



Various MicroStation Tips and Tricks

MicroStation (SELECTseries 3)

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MicroStation Tips and tricks

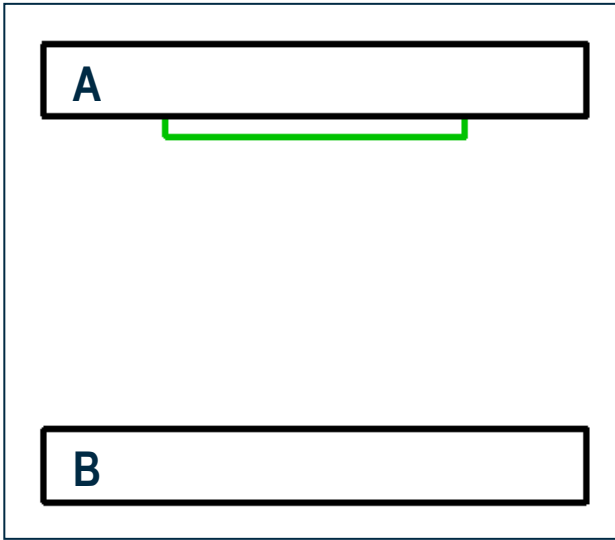
At the end of this training session, an assessment will be given. We will review all assessment questions and answers to see what you have learned.

Learning Objectives

After this session you will be able:

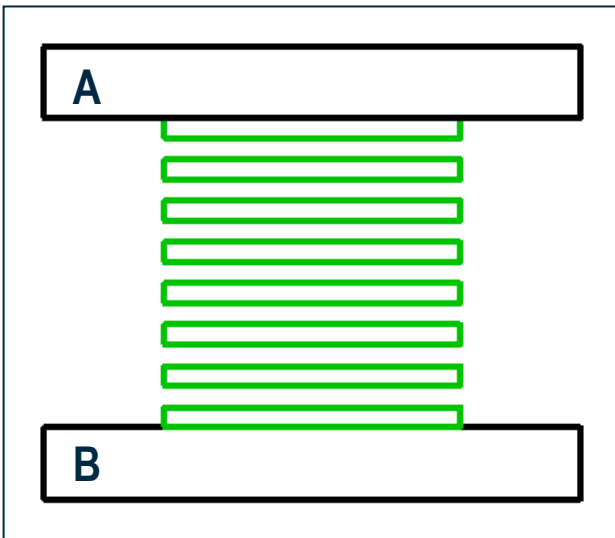
- Use AccuDraw temporary origin
- Use improved Selection Set functionality
- Use drag and drop capabilities
- Use the Text String quick edit
- Capture any color from external sources to Active Attributes
- Create and use item Sets
- And more...

Tip for AccuDraw



Objective:

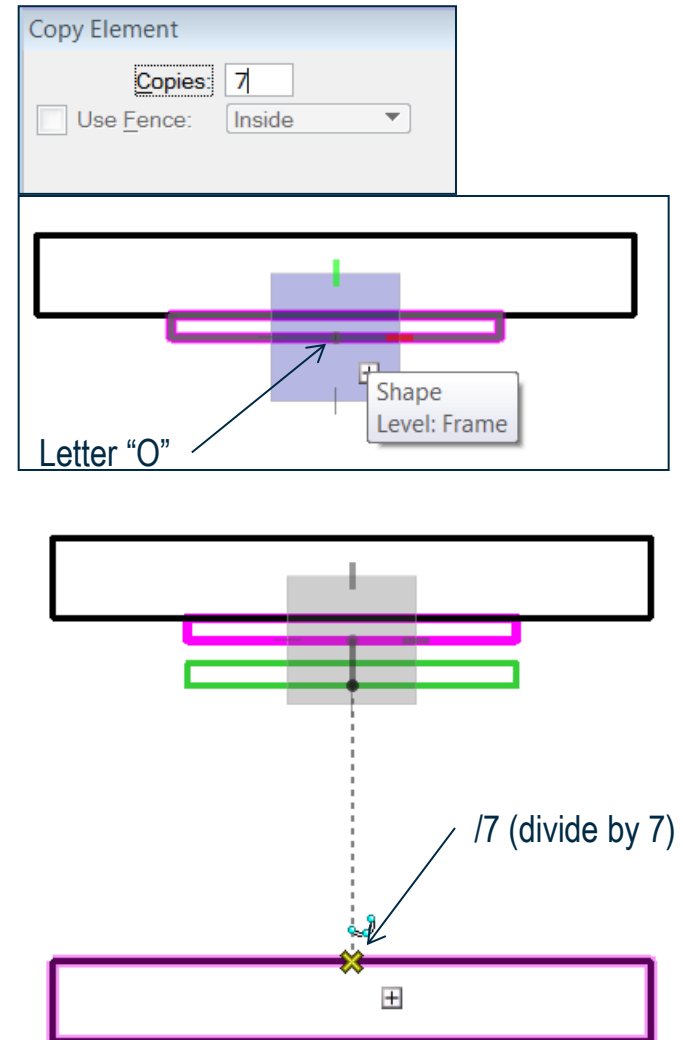
Create 8 green blocks equal distance apart, between Block A & B, without measuring the distance between Blocks A & B.



Demonstration of AccuDraw Tip

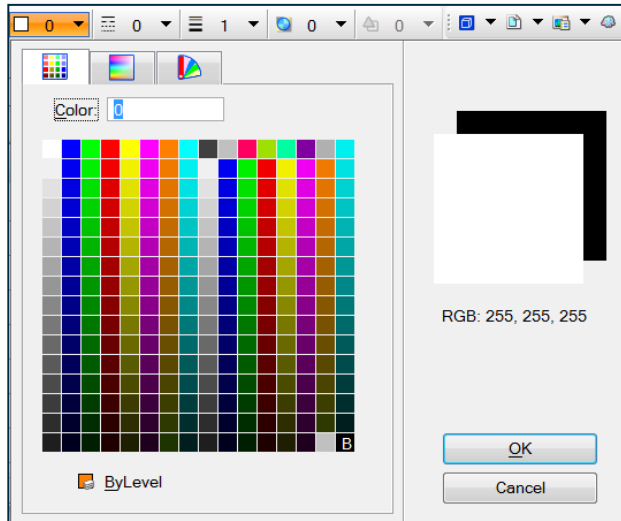
1. Select Copy Element 7 copies
2. Select green block
3. Type letter "O" on green block
4. Hover cursor on Block "B" type Divide by 7 (/7)

File:MicroStationTips.dgn, Model: 01 AccuDraw

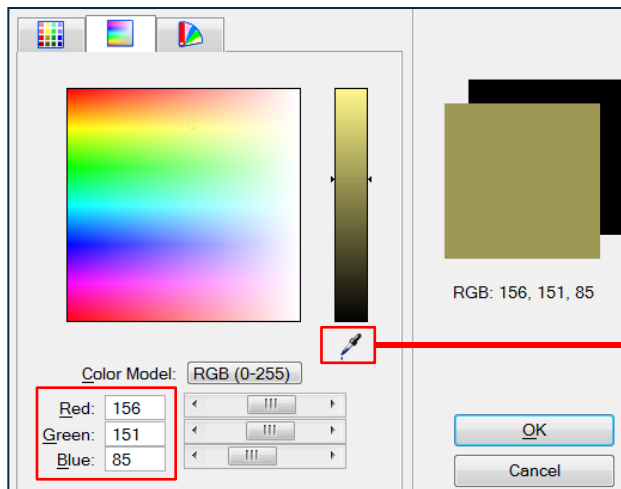


External Color as the Active Color

Objective: Select an active color from an external source.

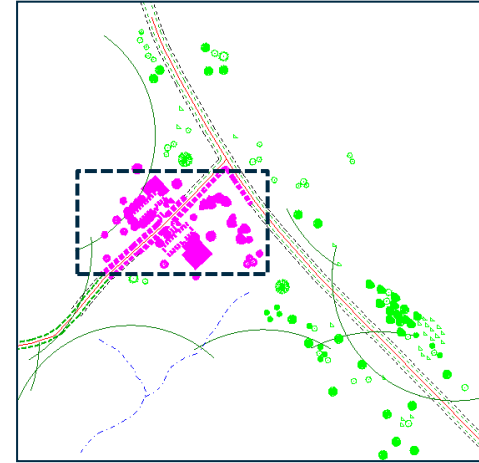
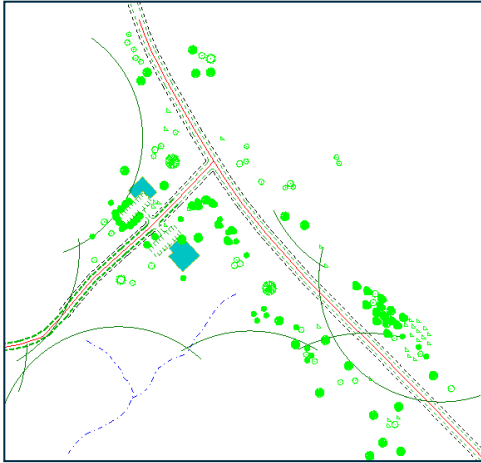


Internet Browser

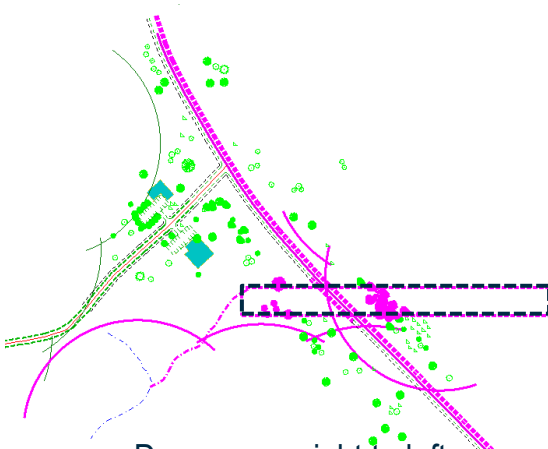


File:MicroStationTips.dgn, Model: 02 Active Color

Selection Set Drag Direction



Drag cursor left to right
Anything contained in box is selected



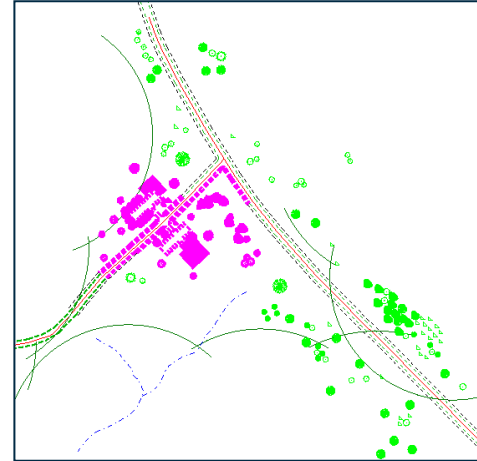
Drag cursor right to left
Anything selection box crosses is selected

File:MicroStationTips.dgn, Model: Selections

Element Selection

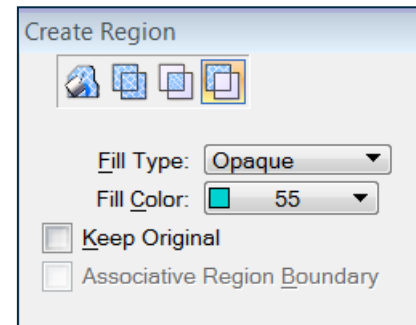
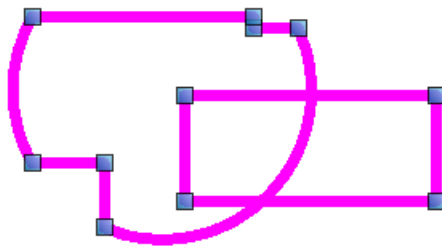
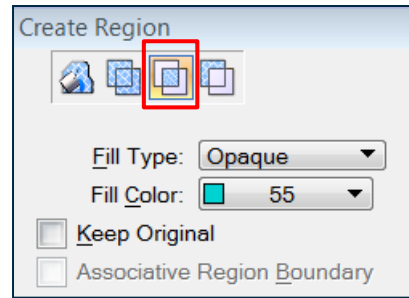
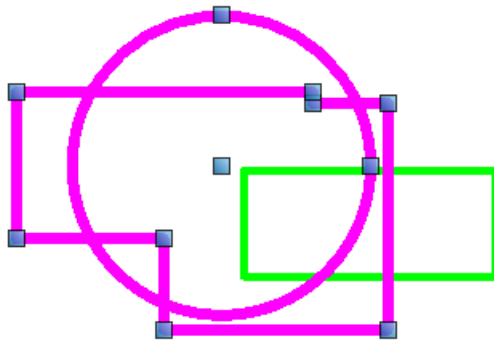
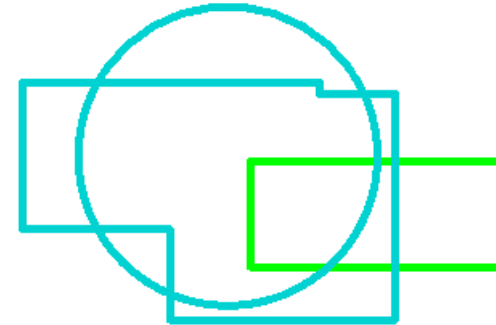
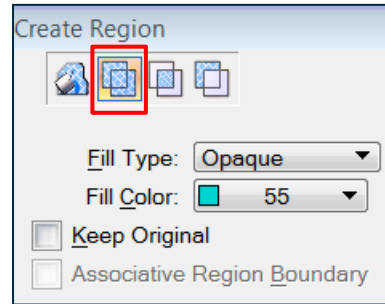
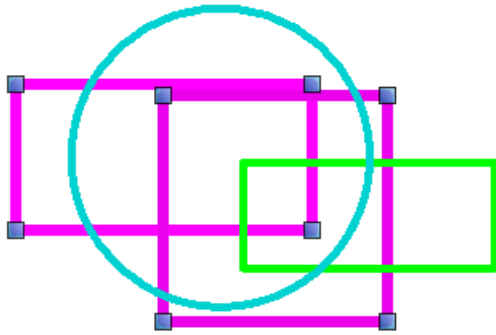


Use the ALT key to change to linemode



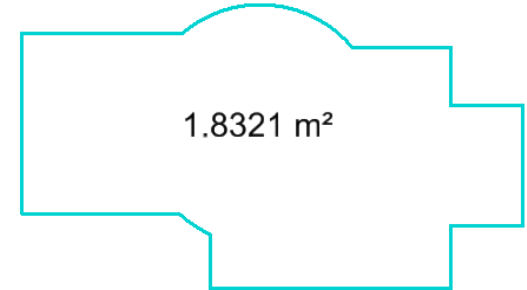
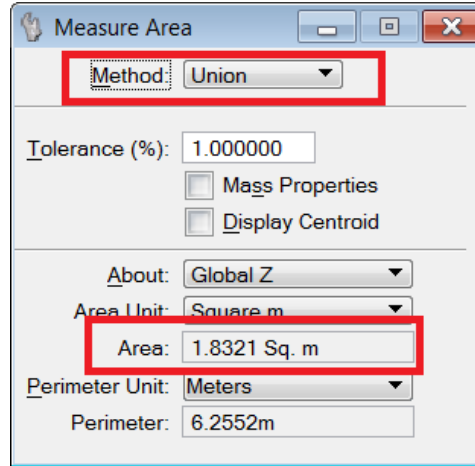
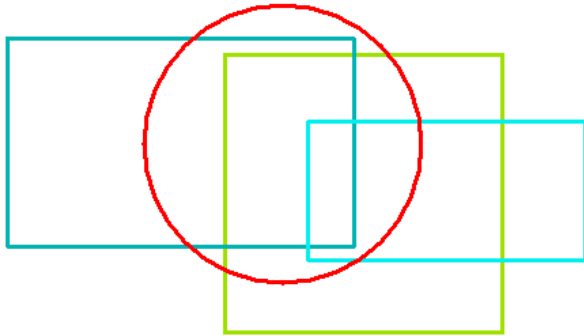
Use the SHIFT key to change between inside and overlap mode

Selection Set Union, Difference, Intersect



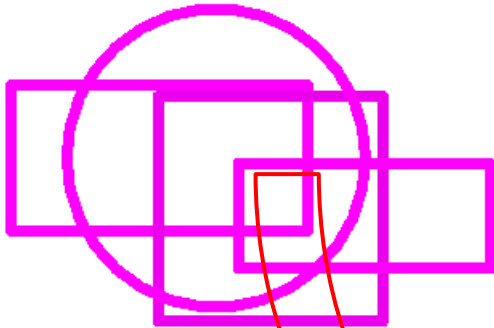
File:MicroStationTips.dgn, Model: 04 Region

Measure Area of Multiple Elements



File:MicroStationTips.dgn, Model: 05 Measure Area

Drag & Drop Elements to Named Groups



Name	Elements	Groups	Selectable
Group 1	0	0	

Separate Elements
In a selection set

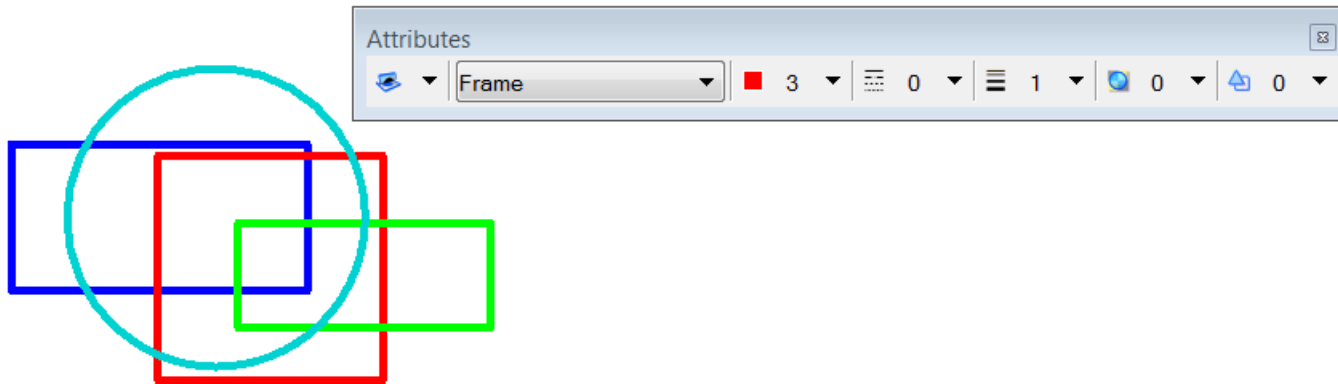
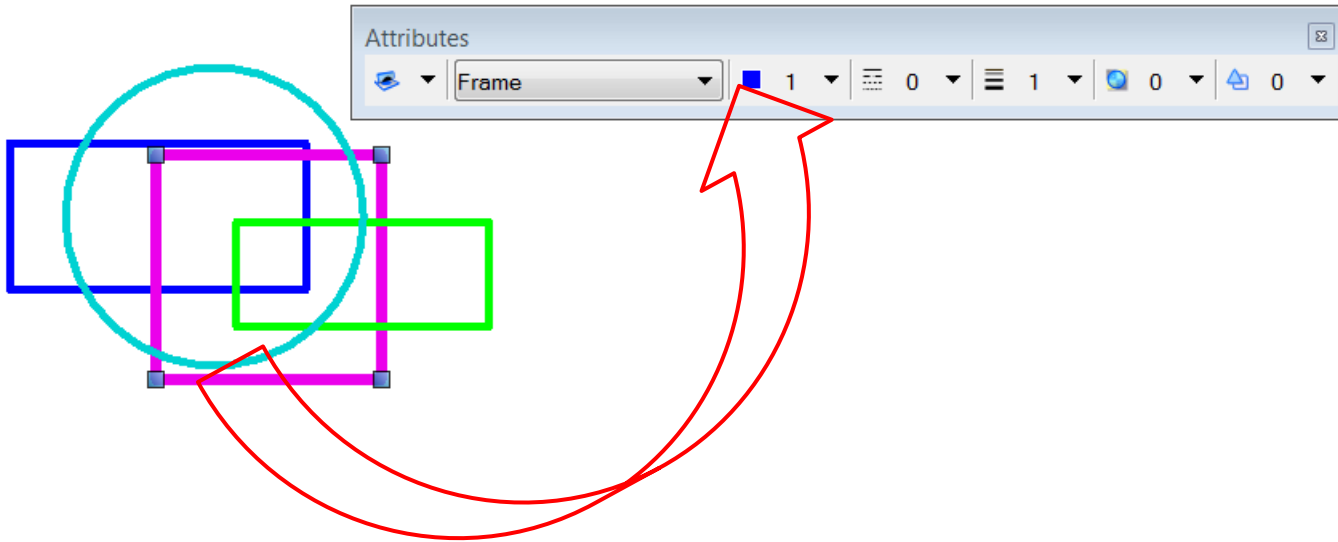
Name	Elements	Groups	Selectable
Group 1	4	0	

4 elements added to group

*Tip: Utilities > Named groups,
And you need to have a Named Group
before you can drag and drop*

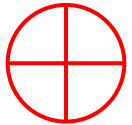
File:MicroStationTips.dgn, Model: 06 NamedGroups

Drag & Drop Element to View Attributes



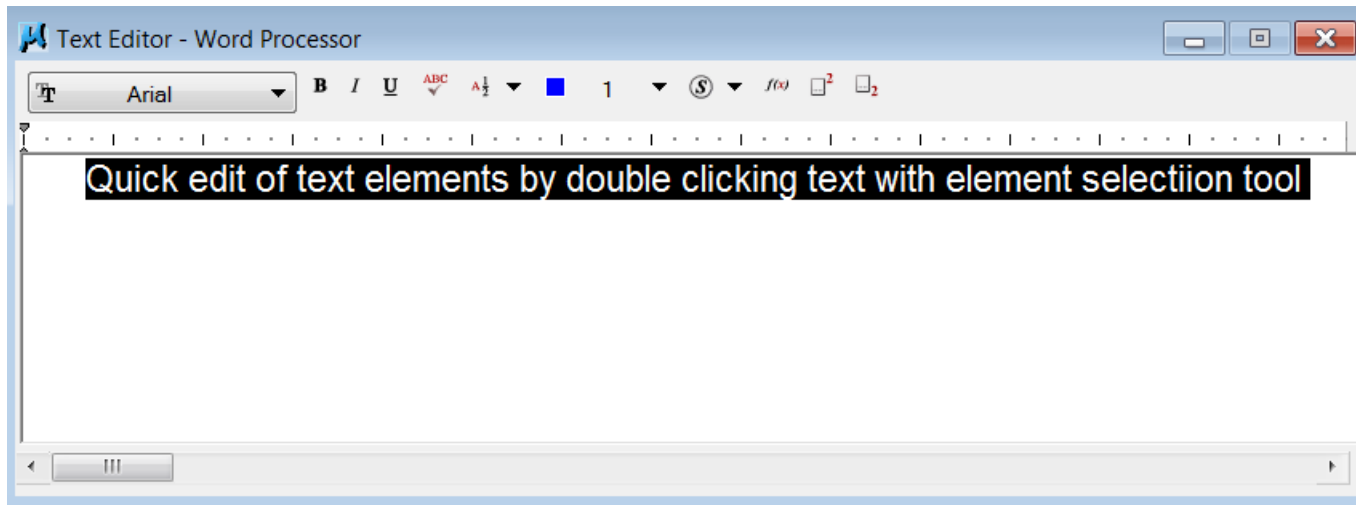
Continue in file: MicroStationTips.dgn, Model: 06 NamedGroups

Quick Edit of Text Elements



Quick edit of text by double clicking text with element selection tool

Double click
Text element
With Selection tool



Text Editor Opens

File:MicroStationTips.dgn, Model: 08 EditText

Drag & Drop to Reference Dialog

The image illustrates the process of dragging a model from the Project Explorer to the References dialog. The Project Explorer shows a tree view with 'civil' selected. The References dialog is open, and an 'Attach Source Files' dialog is shown. A red arrow indicates the drag action from the Project Explorer to the References dialog. A second red arrow points to the final state where the 'civil' model is listed in the References dialog and the design composition view is updated.

References (0 of 0 unique, 0 displayed)

Slot	File Name	Model	Presentation
------	-----------	-------	--------------

Attach Source Files

You have 1 references to attach. Please select attachment method

Attachment Method: Recommended

OK Cancel

References (1 of 1 unique, 1 displayed)

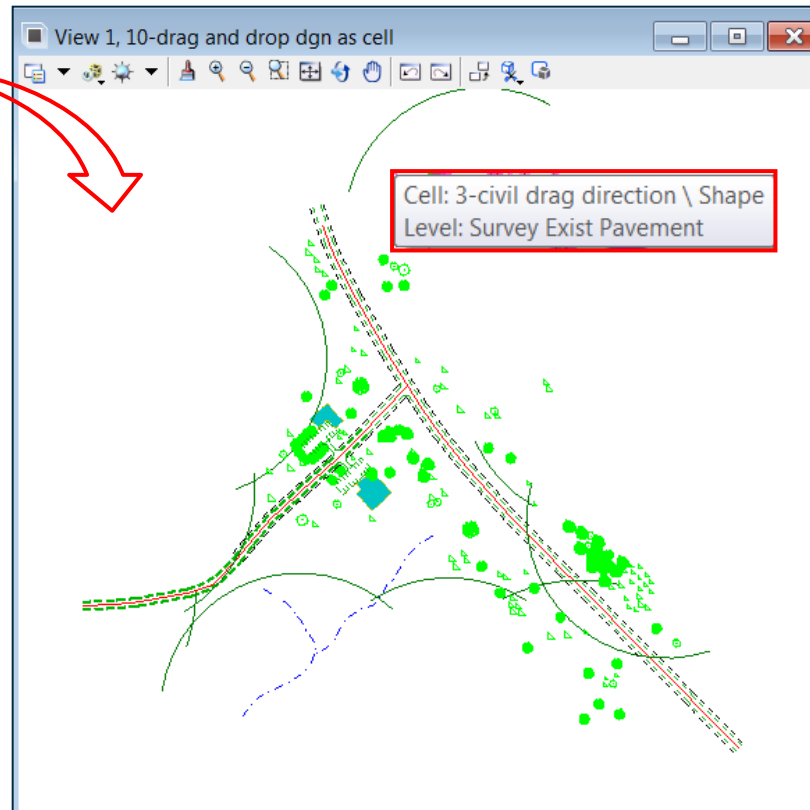
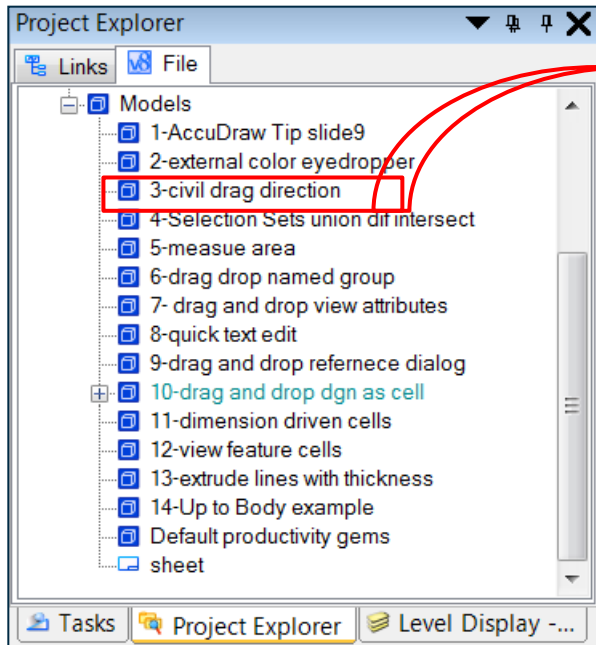
Slot	File Name	Model	Presentation	0	0	✓	✓
1	productiviyt_g...	civil	Wireframe	0	0	✓	✓

View 1, Design Composition

Drag from:

- Project Explorer dialog Links tab
- Windows Explorer
- Models dialog
- Models dialog in another session
- Project Explorer dialog Links tab in another session

Drag & Drop DGN Files as Cells



Tip: Hold CTRL key down while you drag

File:MicroStationTips.dgn, Model: 10 CellDragAndDrop

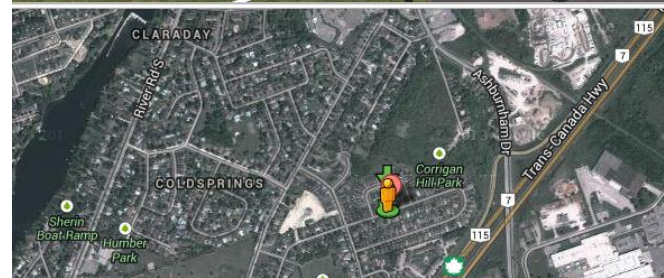
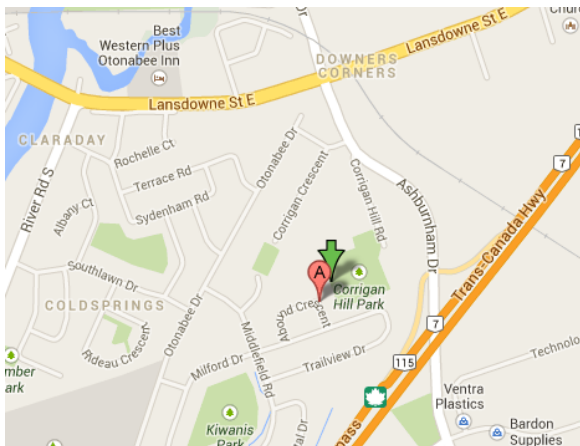
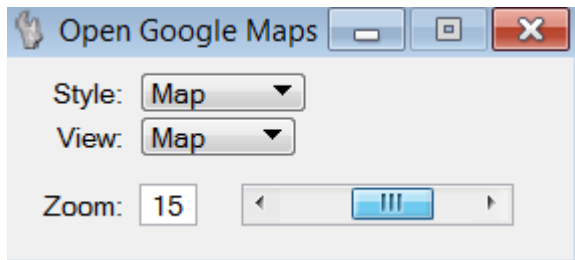
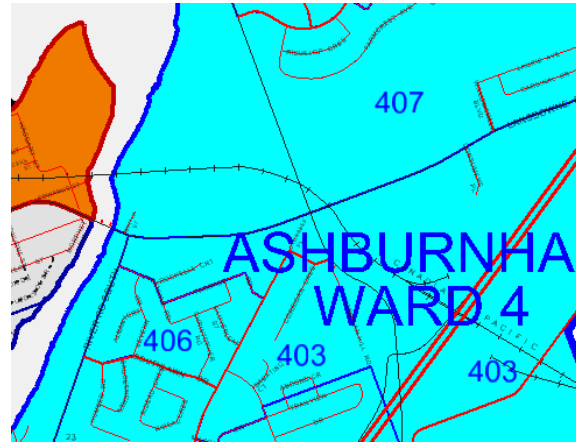
Project Explorer Drag & Drop Combinations

Drag from Project Explorer dialog Links tab	Key pressed	Drop into	Result
Any link	.	Project Explorer dialog Links tab	Move link
Any link	<Ctrl>	Project Explorer dialog Links tab	Copy link
Any link	<Alt>	View window	Link on element
Any link	.	Print Organizer dialog	Create print definition
Model	.	Models dialog	Import model
Model	.	Batch Processor dialog	Add Batch Job
Model	.	References dialog	Attach reference
Model link	.	View window	Attach reference
Model link	<Ctrl>	View window	Place Cell
Model link	<Alt>	View window	Link on element
Model link	.	Print Organizer dialog in another session	Create print definition
Model link	.	Models dialog in another session	Import models
Saved view link	.	View window	Attach reference
Saved view link	<Alt>	View window	Link on element
Saved view link	.	Saved Views dialog	Import saved view
Saved view link	.	Saved Views dialog in another session	Import saved view

You can use the drag-and-drop feature for the following items into the Project Explorer dialog Links tab.

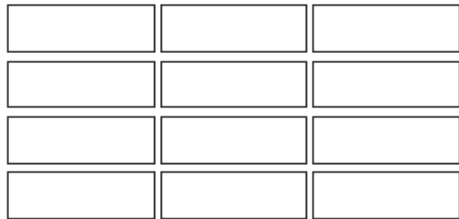
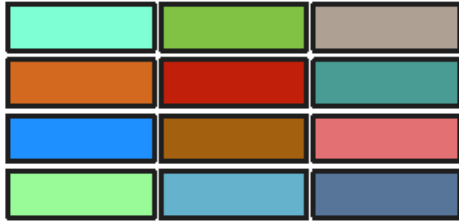
Drag from	Drop into Project Explorer dialog Links tab	Result
Models dialog	Model	Model link
Models dialog in another session	Model	Model link
Saved Views dialog in another session	Saved view	Saved view link
Saved Views dialog	Saved view	Saved view link
Windows Explorer	File or Folder	File or Folder link

Google Maps

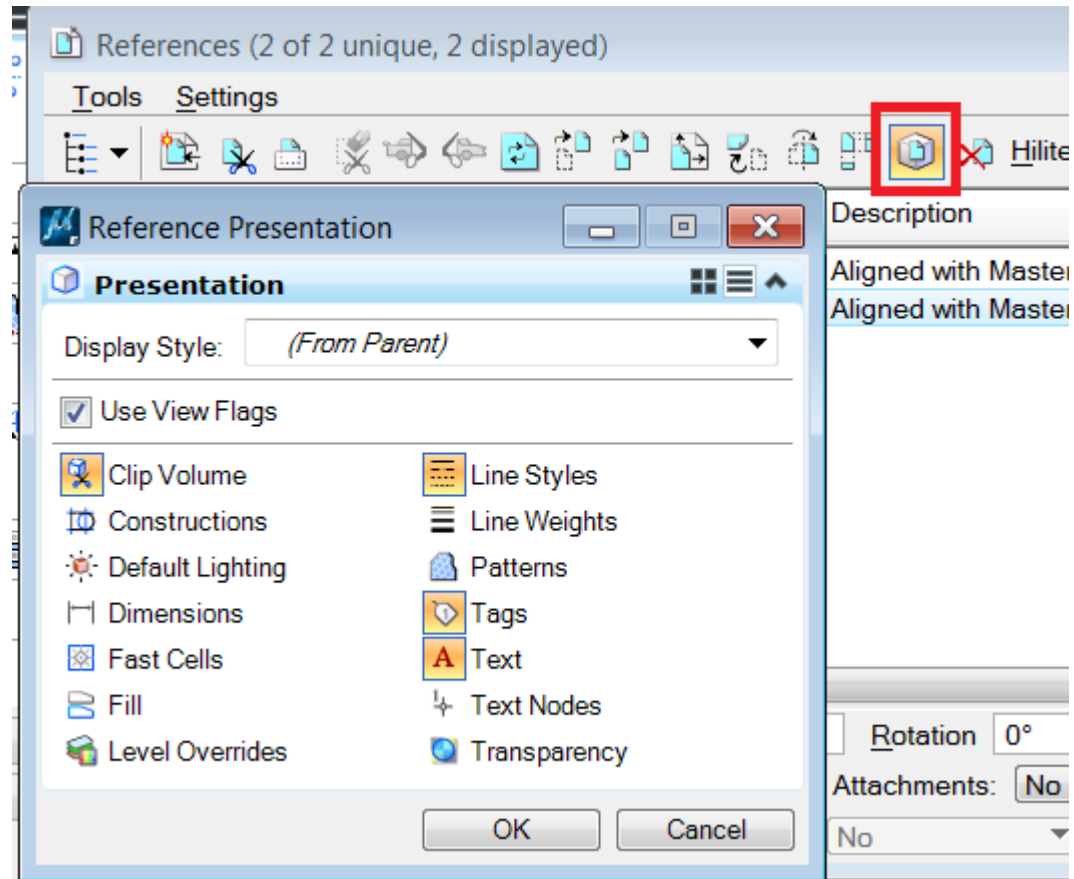


File:MicroStationTips.dgn, Model: 11 GoogleMaps

Reference View Flags



2 references; One with fill and one without

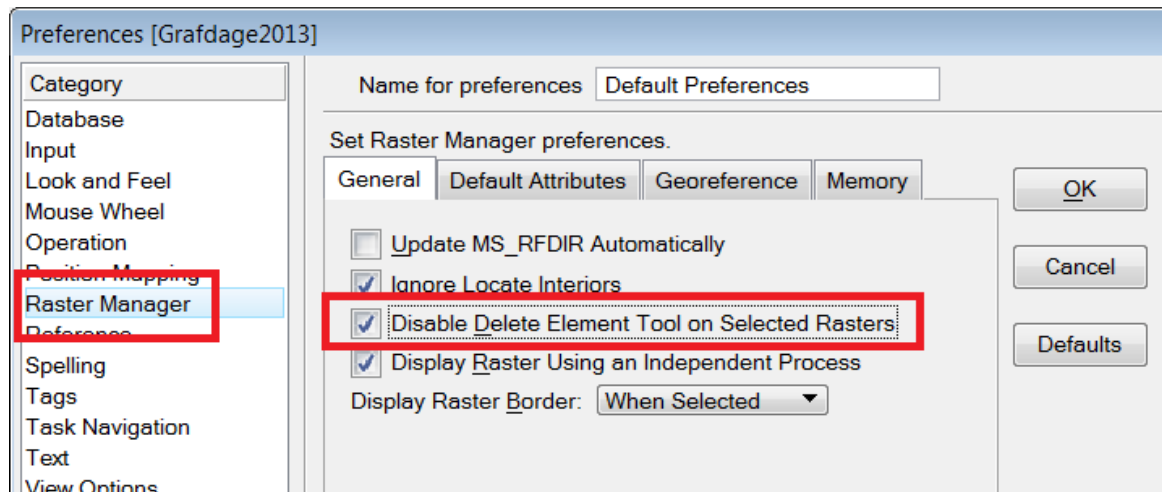


File:MicroStationTips.dgn, Model: 12 Reference View Flags

Raster References as Elements

As with references, raster references are treated as elements which allow you to manipulate them as you would any other element. In the event that this is undesirable, simply lock the raster attachment. They'll still be selectable, but impossible to manipulate. And, to prevent accidental deleting/detaching when they are unlocked. Go to:

Workspace > Preferences > Raster Manager > Enable:
Delete element Tool on Selected Rasters.

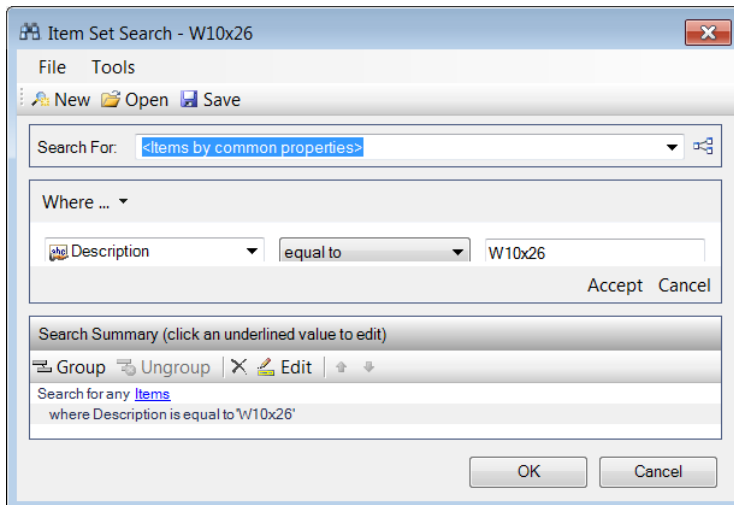
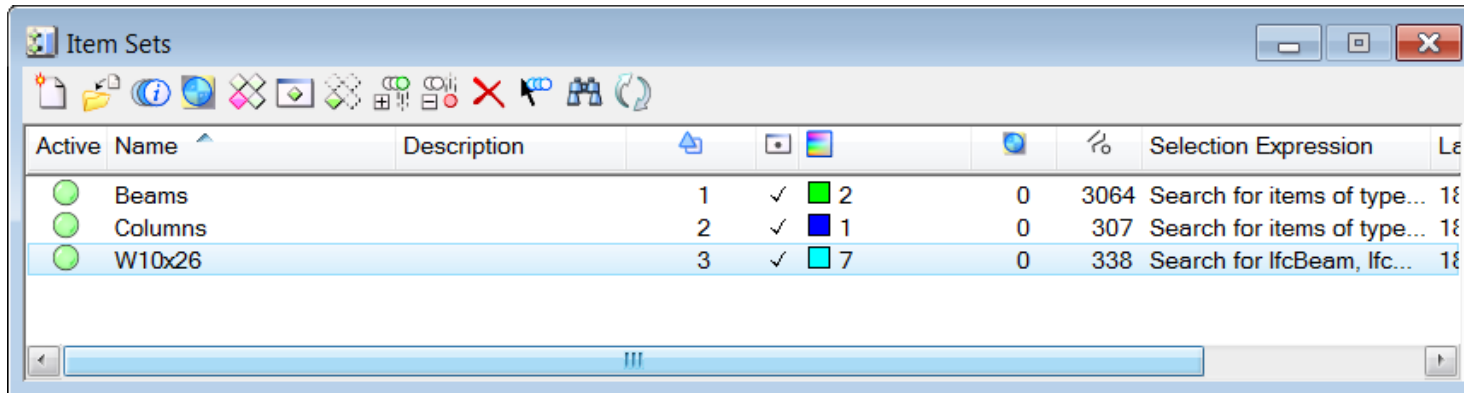


File:MicroStationTips.dgn, Model: 13 DeleteRasterReference

Item sets

Used to create sets of items based on the properties you select.

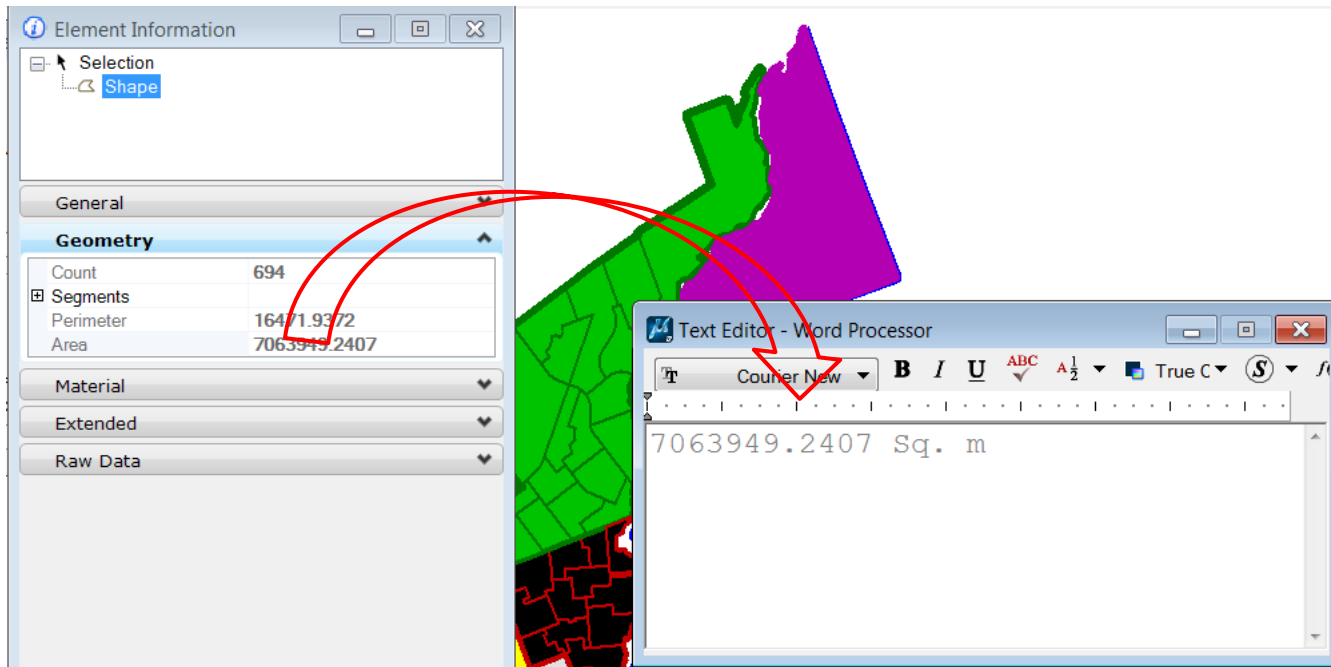
Utilities > Item Sets



*Tip to hands-on:
Create an Item Set and search for objects
where Description = W12x65*

File:MicroStationTips.dgn, Model: 14 Itemsets

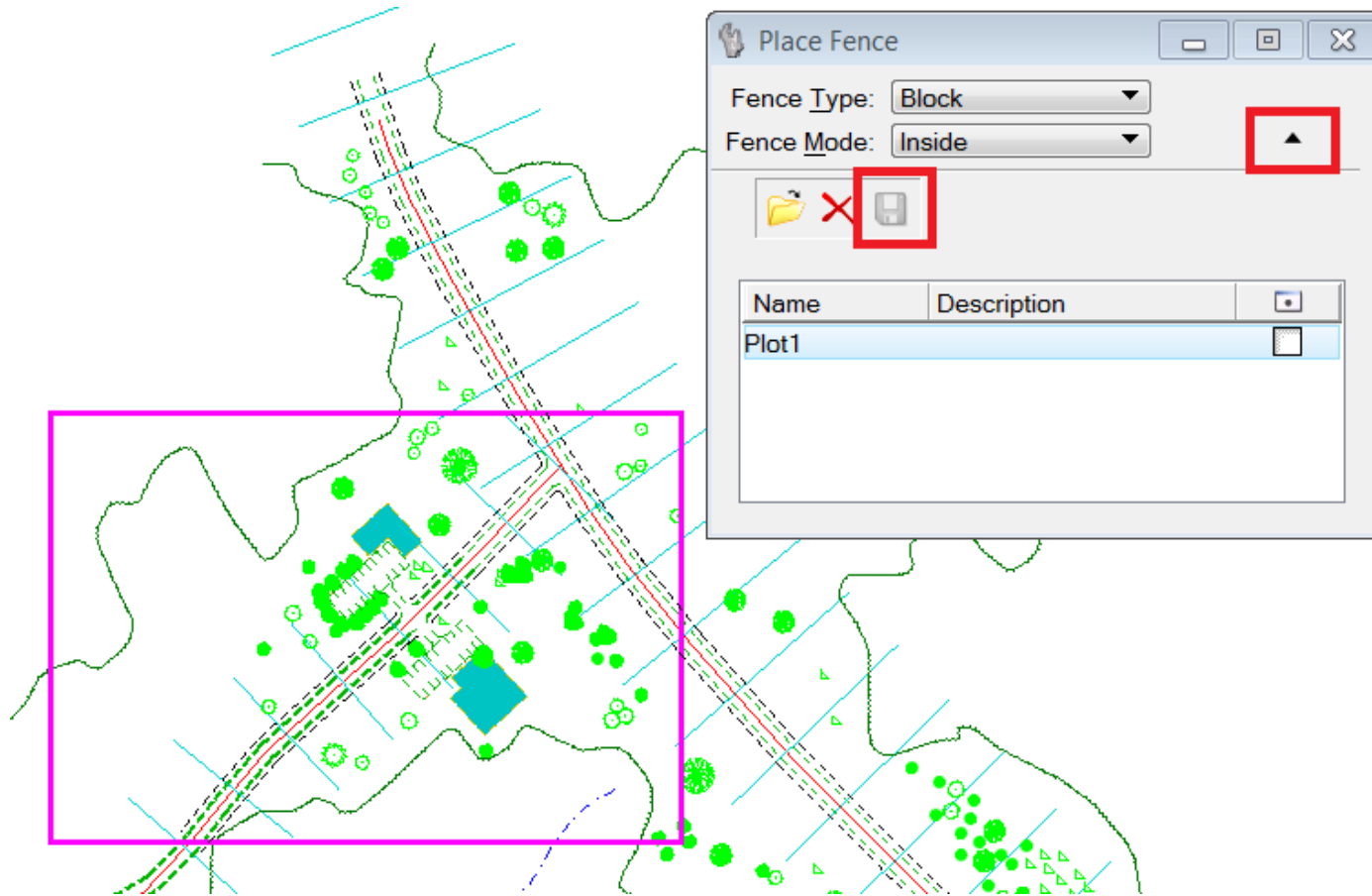
Fields - drag and drop



Tip: if you want to change sq. m to m², double click on field to edit

File:MicroStationTips.dgn, Model: 15 FieldsDragAndDrop

Save a Fence



File:MicroStationTips.dgn, Model: 16 SaveFence

Fence and references

Reference Attachment Settings for MicroStationTips.dgn

File Name: MicroStationTips.dgn
Full Path: ...TipsAndTricksWorkshop\dgn\MicroStationTips.dgn
Model: 16 SaveFence
Logical Name: Plot1
Description: Named Fence Attachment

Orientation:

View	Description
Coincident	Aligned with Master File
Coincident - World	Global Origin aligned with Master File
Standard Views	
Saved Views (none)	
Named Fences	
Plot1	

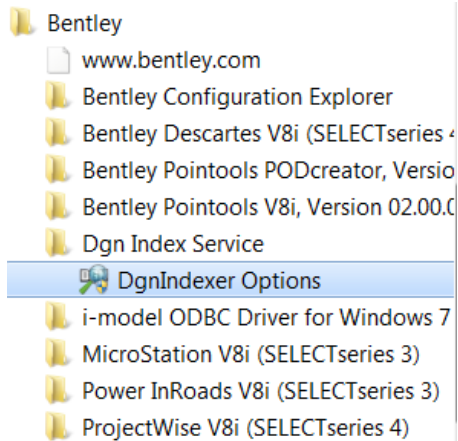
Detail Scale: 1:1000
Scale (Master:Ref): 1.000000 : 1.000000

File:MicroStationTips.dgn, Model: 17 FenceAndReferences

DGN indexing

Used to start or stop the DGN indexing service and set options for DGN indexing.

From Windows

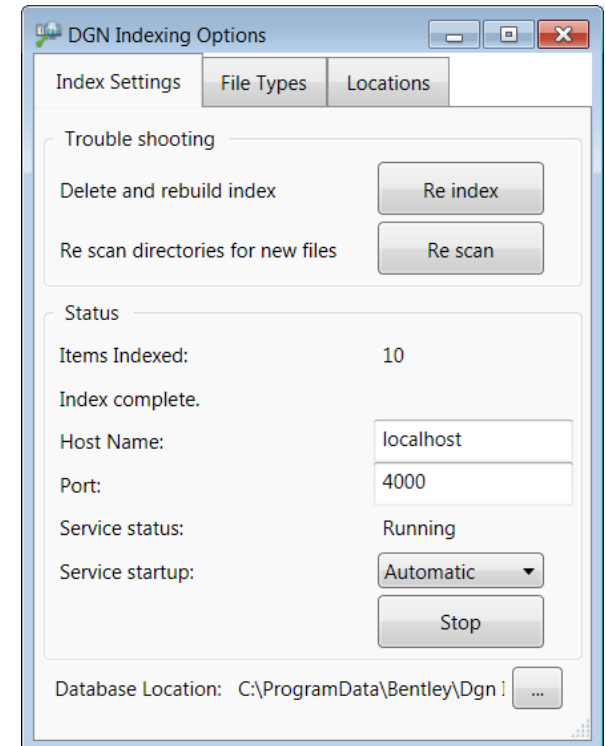
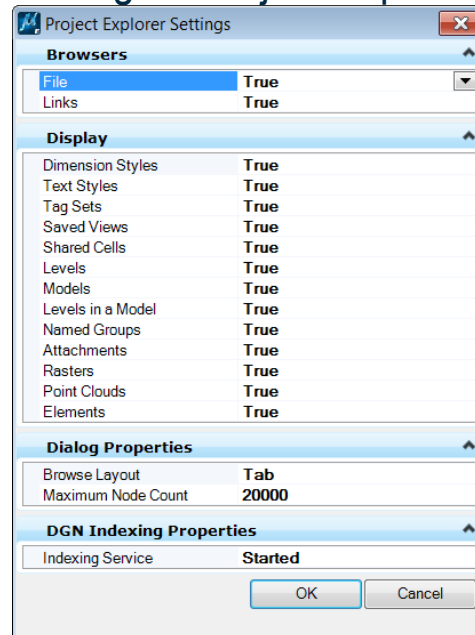


Tip: Workspace is located here:

*C:\Documents and Settings\All Users\Application Data\Bentley\MicroStation V8i (SELECTseries)\WorkSpace\Projects\
MicroStationTips*

From MicroStation:

Settings > Project Explorer

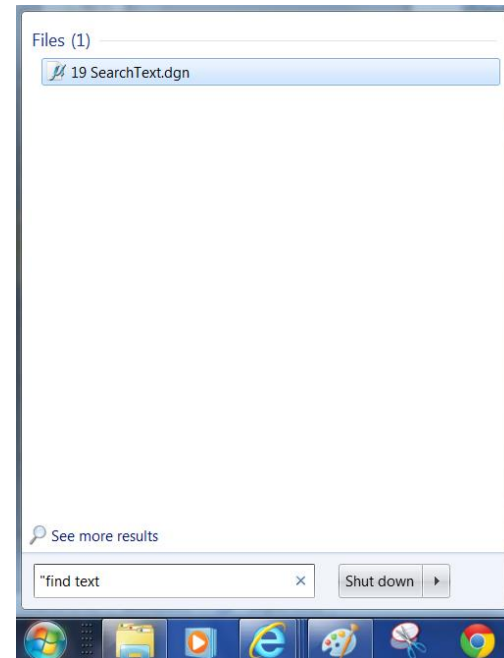


Bentley DGN iFilter

Bentley DGN IFilter is a tool that enables searching text content in DGN files using Windows Search. It supports all the text-based elements such as text, text nodes, fields, tags, XYZ text, cells, and digital signatures. It also supports overridden dimensions.

In addition to .dgn files, Bentley DGN IFilter also supports .cel, .rdl, .sht file types. It also supports published files such as i.dgn, dgn.i.dgn, and dwg.i.dgn.

Use Window search, and search for “Find text”



Focus

Home – ESC or F12

When the focus is home, you need not use the mouse to navigate toolboxes, tasks, and the Tool Settings window: You can quickly select tools by pressing keys on your keyboard. This technique is called positional keyboard navigation.

Tool Settings - F10

The Tool Settings window has the focus.

Key-in – ENTER or F9

The Key-in window has the focus.

AccuDraw – SPACE or F11

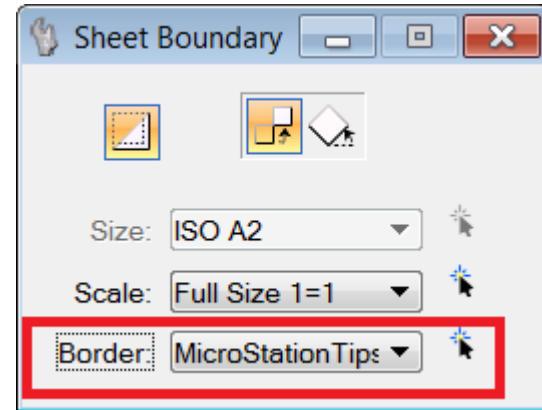
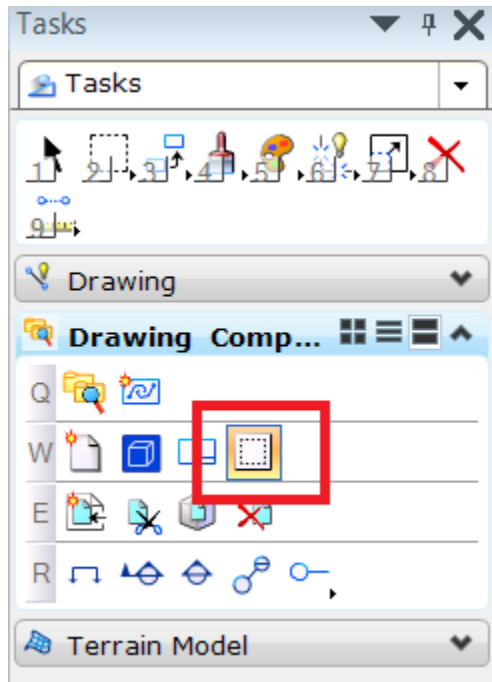
The AccuDraw window has the focus.

(No icon)

no other window or dialog has the focus

Sheets and border

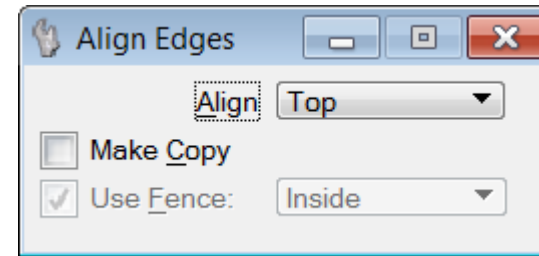
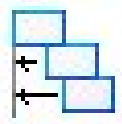
Link your border to the sheet, and automatically scale the border reference with annotation scale



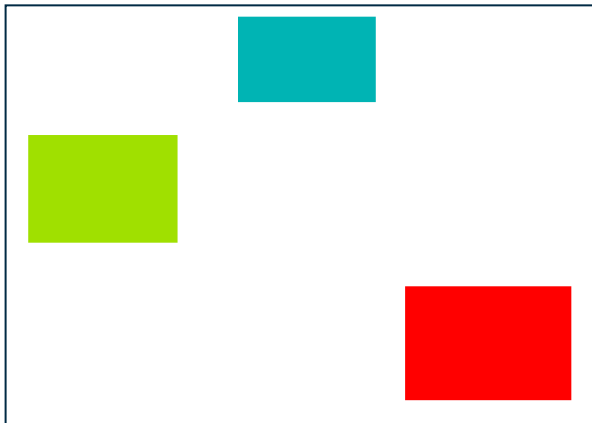
File:MicroStationTips.dgn, Model: 21 Sheet and border

Align Edges

Move your elements to a specific elevation - using the align edges command



Before

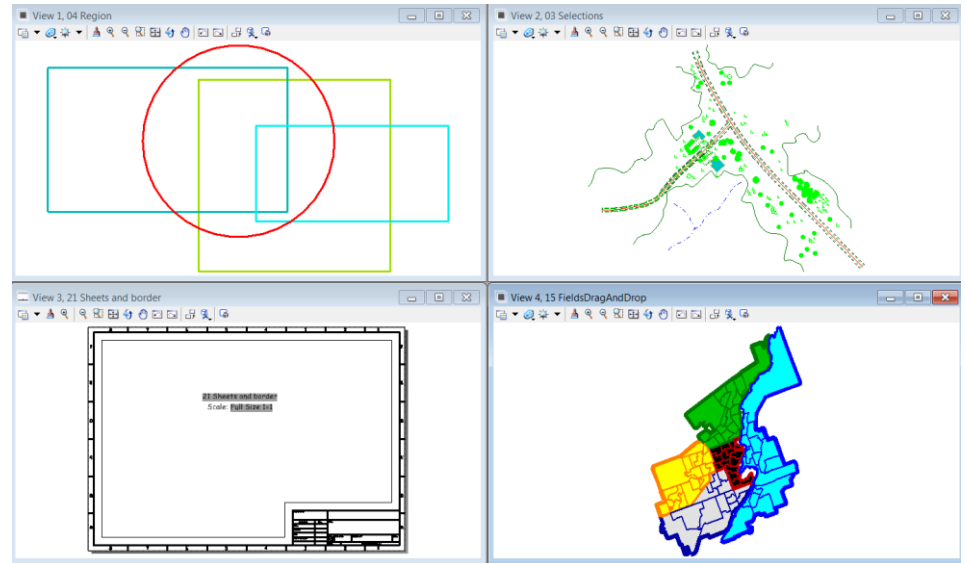
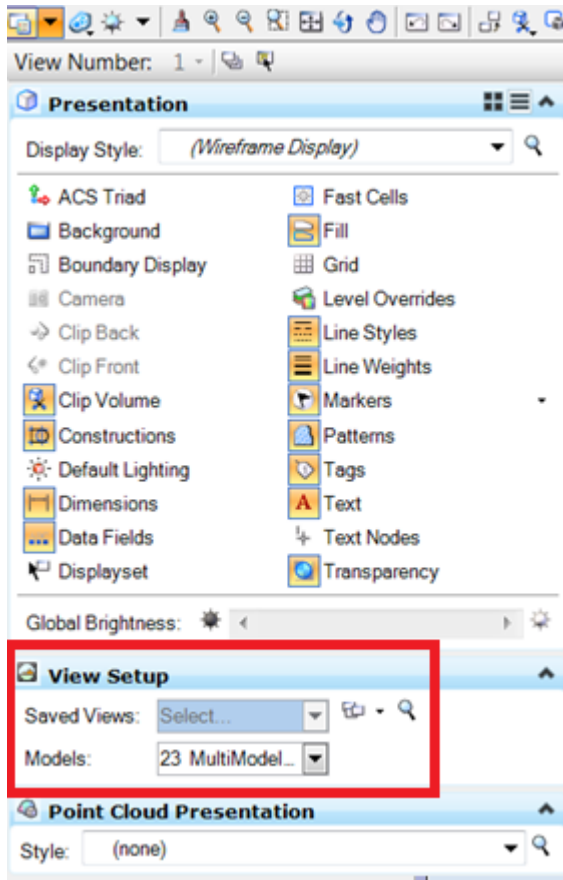


After



File:MicroStationTips.dgn, Model: 22 Align Edges

MultiModel Views



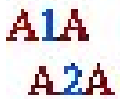
File:MicroStationTips.dgn, Model: 23 MultiModelViews

Multi copy with increment text

A combination of an old key-in and Copy Increment text.

`DL=0,-10,0|6`

Where $DL = 0,-10$ is the X,Y distance between the copied elements and $|6$ is the number of copies



A1A
A2A



Before

Number : 105

After

Number : 105

Number : 106

Number : 107

Number : 108

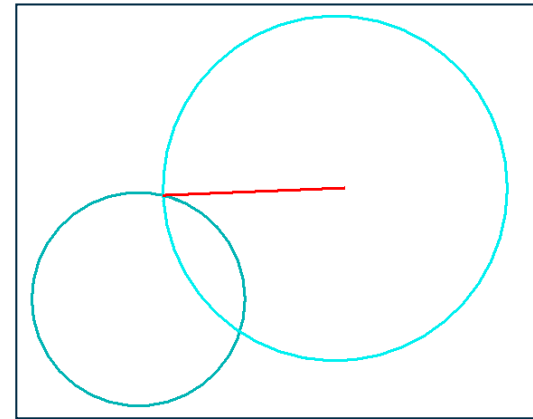
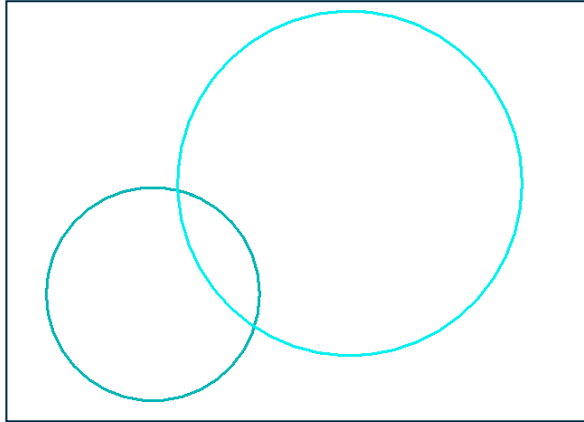
Number : 109

Number : 110

Number : 111

File:MicroStationTips.dgn, Model: 24 Multi copy with increment text

Perpendicular line from intersection

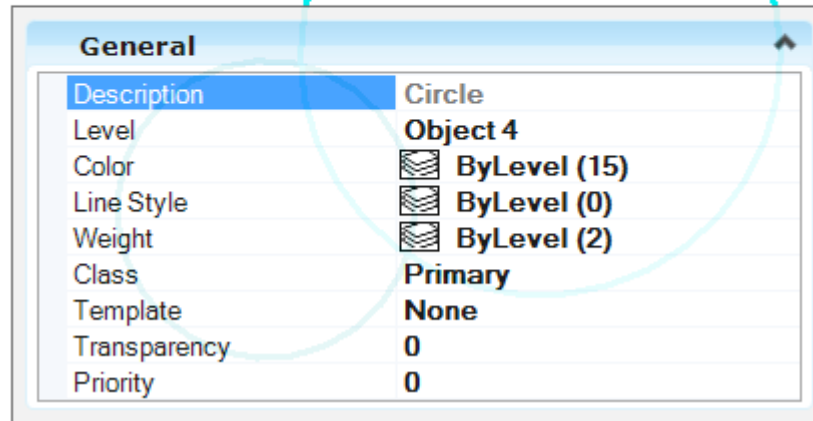


1. Select Place Smartline (or the tool you want to use)
2. Make IntersectionSnap the default snapfunction by double clicking on the icon
3. Then select PerpendicularSnap Point
4. Move the curser to the intersection point and draw your line

File:MicroStationTips.dgn, Model: 25 Perpendicular line from intersection

Quick info

ALT + Reset



Papersize settings

Settings > Preferences

Color: True Color Copies: 1

Printer and Paper Size

Bentley driver

Paper: ANSI A

Paper size: 780.000 841.000 mm

Portrait Create plot file

Print Scale and Position

Scale: 0.500 1 mm (paper) t

Size: 780.000 841.000 mm Maximize

Origin: 0.000 0.000 mm Auto-cent

Print - Preferences

User Interface

- Allow paper size editing
- Hide advanced layout controls
- Show print status dialog

Page Layout

- Enable auto rotation
- Enable auto orientation
- Enable scale preservation
- Enable scale clipping
- Default form scale priority
- Maximize on new plot area

Auto fit view: None

Sheet Definition

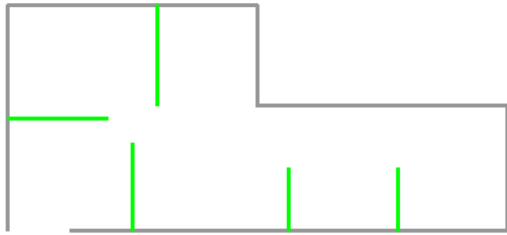
- Honor sheet layout
- Honor sheet plot style table
- Set units from sheet
- Use sheet instead of fence

Preview

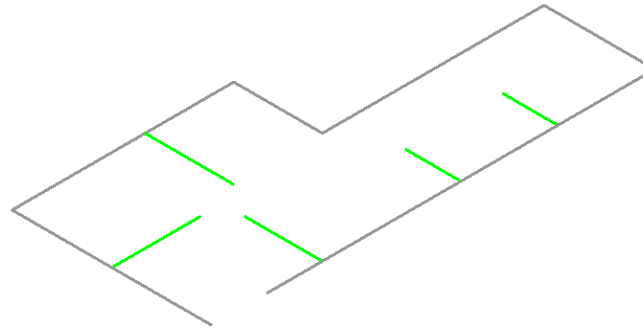
- Preview entire page
- Preview usable area
- Preview accurate rotation

Thumbnail preview timeout (sec.) 10

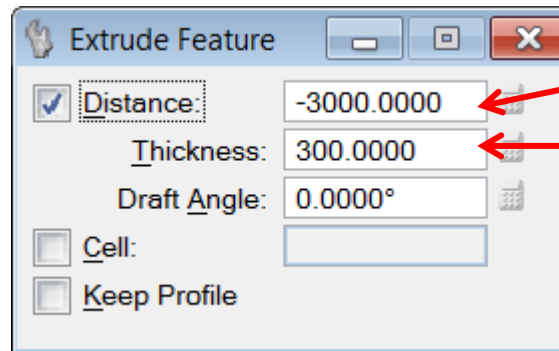
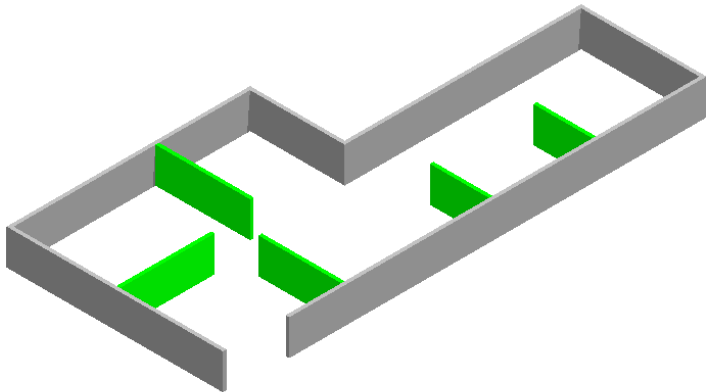
Extrude 2D Lines with Thickness



Simple existing 2D drawing can be converted to a 3D drawing.



In 3D model set a standard isometric view



Height of wall

Wall thickness

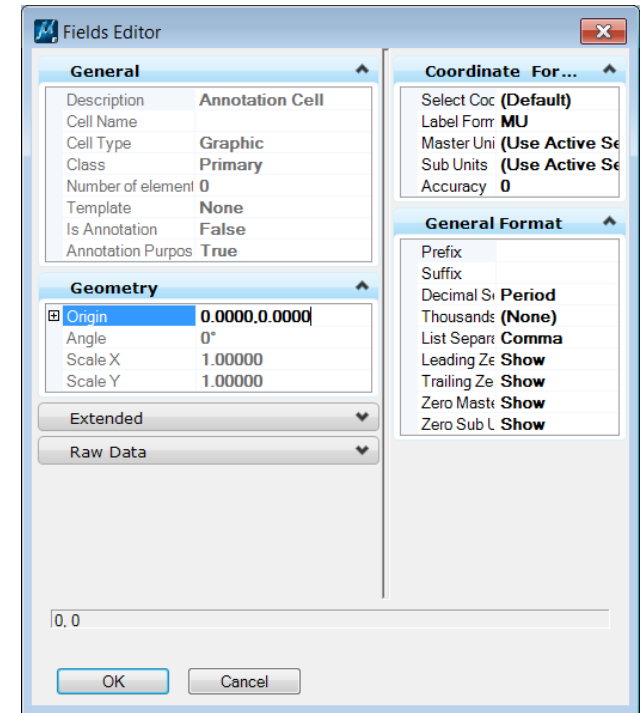
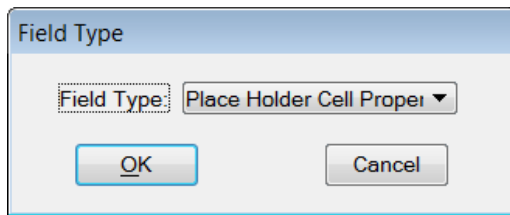
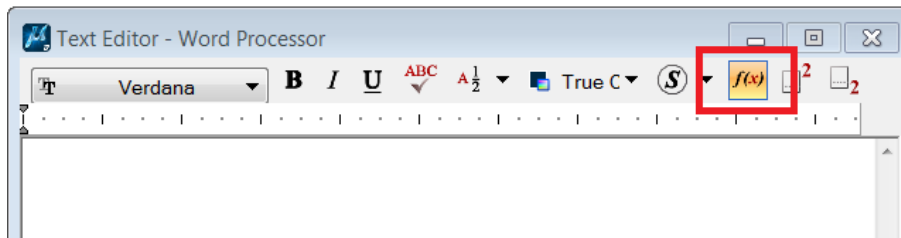
Use Feature Modeling Extrude with thickness to create 3D walls.

File:MicroStationTips.dgn, Model: 28 Extrude 2D lines

Fields and cells

A cell can contain a field that reads the properties from the cell.

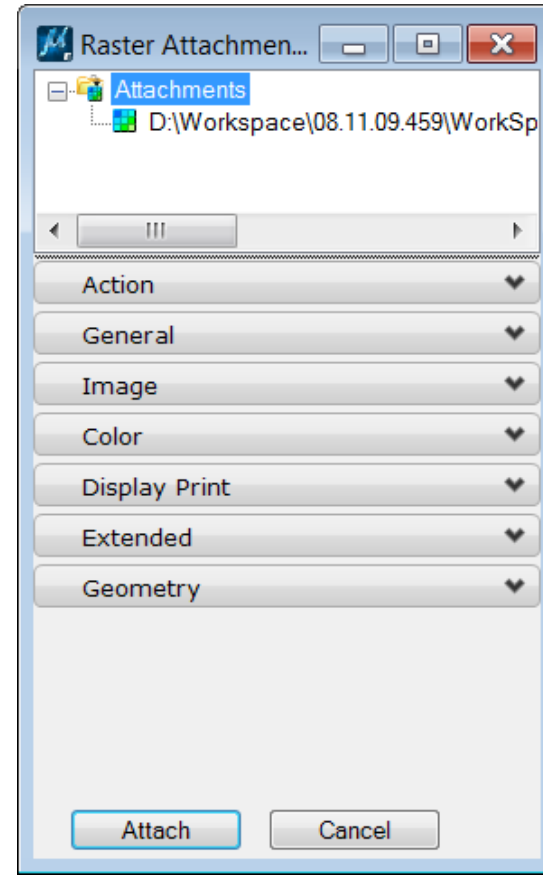
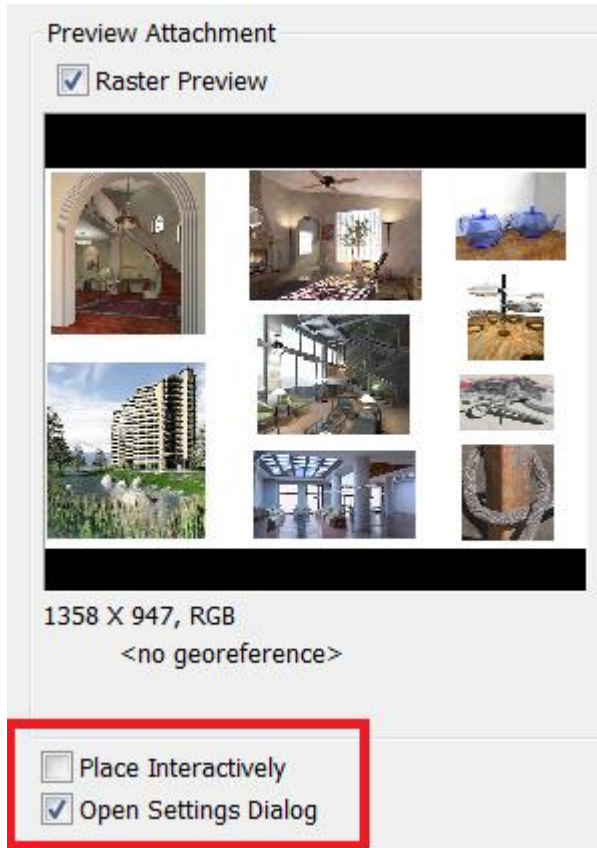
It's called a "Place Holder Cell Property field"



File:MicroStationTips.dgn, Model: 29 FieldsAndCells

Attach Raster

Note the options when you attach a reference

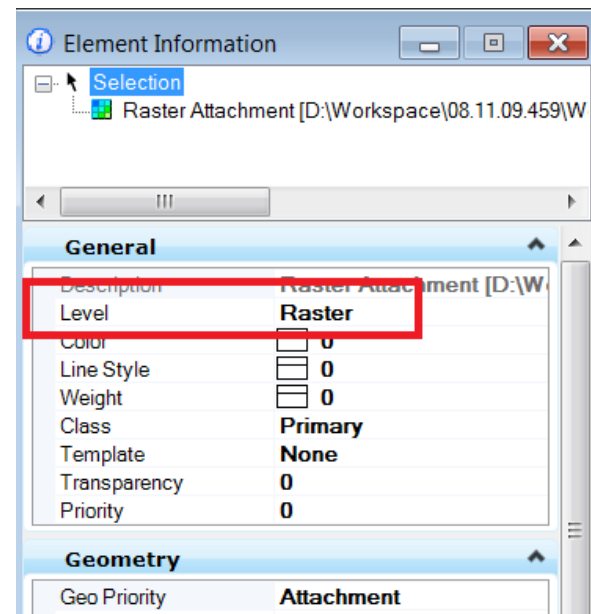
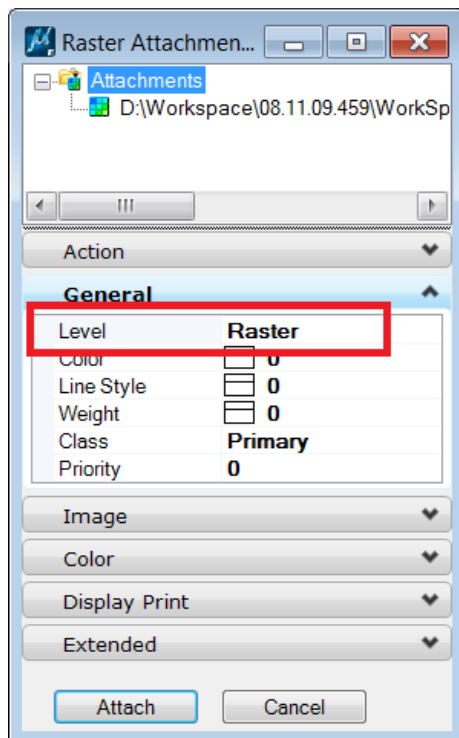


File:MicroStationTips.dgn, Model: 30 Attach Raster

Raster and levels

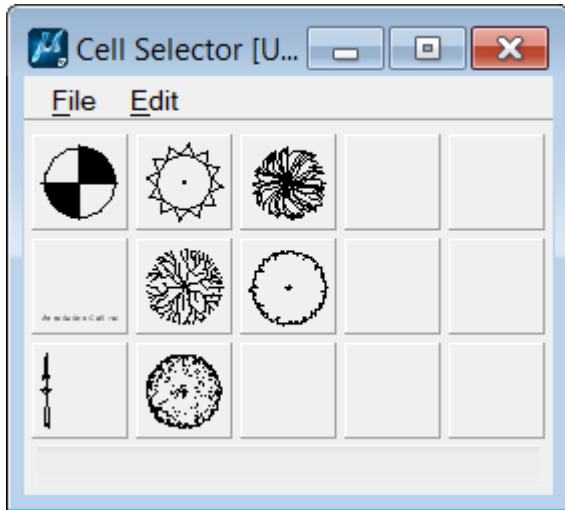
A raster reference is placed on the active level, unless to define which level it should be placed on.

You can use Level Display to turn on and off your raster references.



Continue in File:MicroStationTips.dgn, Model: 30 Attach Raster

Cell Selector

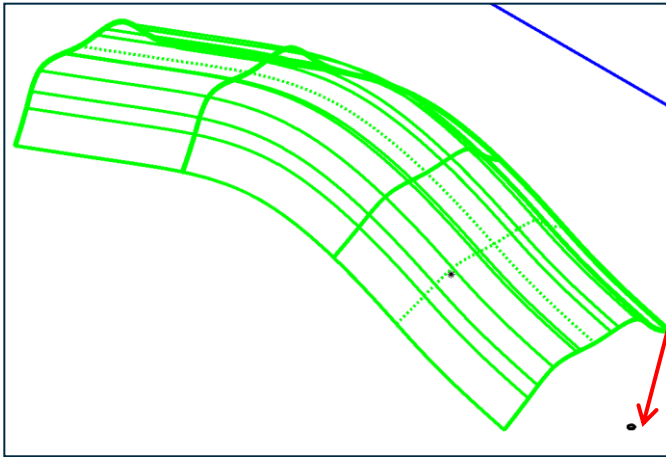


You can modify the cell selector file by using the menu in the Cell Selector dialog.

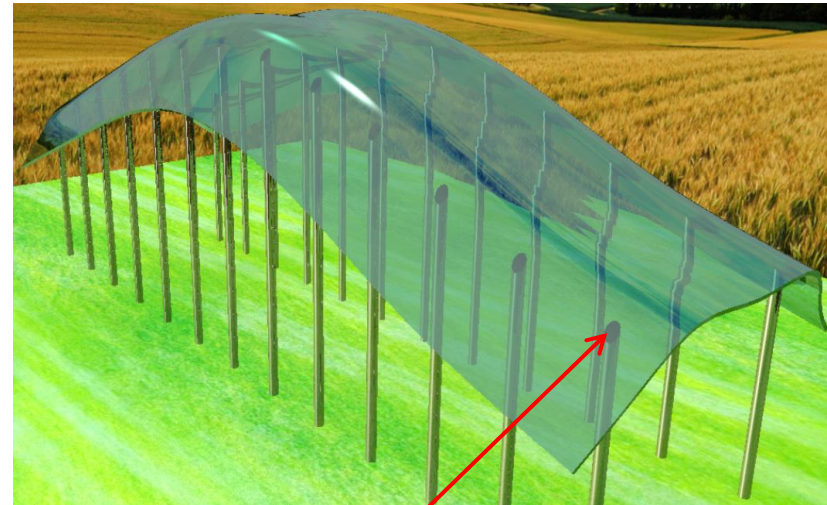
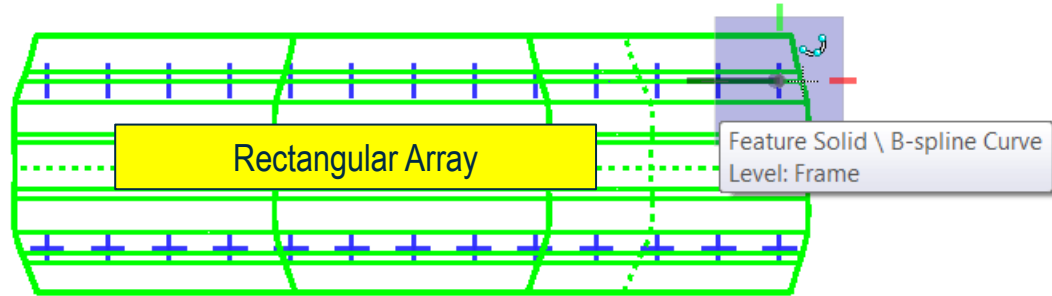
Import and delete cell icons, change size etc.

Save your favorites in a cfs file, and set the configuration variable:
MS_CELLSELECTOR

Parametric Feature Modeling Protrusion

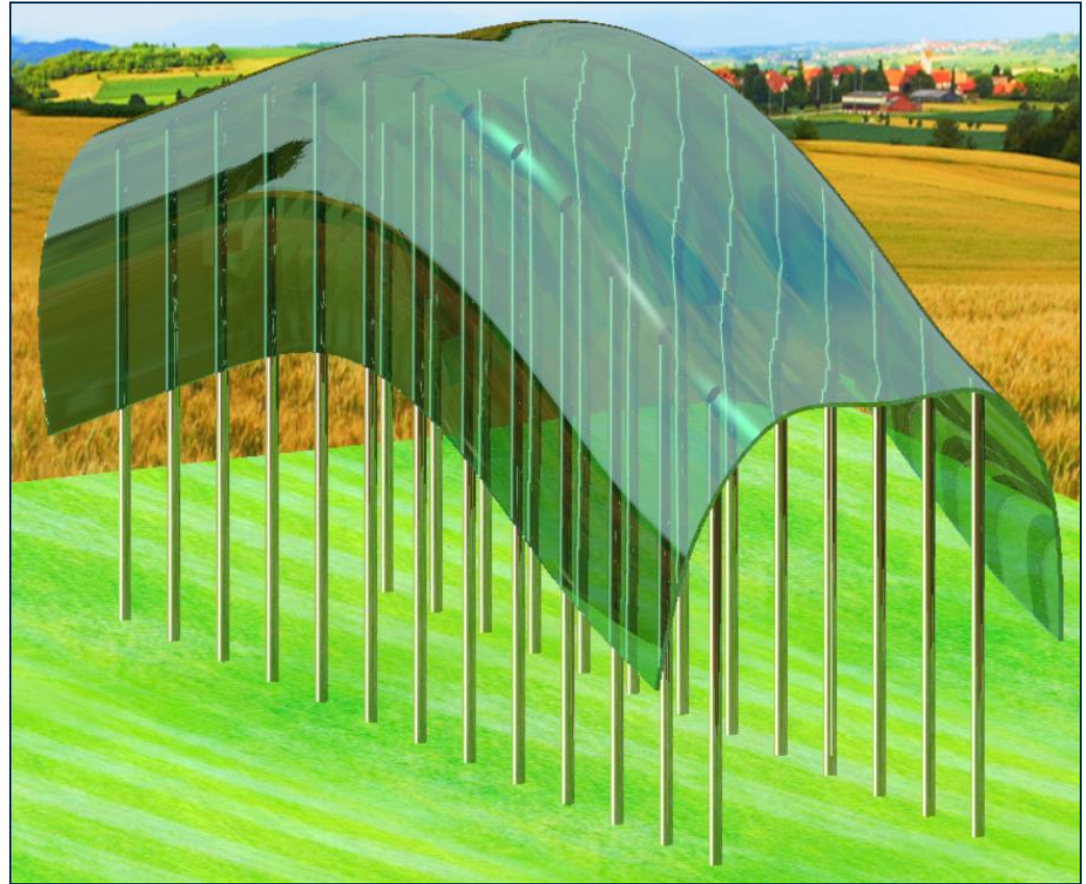
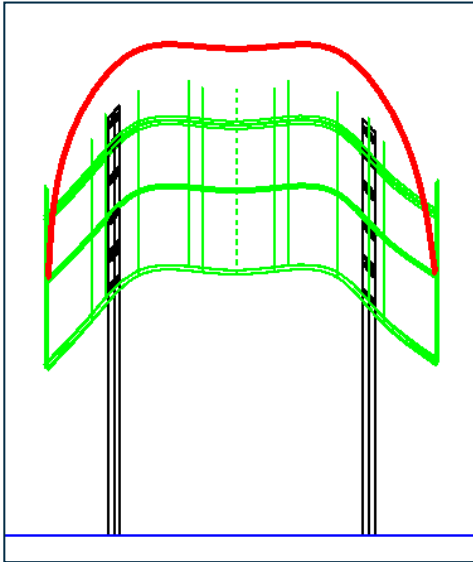


A circle is protruded Up to the body of a solid (green canopy). Then this feature is arrayed.



Modified Canopy Results

Original profile of canopy is modified (red b-spline) then placed back into model. The canopy updates and all the up to body columns modify dynamically.



File:MicroStationTips.dgn, Model: 30 Attach Raster

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

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	Language	Generation	Release Label	LU's
<input type="checkbox"/>	MicroStation Essentials	English	V8i	Base Release	8
<input type="checkbox"/>	MicroStation Essentials Basics	English	V8i	Base Release	4
<input type="checkbox"/>	MicroStation Essentials Express	English	V8i	Base Release	4
<input type="checkbox"/>	MicroStation Essentials	English	V8i	Base Release	8
<input type="checkbox"/>	MicroStation for AutoCAD Users	English	V8i	Base Release	8
<input type="checkbox"/>	MicroStation for AutoCAD Users Express	English	V8i	Base Release	4
<input type="checkbox"/>	MicroStation for Mining and Metal Extraction	English	V8i	Base Release	4
<input type="checkbox"/>	MicroStation for AutoCAD Users Express	English	V8i	Base Release	4

On-Demand

Title	Language	Generation	Release Label	LU's	Type	
<input type="checkbox"/>	MicroStation Essentials Lecture Series	English	V8i	Base Release	1	OnDemand eLearning: Lecture
<input type="checkbox"/>	MicroStation Quick Start Guide	English	V8i	Base Release	1	OnDemand eLearning: Hands-on
<input type="checkbox"/>	MicroStation Essentials	English	V8i	Base Release	8	OnDemand eLearning: Hands-on
<input type="checkbox"/>	MicroStation for AutoCAD Users	English	V8i	Base Release	8	OnDemand eLearning: Hands-on
<input type="checkbox"/>	MicroStation for Mining and Metal Extraction	English	V8i	Base Release	4	OnDemand eLearning: Hands-on
<input type="checkbox"/>	MicroStation Essentials	English	V8i	Base Release	8	OnDemand eLearning: Hands-on

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

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](#)

LU's: 0

Find Training (10)

Live	Title	Language	Generation	Release Label	LU's
<input type="checkbox"/>	ProjectWise User Essentials	English	V8i	SELECTseries 2	8
<input type="checkbox"/>	ProjectWise User Essentials	English	V8i	SELECTseries 3	8
<input type="checkbox"/>	ProjectWise Client Start Up Guide	English	V8i	Base Release	4
<input type="checkbox"/>	ProjectWise User Essentials	English	V8i	Base Release	8

On-Demand

Title	Language	Generation	Release Label	LU's	Type	
<input type="checkbox"/>	Design Management Studio	English	V8i	Base Release	1	OnDemand eLearning: Lecture
<input type="checkbox"/>	ProjectWise User Essentials	English	V8i	SELECTseries 2	8	OnDemand eLearning: Hands-on
<input type="checkbox"/>	ProjectWise User Essentials	English	V8i	SELECTseries 3	8	OnDemand eLearning: Hands-on
<input type="checkbox"/>	ProjectWise Client Start Up Guide	English	V8i	Base Release	4	OnDemand eLearning: Hands-on
<input type="checkbox"/>	ProjectWise User Essentials	English	V8i	Base Release	8	OnDemand eLearning: Hands-on
<input type="checkbox"/>	ProjectWise User Essentials	English	V8i	Base Release	5	OnDemand eLearning: Hands-on

ADD MORE

MicroStation Essentials

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](#)

LU's: 0

Learning paths to you and your colleagues

Link to a video presentation + a LIVE session with many of these tips:

<http://learn.bentley.com/app/Public/ViewLearningPathDetails?lpId=105555>

Link to a learning path about the LEARN server:

<http://learn.bentley.com/app/Public/ViewLearningPathWithMasterCourseExpanded?lpId=101155&mcId=100515>

Other good lectures about MicroStation from Bentley LEARNing conference 2013.

<http://learn.bentley.com/app/Public/ViewLearningPathDetails?lpId=104215>



Assessment

1. What is the AccuDraw shortcut to place a temporary origin?
2. How do you drag and drop a dgn file as a cell into a file?
3. What is the quickest way to edit a text string?



Assessment Answers

1. The letter “O” - Moves the drawing plane origin to the current pointer position.
2. Drag the DGN file to the View Window while holding the Control key.
3. To edit a text string, simply double click the text string using the Element Selection tool.



Thanks to all!

A thank you to all attendees, and also thanks to all my great colleagues for contribution to this session. Especially Bob Bossler, who delivered many of these tips at the Bentley LEARNing conference 2013. 😊

More tips and tricks? –Don't hesitate to contact me:

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LEARNing Consultant