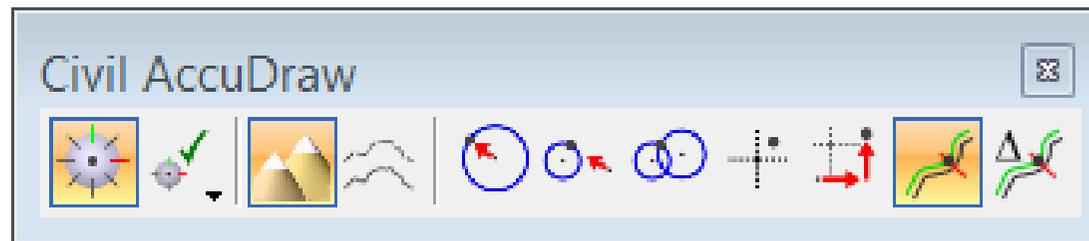


2D Plan

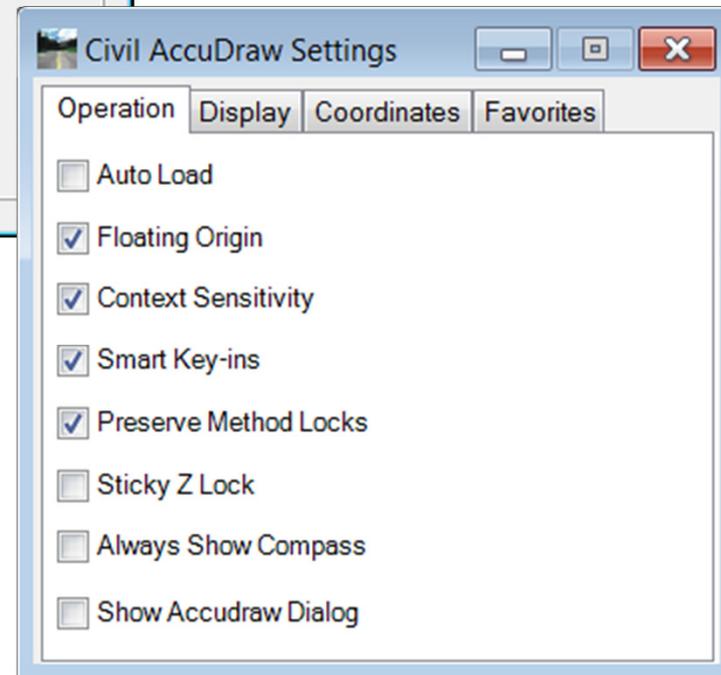
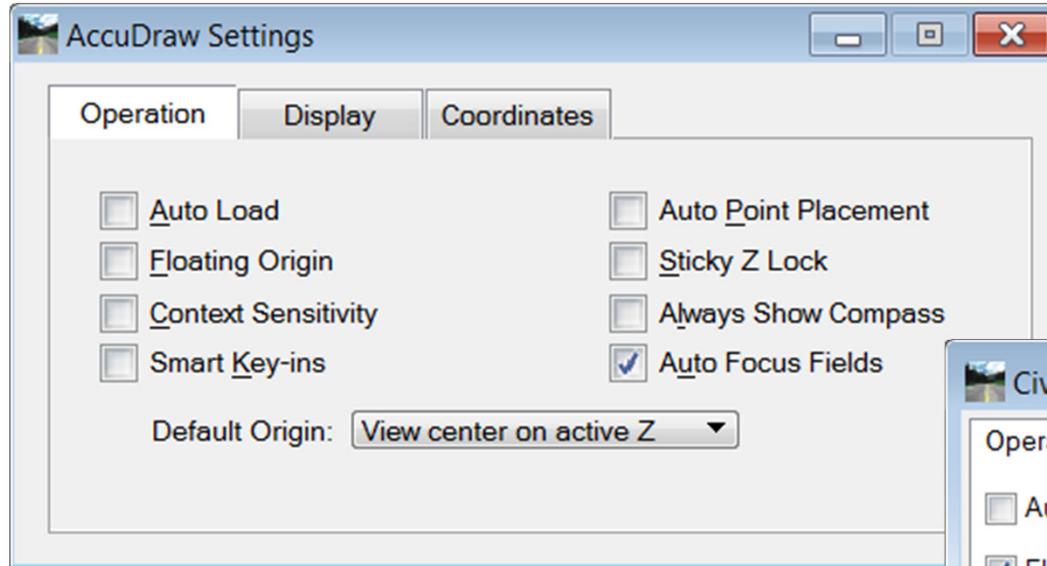


Profile Model View

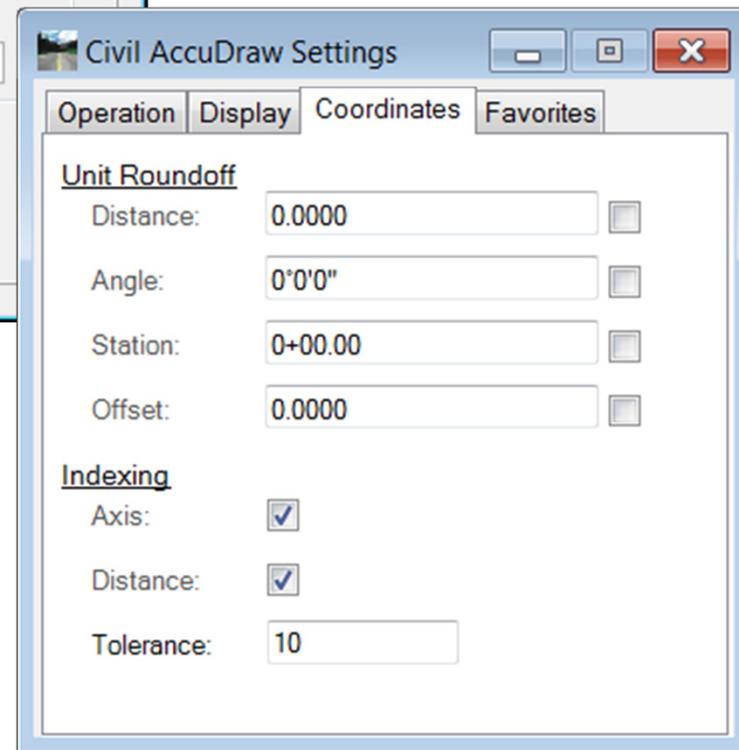
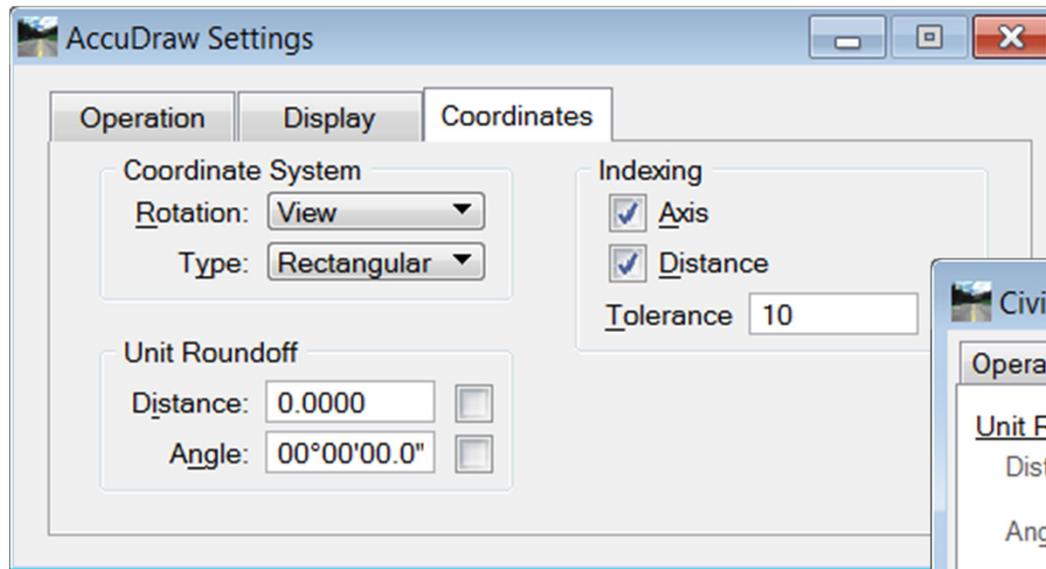
3D Plan



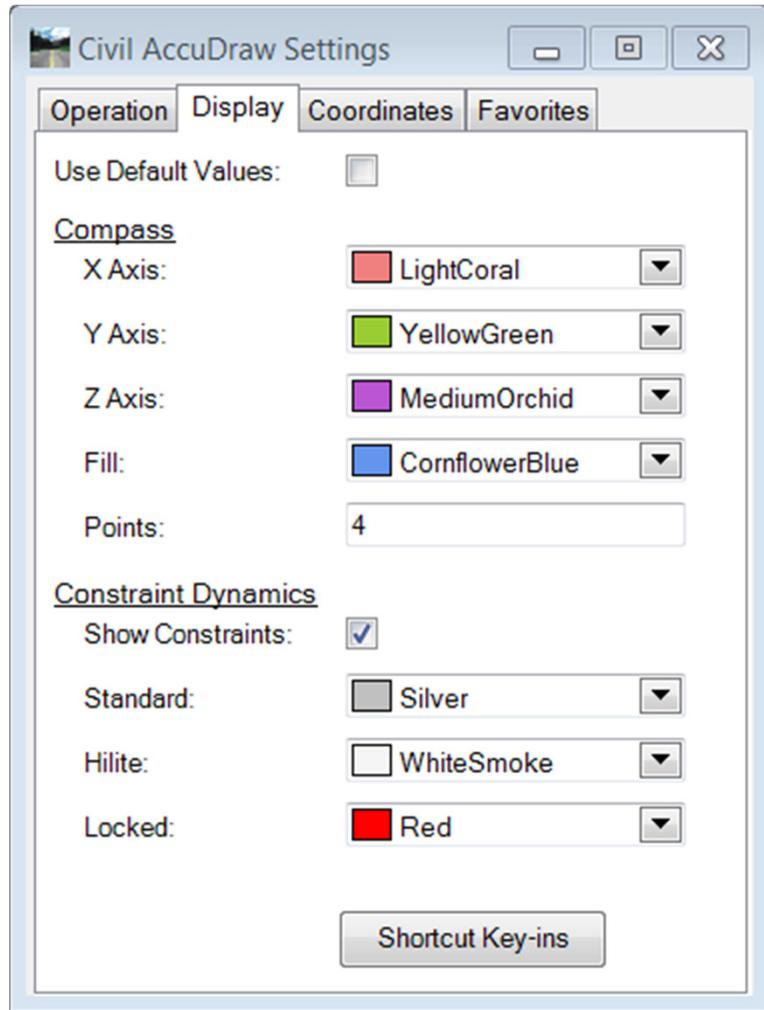
Settings Similar to MS AccuDraw



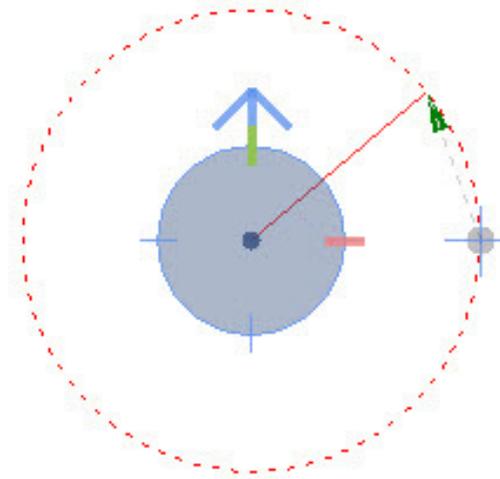
Settings Similar to MS AccuDraw



Display Settings



These control the heads-up dynamics

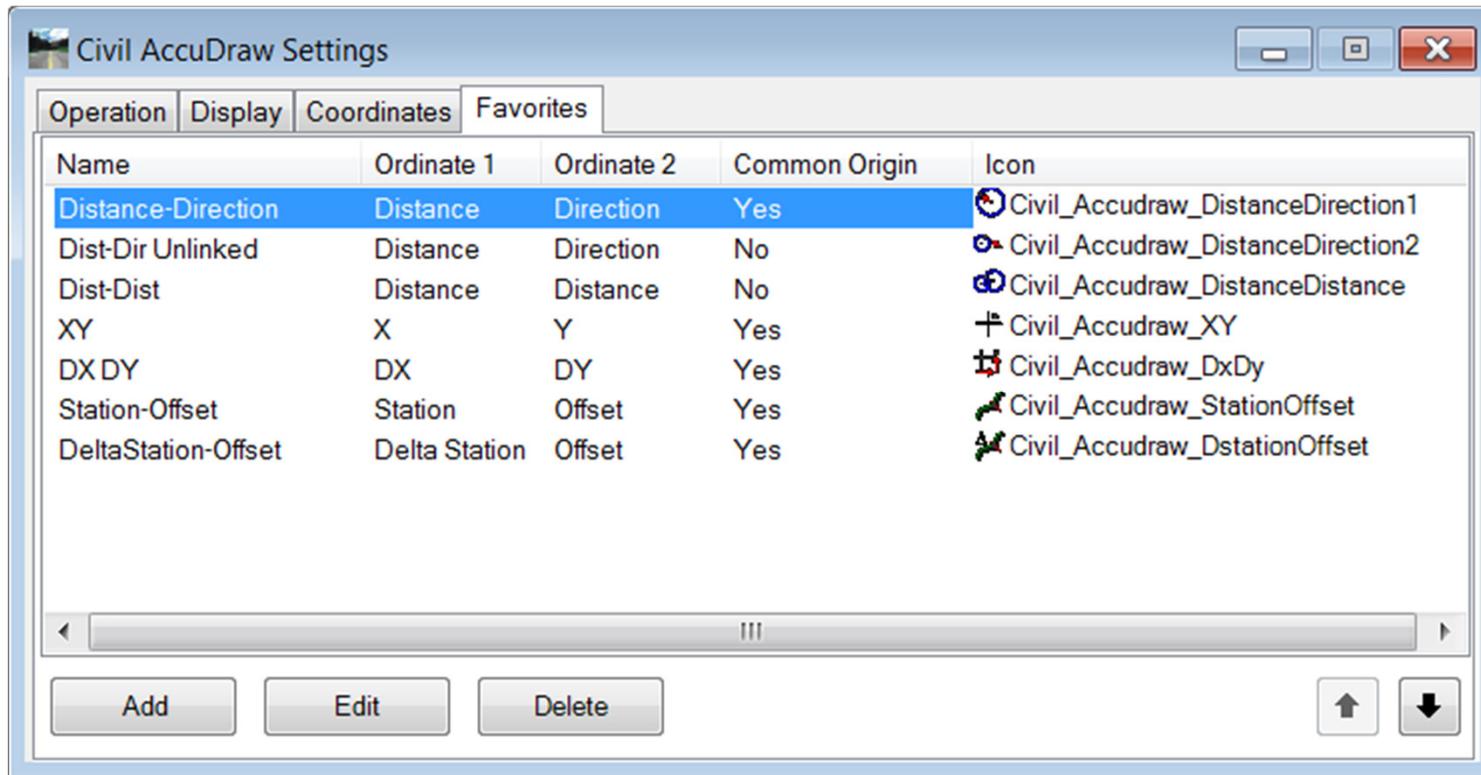


Distance	250.000	<input type="checkbox"/>
Direction	45°00'00"	<input type="checkbox"/>
Z	<input type="text" value="0.0000"/>	

Enter End Point	
Distance	250.000 <input type="text"/>

Favorites

Supports customized methods



Workspace Preferences

Preferences [Bentley-Civil-Imperial]

Name for preferences

Cursor Prompt Dialog

Dialog Opacity: 70
 Dialog Color: [255,255,255]
 Text Color: [0,0,0]

Manipulator Settings

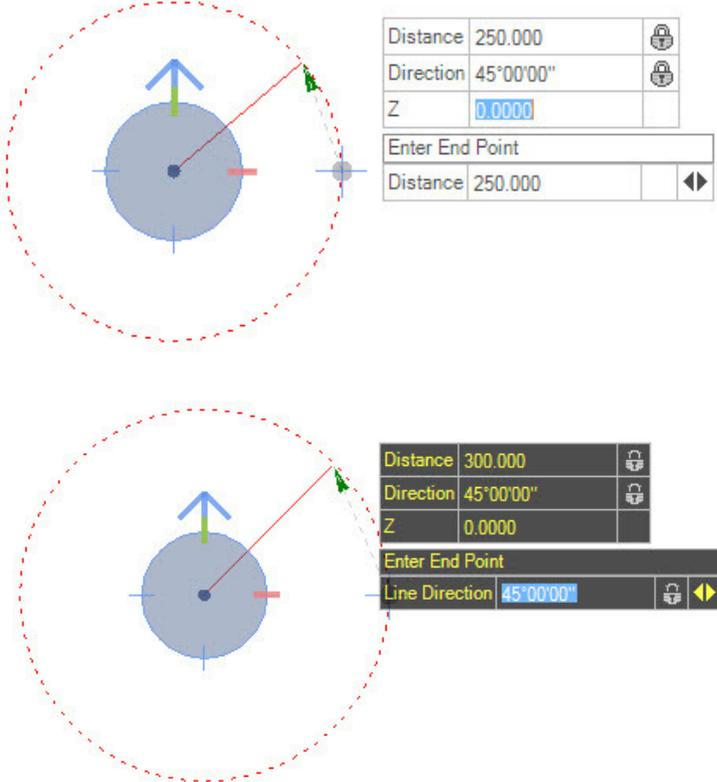
Manipulator Size: 10
 Normal Color: [0,0,255]
 Read-Only Color: [211,211,211]
 Selected In Property Pane: [255,255,255]
 Selected Color: [255,165,0]
 Manipulator Font: Arial
 Manipulator Font Scale: 1
 Manipulator Transparency: 30
 Use Shaded Manipulators: True

Superelevation Settings

Fill:

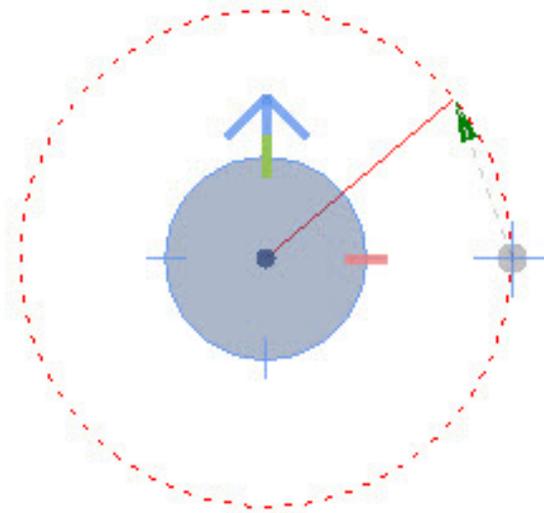
OK
Cancel
Defaults

Focus Item Description



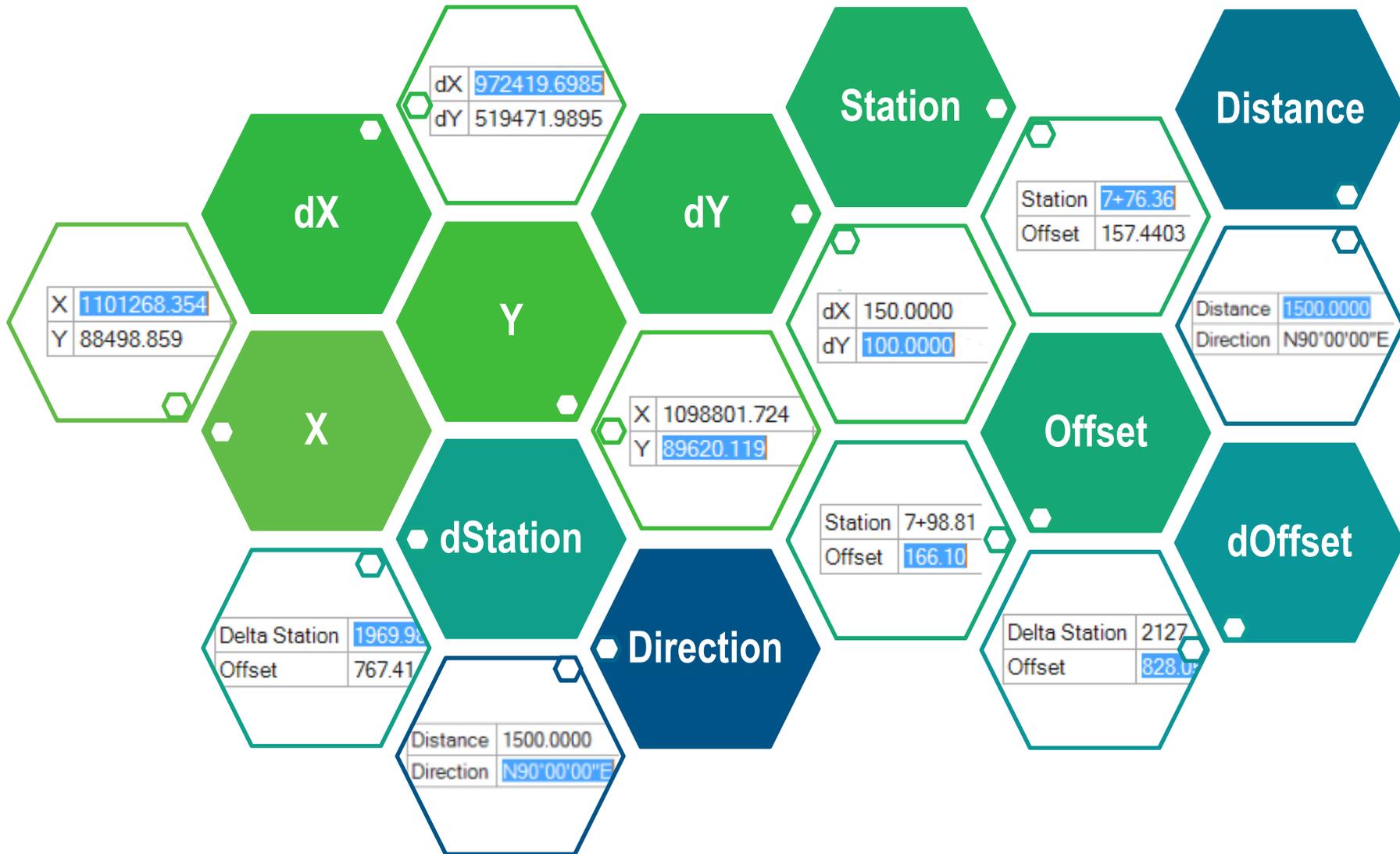
The Heads Up Display

- By default, Civil AccuDraw input follows the cursor for direct input.
- North Arrow is always shown.

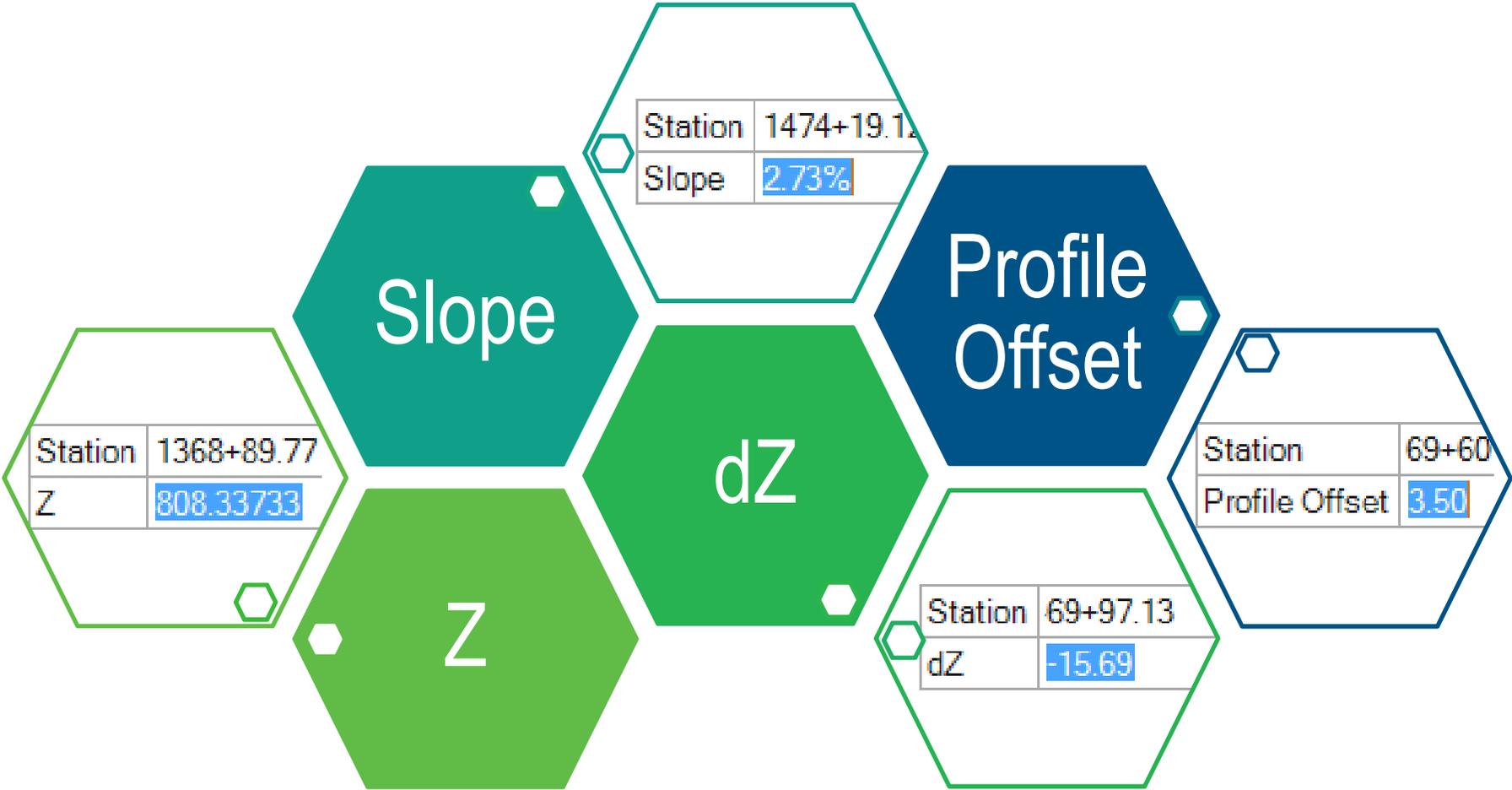


Distance	250.000	
Direction	45°00'00"	
Z	0.0000	
Enter End Point		
Distance	250.000	

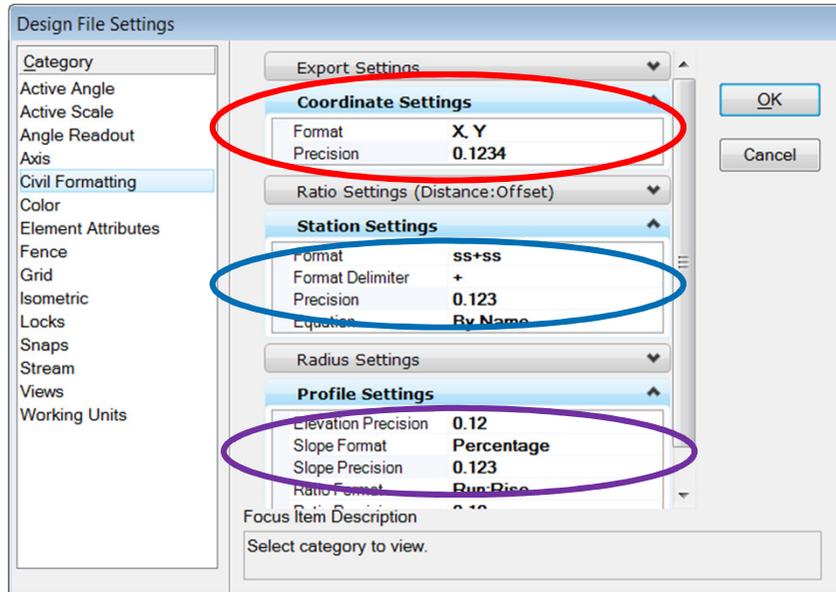
Horizontal Methods



Vertical Methods



Settings - Decimal Places

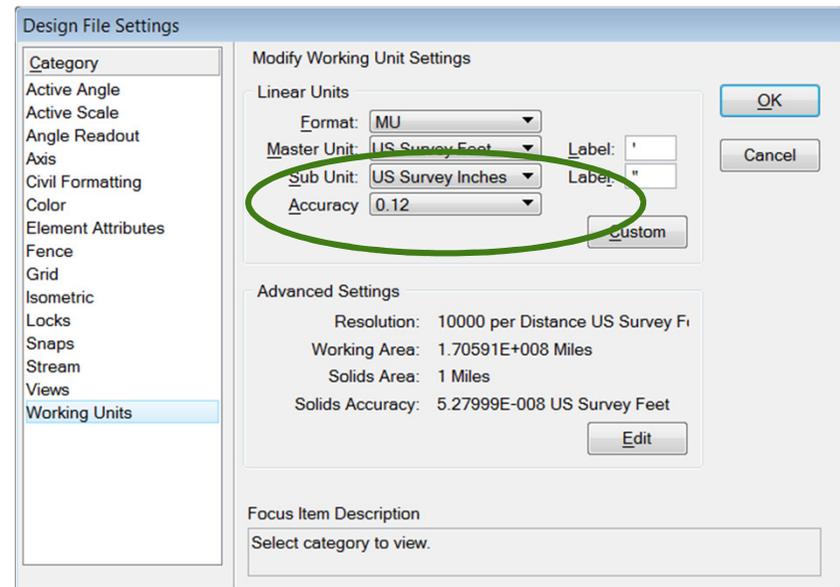


X, Y, Z

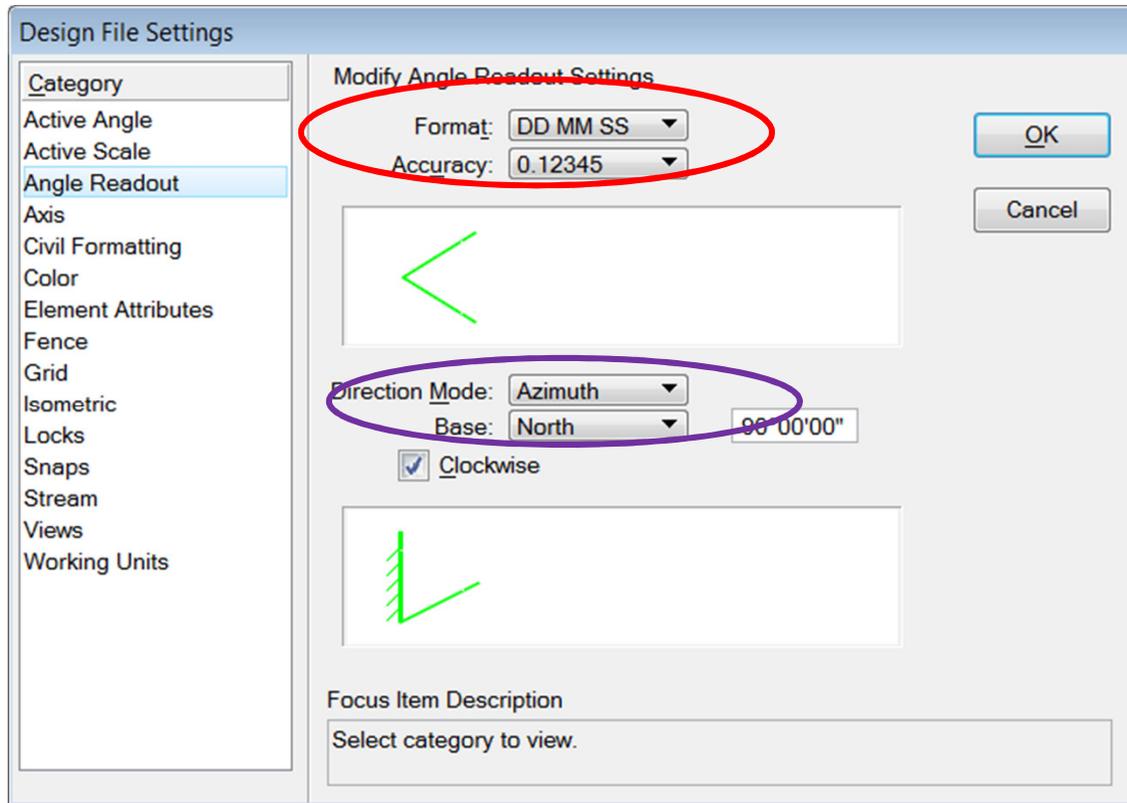
Station

dX, dY, dStation, Length,
Profile Offset,

Slope

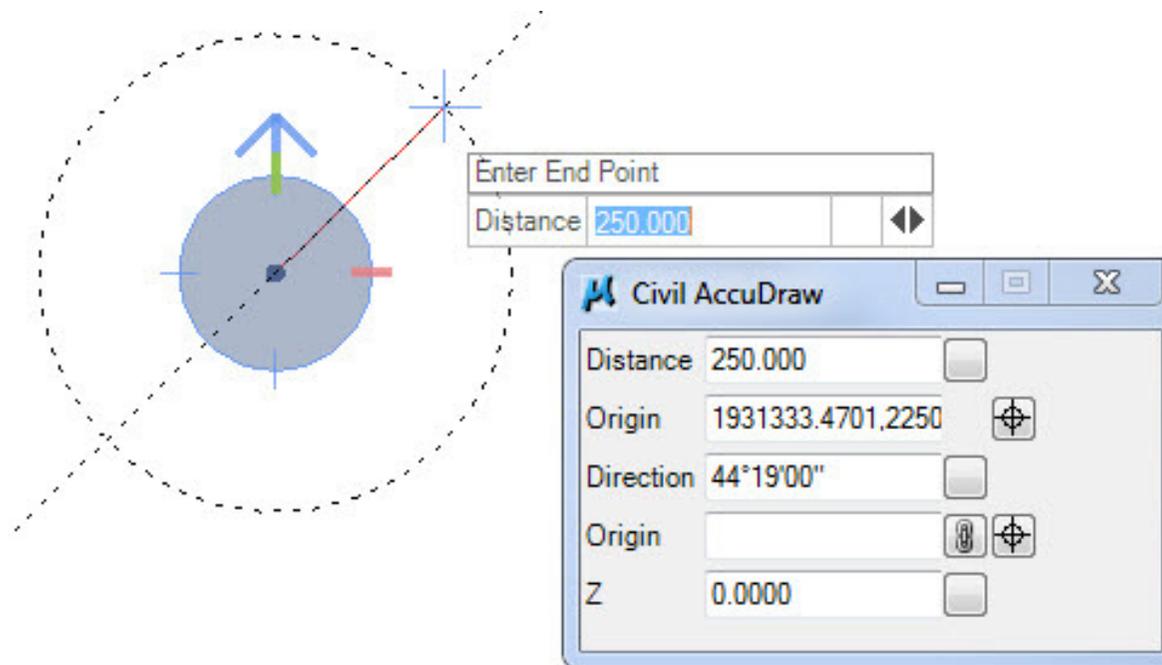


Direction Settings



Fixed Dialog

The dialog can be changed to a fixed box by pressing down arrow on keyboard. (Up changes it back.)



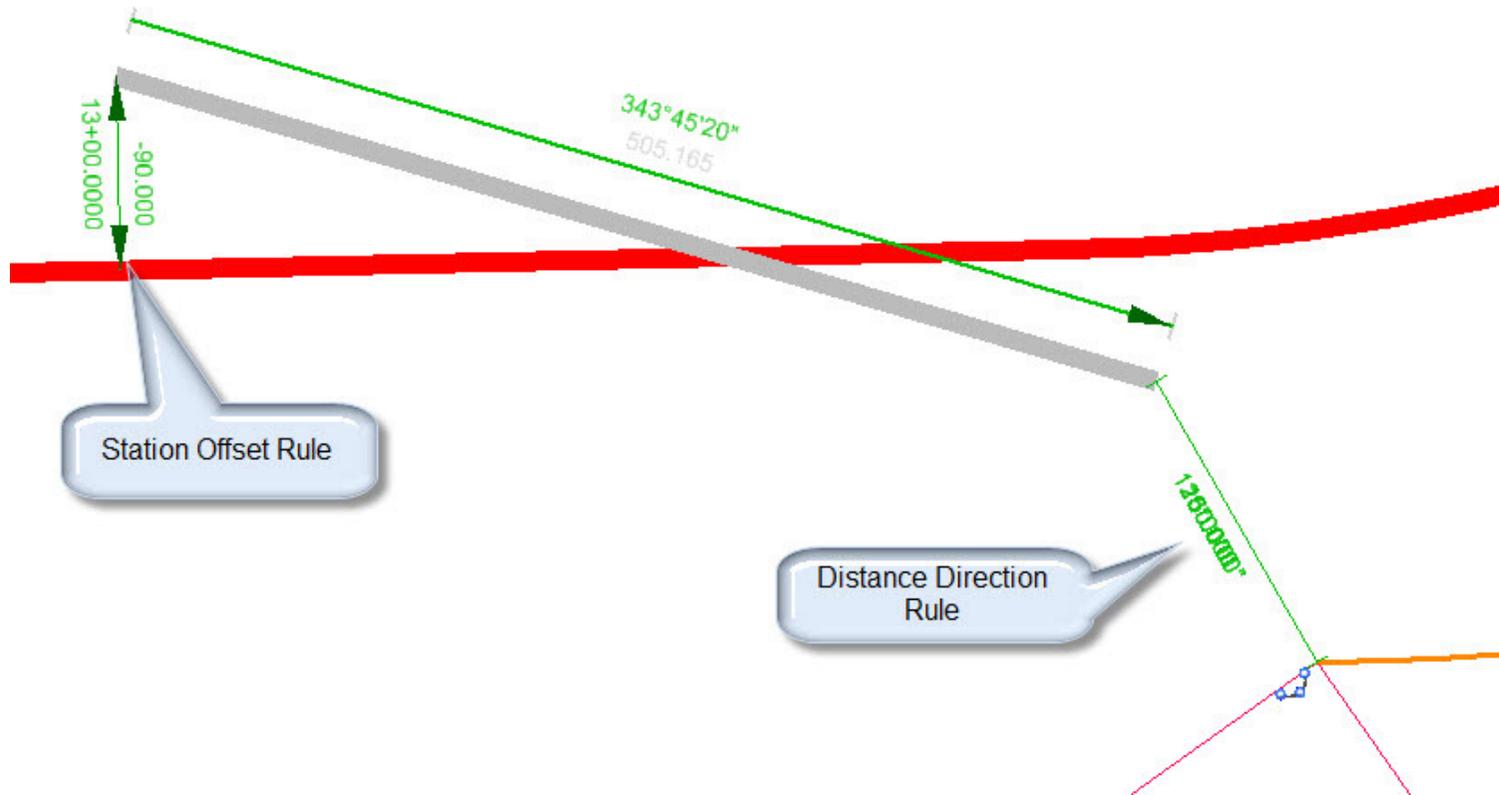
Keyboard Shortcuts

Almost all MS Accudraw shortcuts function the same with a few subtle differences:

- Smart lock is not supported.
- Space bar does not cycle the methods but rather opens a direct pick menu.
- O – Set origin is subtly different. For Civil Accudraw O is not instant but waits for another pick to set the origin.
- ACS tools may have limited support

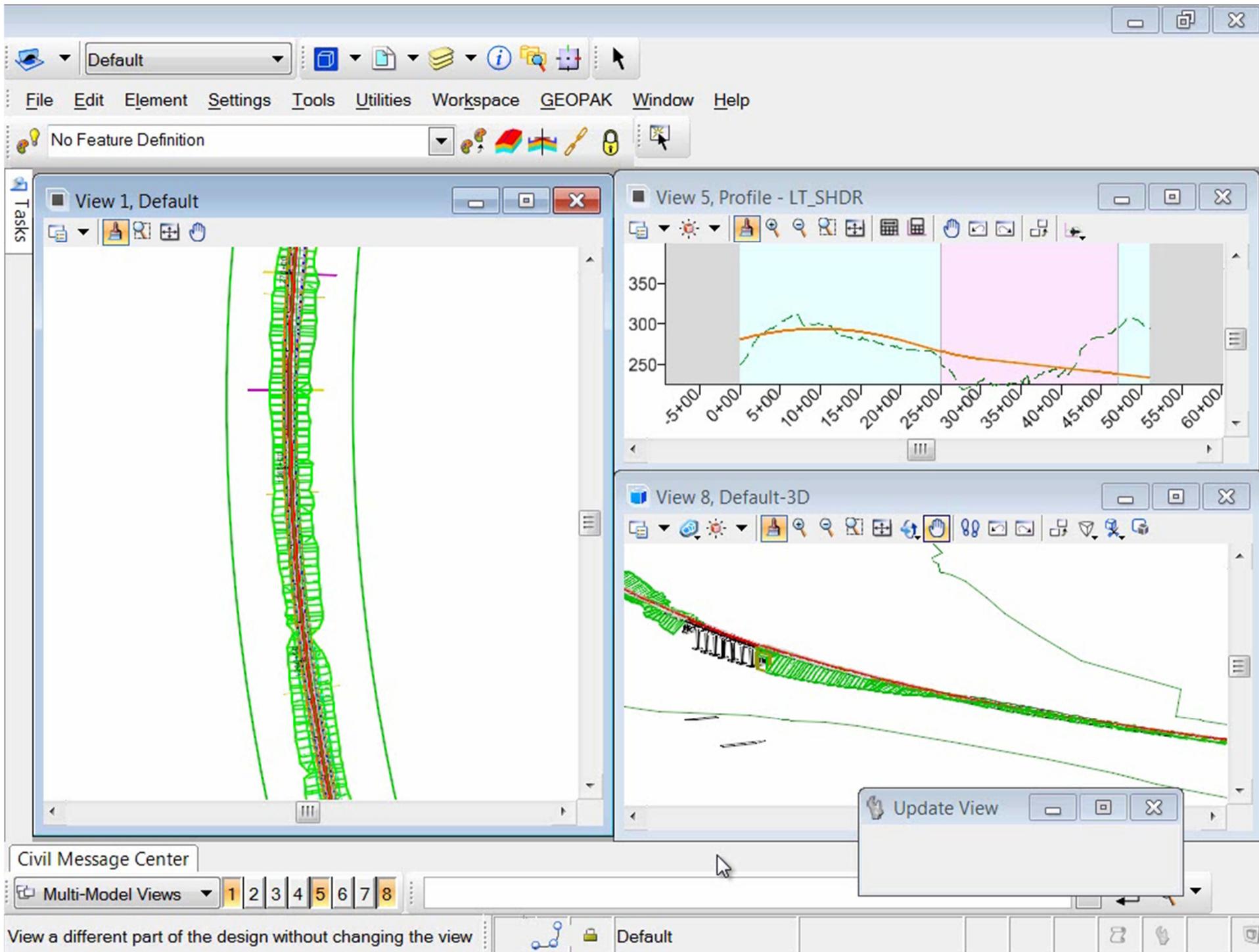
Civil AccuDraw Persistence

When used in conjunction with Civil Geometry, the AccuDraw is persisted as part of the rules.



Demo

- Accessing CivilAccuDraw tools
- Right of way – existing r/w, temporary easement, parcels
- Profiles – Special ditch grades
- Civil cells – turn lane lengths



Right of Way

- Existing r/w
 - Coordinates (X,Y)
 - Elements by PI
- Permanent easements
 - Based off existing r/w
 - Station /offset (updates!)
- Parcels
 - X,Y for points
 - Distance, direction

Default [Icons: Save, Print, Layers, Info, Find, Undo, Redo]

File Edit Element Settings Tools Utilities Workspace GEOPAK Window Help

No Feature Definition [Icons: Feature Definition, Color, Line Style, Lock]

View 1, Default [Icons: Minimize, Maximize, Close]

Tasks [Icons: Print, Find, Undo, Redo]



Civil AccuDraw [Close icon]

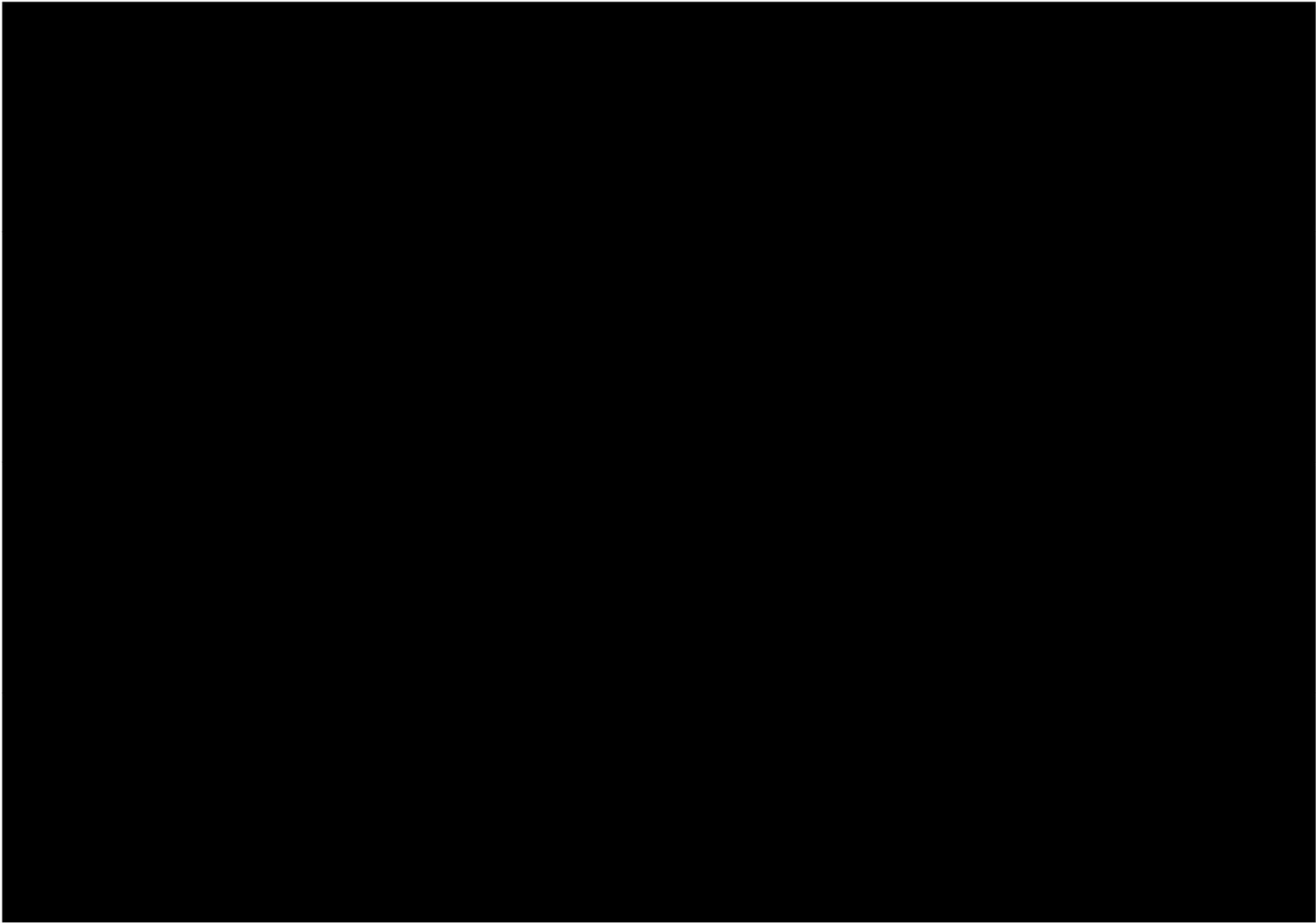
Civil Message Center

Multi-Model Views [1 | 2 | 3 | 4 | 5 | 6 | 7 | 8] [Icons: Undo, Redo]

> Settings Saved [Icons: Undo, Redo] Default Element Selection [Icons: Minimize, Maximize, Close]

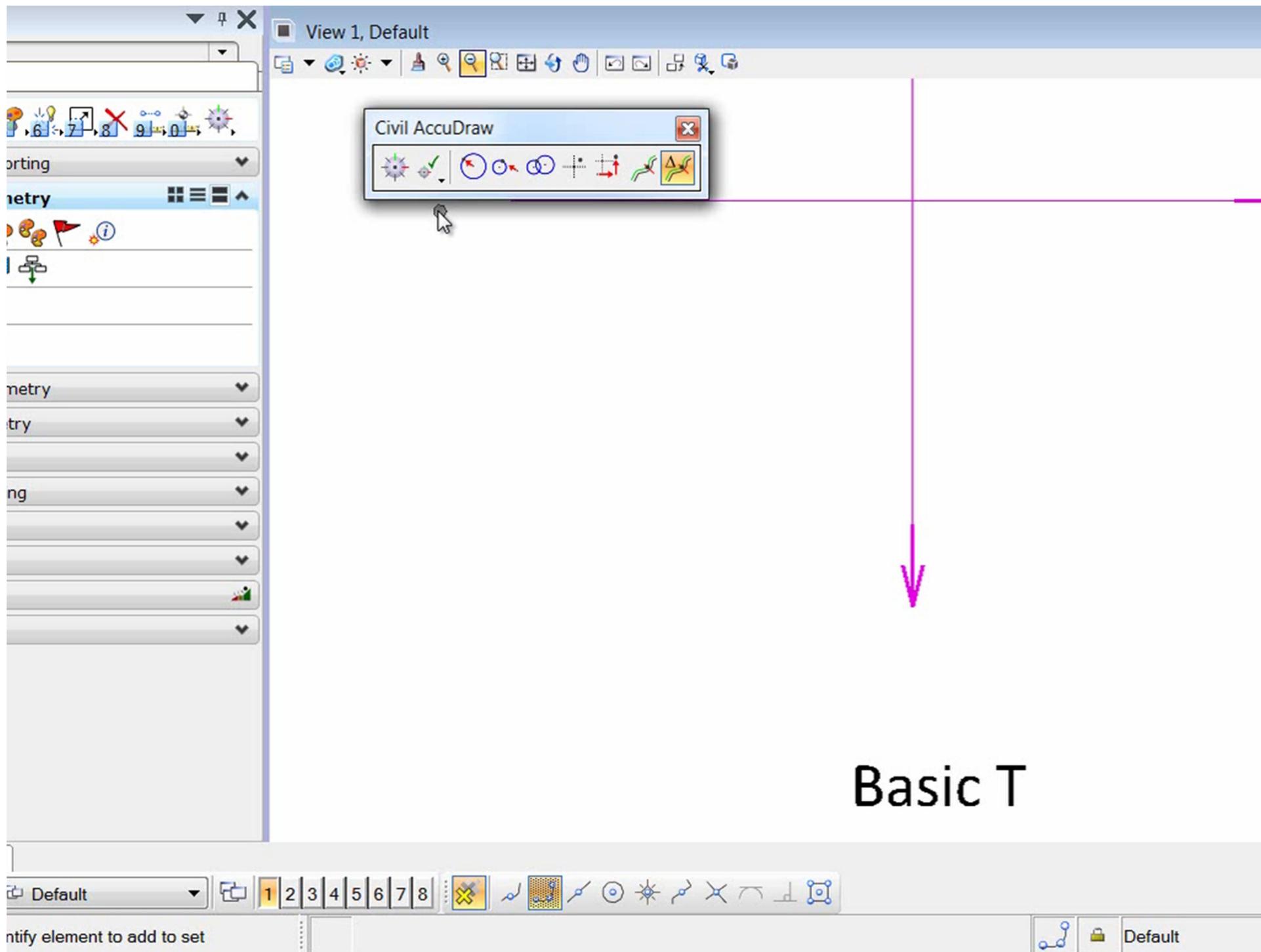
Profiles

- Special Ditch Grades
 - Station / elevation
 - Station / slope
- Subsurface Design Profiles
 - Profile offsets
- Bridge Deck Clearances
 - Profile offsets
 - Station / dZ, Z



Civil Cells

- Excellent usage of Civil AccuDraw to set up geometrics
- Use of delta options (i.e. delta station)



Basic T

Learning Paths: Ready-Made Training Plans

Choose from:

- Bentley recommendations
- Configure your own
 - Organizational
 - Personal

Select:

- Product(s) and version(s)
- Language
- Training type

Enroll team members in:

- One learning path
- Multiple learning paths

Personalize Learning Path

Use this form to personalize a Learning Path. You can enable/disable specific course offerings by expanding the "Find Training" tab, and even add new course blocks into your Learning Path. Click the Help icon for more detailed instructions and a Step-By-Step guide.

Name* Peter's custom lp
Description*
Learning Path Type: Personal Learning Path Set as Company Learning Path

Courses

MicroStation Essentials III
MicroStation Essentials is designed for the new MicroStation user and builds a solid foundation in the concepts, tools and features found in the MicroStation drawing environment. Starting with setting... [More](#)

Find Training (14)

Live	Title	Lang
<input type="checkbox"/>	MicroStation Essentials	Engl
<input type="checkbox"/>	MicroStation Essentials Basics	Engl
<input type="checkbox"/>	MicroStation Essentials Express	Engl
<input type="checkbox"/>	MicroStation Essentials	Engl
<input type="checkbox"/>	MicroStation for AutoCAD Users	Engl
<input type="checkbox"/>	MicroStation for AutoCAD Users Express	Engl
<input type="checkbox"/>	MicroStation for Mining and Metal Extraction	Engl
<input type="checkbox"/>	MicroStation for AutoCAD Users Express	Engl

On-Demand

Title	Language	Gene
<input type="checkbox"/>	MicroStation Essentials Lecture Series	English VBI
<input type="checkbox"/>	MicroStation Quick Start Guide	English VBI
<input type="checkbox"/>	MicroStation Essentials	English VBI
<input type="checkbox"/>	MicroStation for AutoCAD Users	English VBI
<input type="checkbox"/>	MicroStation for Mining and Metal Extraction	English VBI
<input type="checkbox"/>	MicroStation Essentials	English VBI

Personalize Learning Path

Use this form to personalize a Learning Path. You can enable/disable specific course offerings by expanding the "Find Training" tab, and even add new course blocks into your Learning Path. Click the Help icon for more detailed instructions and a Step-By-Step guide.

Name* MicroStation Technician in a Roadway Setting
Description* 2 year onboarding program. 72 LU's. Multi-product MS, PW, InterPlot, InRoads. Live and on-demand self-study.
Learning Path Type: Personal Learning Path Set as Company Learning Path

Manage Master Course List

ProjectWise User Essentials III
This course is for individuals who need to manage documents throughout a project cycle and work in the ProjectWise managed environment. It presents techniques for working in the integrated environment... [More](#)

LUUs:

Find Training (10)

Live	Title	Language	Generation	Release Label	LUUs
<input type="checkbox"/>	ProjectWise User Essentials	English	VBI	SELECTseries 2	8
<input type="checkbox"/>	ProjectWise User Essentials	English	VBI	SELECTseries 3	8
<input type="checkbox"/>	ProjectWise Client Start Up Guide	English	VBI	Base Release	4
<input type="checkbox"/>	ProjectWise User Essentials	English	VBI	Base Release	8

Displaying items 1 - 4 of 4

On-Demand	Title	Language	Generation	Release Label	LUUs	Type
<input type="checkbox"/>	Design Management Studio	English	VBI	Base Release	1	OnDemand eLearning: Lecture
<input type="checkbox"/>	ProjectWise User Essentials	English	VBI	SELECTseries 2	8	OnDemand eLearning: Hands-on
<input type="checkbox"/>	ProjectWise User Essentials	English	VBI	SELECTseries 3	8	OnDemand eLearning: Hands-on
<input type="checkbox"/>	ProjectWise Client Start Up Guide	English	VBI	Base Release	4	OnDemand eLearning: Hands-on
<input type="checkbox"/>	ProjectWise User Essentials	English	VBI	Base Release	8	OnDemand eLearning: Hands-on
<input type="checkbox"/>	ProjectWise User Essentials	English	VBI	Base Release	5	OnDemand eLearning: Hands-on

Displaying items 1 - 6 of 6

[ADD MORE](#)

MicroStation Essentials III
MicroStation Essentials is designed for the new MicroStation user and builds a solid foundation in the concepts, tools and features found in the MicroStation drawing environment. Starting with setting... [More](#)

LUUs:

This Session's Learning Path:

Here's the name and link to a short learning path that includes this session and recommended modules that you may share with your colleagues:

V8i (SELECTseries 3) OpenRoads Technology Learning Path

<http://learn.bentley.com/app/Public/ViewLearningPathDetails?lpld=104292#.UYkxZxK2r9s.email>

Assessment

1. True or False: Civil AccuDraw creates precision POINT data to be utilized in a variety of Civil tools.

2. Civil AccuDraw can be used in:
 - A. 2D Plan view
 - B. Vertical geometry (profile view)
 - C. 3D views
 - D. All of the above.

3. True or False: The majority of AccuDraw short-cuts can also be used in Civil AccuDraw.

Discover more at...

- www.bentley.com
- www.youtube.com User: **BentleySystems**

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Thank you!