

# InRoads Storm & Sanitary Update V8i – Tips & Tricks

# V8i (SELECTseries 2)

- Inlet by Spread!

The screenshot shows the 'Drainage Lay Out' dialog box with the following settings:

- Multiple Junctions:** Pipe by Slope
- Inlets by Spread:** Selected (highlighted with a red box)
- Inlet Seed ID:** INC
- Alignment:** Secondary
- Crest Station:** 0+00.00
- Initial Station:** 0+00.00
- Sag Location:** Station: 0+00.00
- Inlet Location:** Constant Offset: -39.2333, Max. Spacing: 360.0000, Spacing Step: 10.0000, Surface: OG, Feature: AF1
- Drainage Area:** Left Offset: -42.7000, Right Offset: 42.7000
- Existing Bypass:** User-Specified: 0.0
- Connecting Pipes:** Add Connecting Pipes checked, By Slope selected (1.000%), User Data Field: [empty], Value: [empty]

Buttons at the bottom: Apply, Options..., Close

# Translate Excel to IDF file (Intensity, Duration, and Frequency)

**Translate Excel to IDF**

Preview of Excel Spreadsheet:

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
1	Intensi...									
2	I-15 In...									
3		Latitude:	34.55 ...					Datum:		
4		Longit...	117.30...					Elevati...	2800	
5		Durati...	10-YRd...		25-YRd...		50-YRd...		100-Y...	
6			(mm/hr)	(in/hr)	(mm/hr)	(in/hr)	(mm/hr)	(in/hr)	(mm/hr)	(in/hr)
7		5	108	4.27	137	5.40	159	6.26	181	7.12
8		6	95	3.76	121	4.76	140	5.51	159	6.27
9		7	86	3.37	108	4.27	126	4.95	143	5.62
10		8	78	3.07	99	3.89	114	4.51	130	5.12

Preview of IDF File:

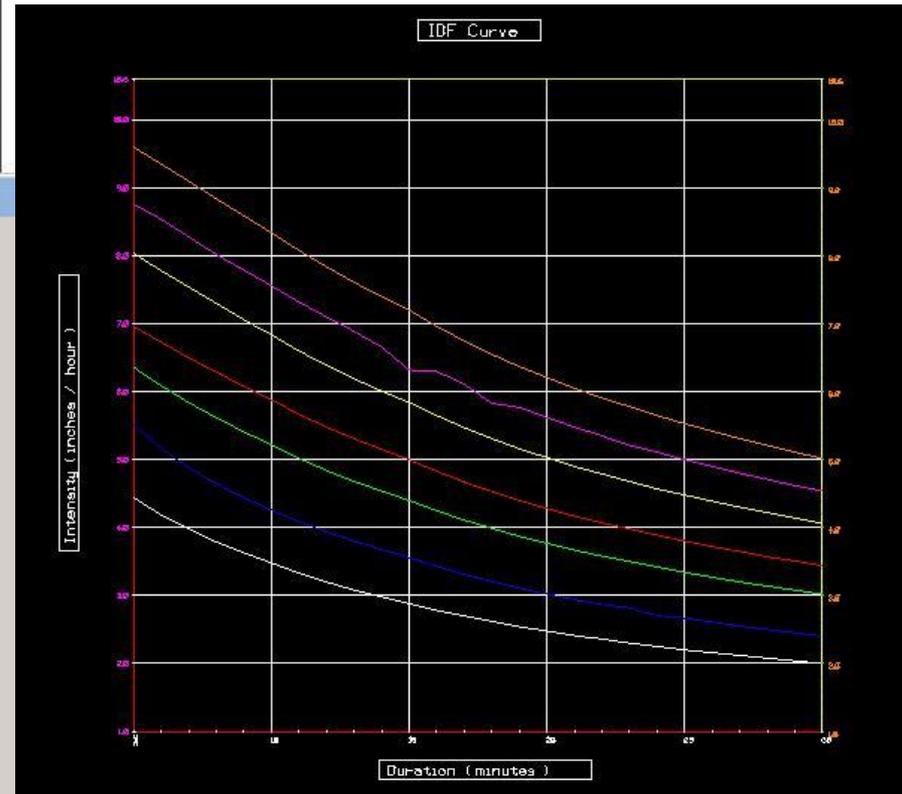
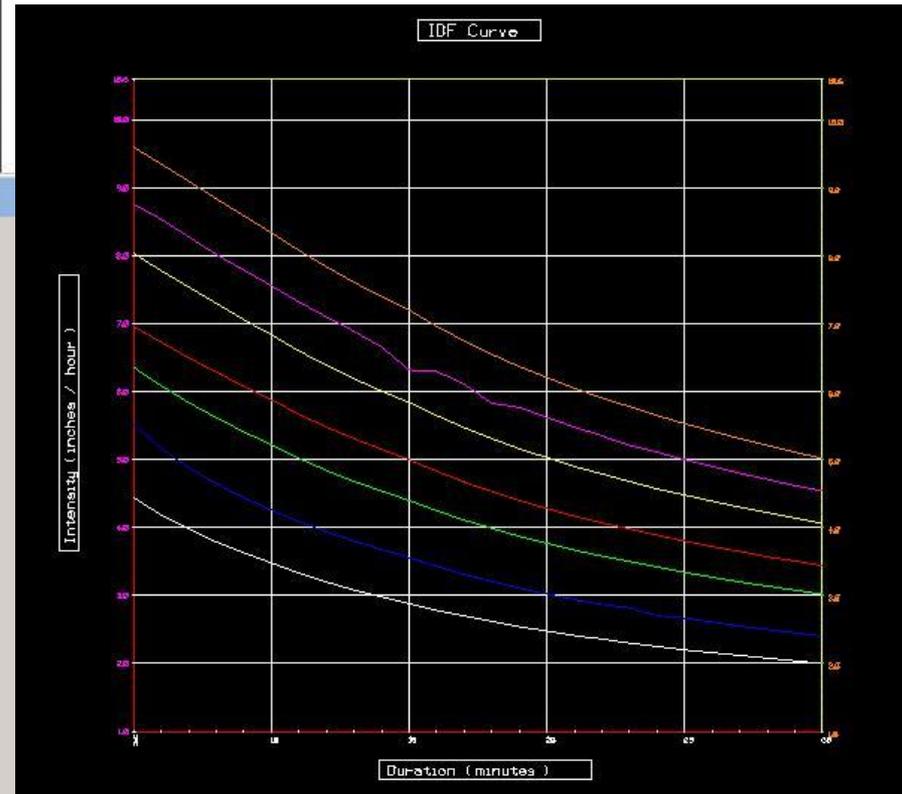
8										
5	108	4.27	137	5.40	159	6.26	181	7.12		
6	95	3.76	121	4.76	140	5.51	159	6.27		
7	86	3.37	108	4.27	126	4.95	143	5.62		
8	78	3.07	99	3.89	114	4.51	130	5.12		
9	72	2.83	91	3.58	105	4.15	120	4.72		
10	67	2.63	84	3.33	98	3.85	111	4.38		
11	62	2.46	79	3.11	92	3.61	104	4.10		
12	59	2.31	74	2.93	86	3.39	98	3.86		
13	56	2.19	70	2.77	81	3.21	93	3.65		
14	53	2.08	67	2.63	77	3.05	88	3.46		
15	50	1.98	64	2.50	74	2.90	84	3.30		

First Row of Data:  Last Row of Data:  Duration Column:

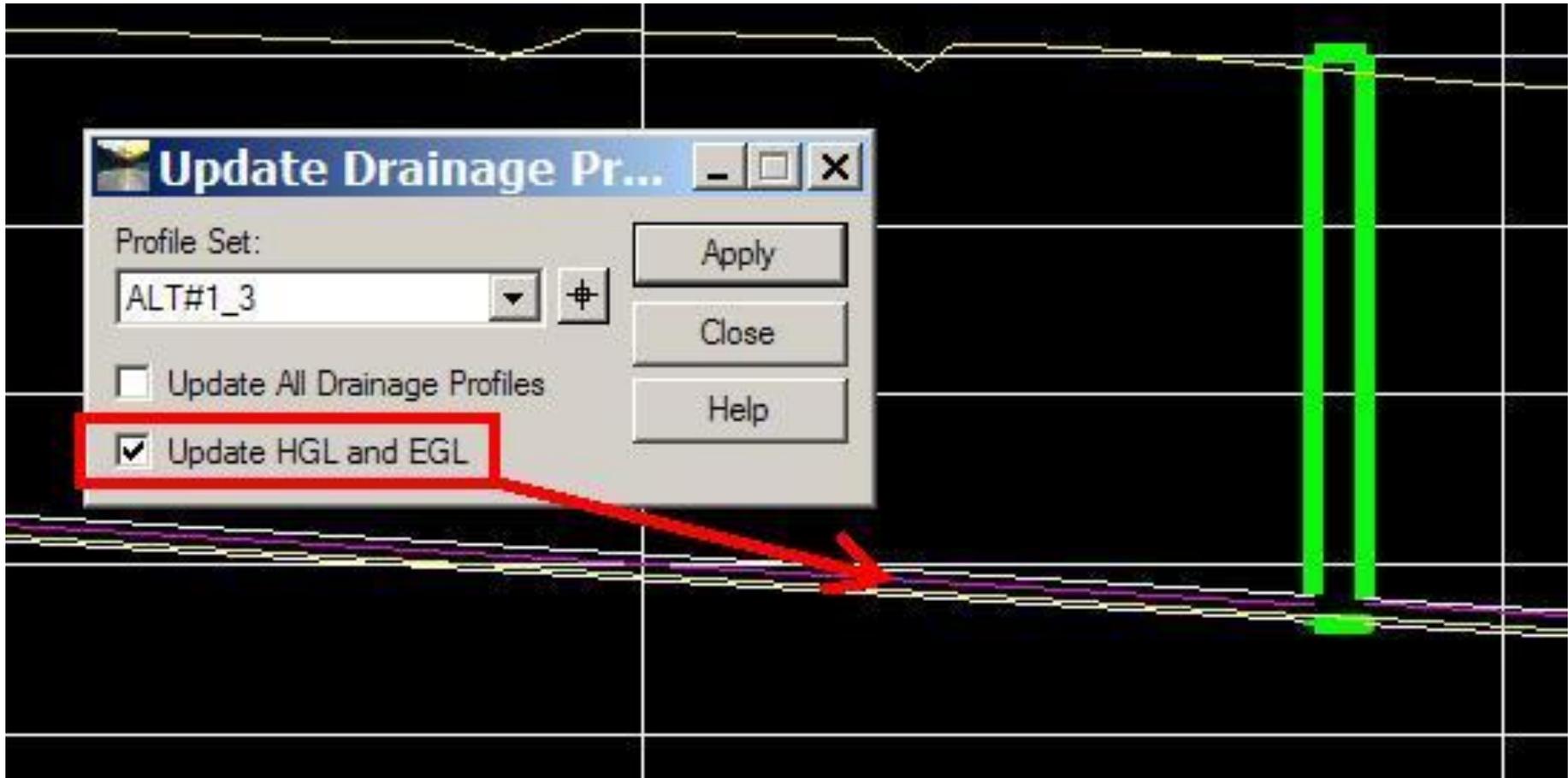
Header Comment Rows:  Frequency Headings:

Footer Comment Rows:  Frequency Columns:

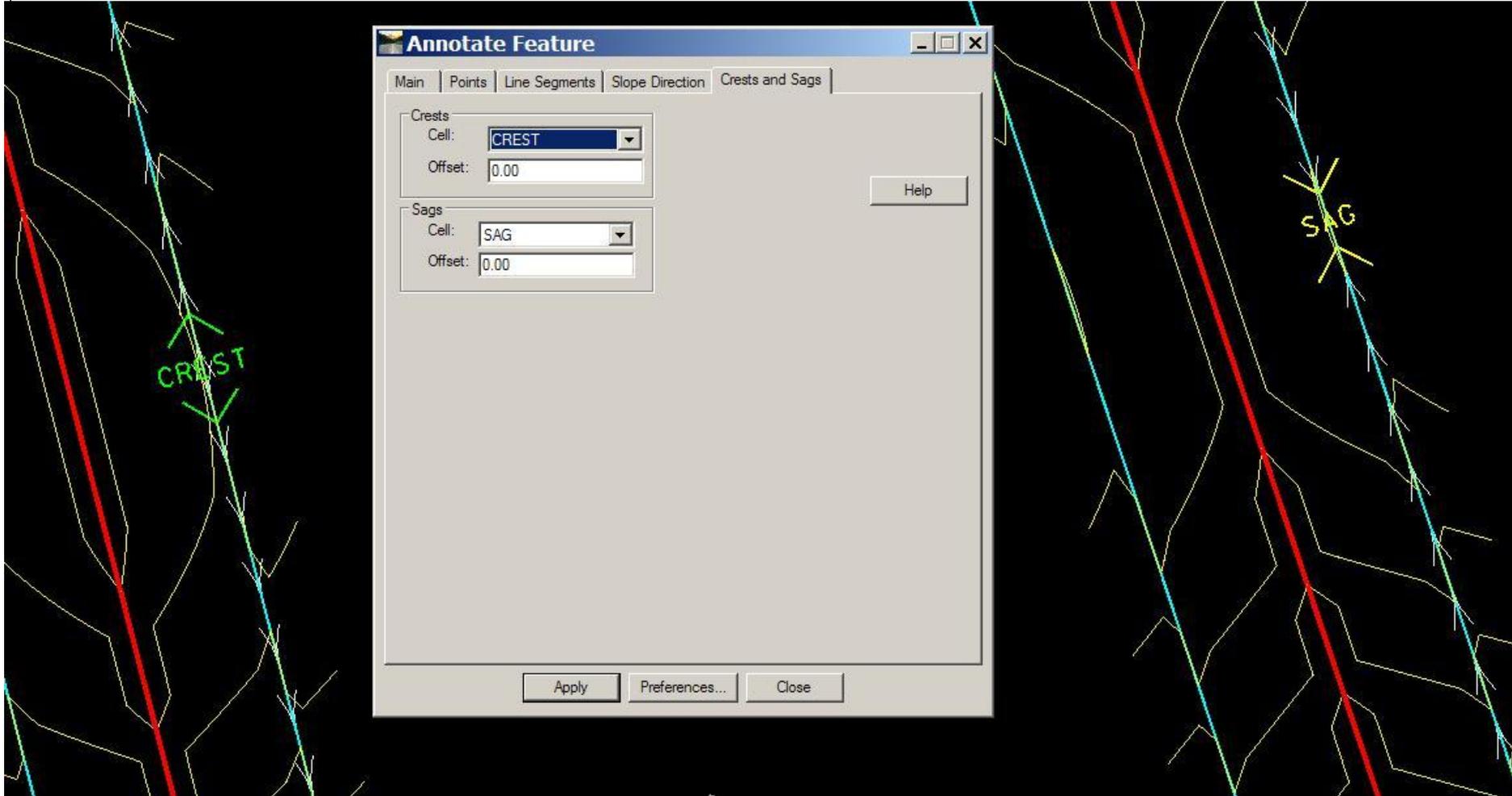
# Display IDF curves



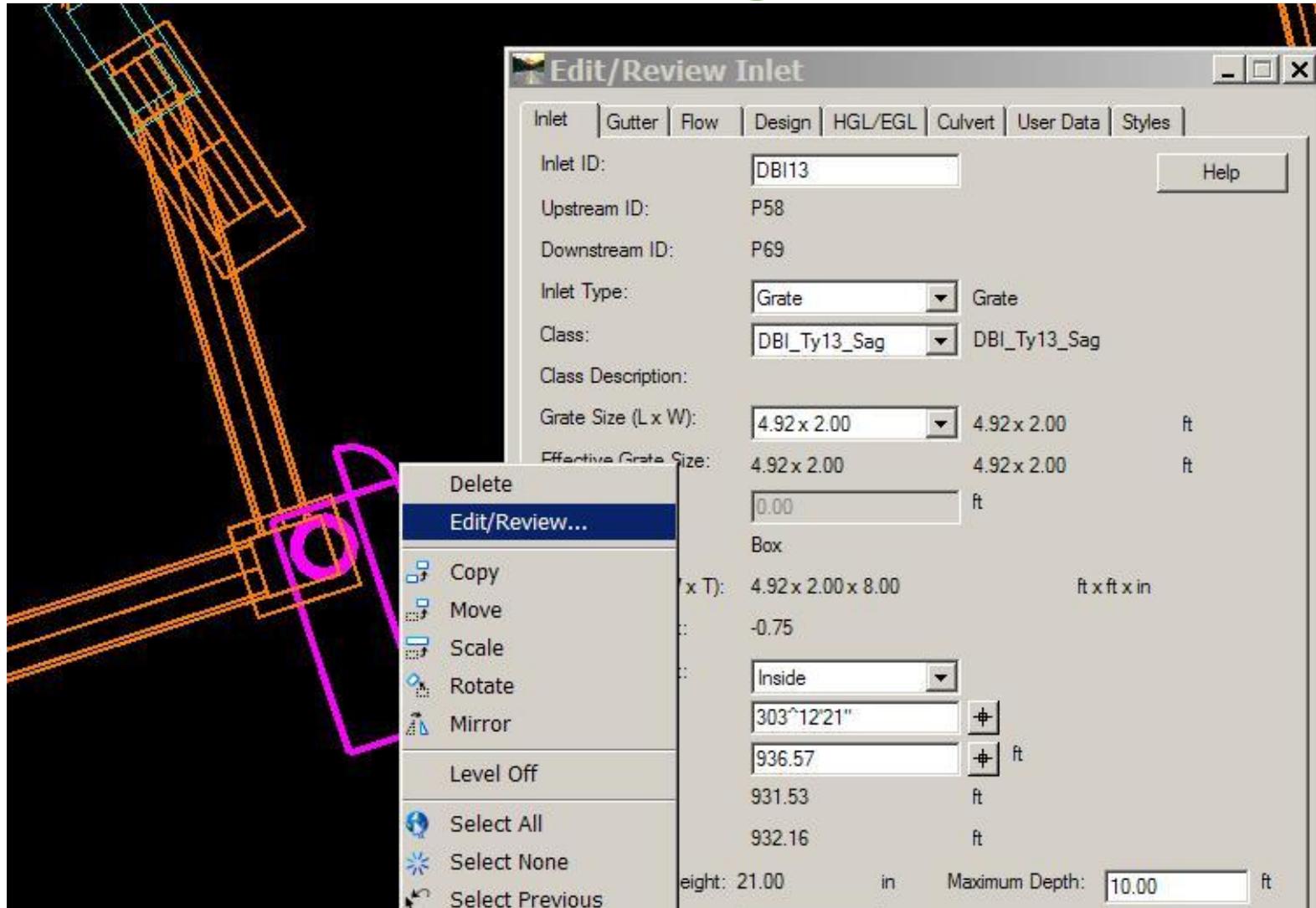
# Update Drainage to update the HGL/EGL



# Surface > View > Annotate Features > Sags and Crests



# Hover over drainage elements for shortcuts to drainage commands



The image shows a software interface for editing a drainage element. A context menu is open over the element, listing various commands. The 'Edit/Review...' option is highlighted. The background shows a technical drawing of a drainage system with orange and pink lines.

**Edit/Review Inlet**

Inlet | Gutter | Flow | Design | HGL/EGL | Culvert | User Data | Styles

Inlet ID: DBI13 Help

Upstream ID: P58

Downstream ID: P69

Inlet Type: Grate Grate

Class: DBI\_Ty13\_Sag DBI\_Ty13\_Sag

Class Description:

Grate Size (L x W): 4.92 x 2.00 4.92 x 2.00 ft

Effective Grate Size: 4.92 x 2.00 4.92 x 2.00 ft

0.00 ft

Box

(x T): 4.92 x 2.00 x 8.00 ft x ft x in

: -0.75

: Inside

303^12^21" +

936.57 + ft

931.53 ft

932.16 ft

Height: 21.00 in Maximum Depth: 10.00 ft

Context Menu:

- Delete
- Edit/Review...**
- Copy
- Move
- Scale
- Rotate
- Mirror
- Level Off
- Select All
- Select None
- Select Previous

## V8i (SELECTseries 1) Updates

- View > Annotate Structures. If the shape is circular, only one (height or width) size attribute is annotated.
- View > Annotate Structures. Offsets now read the Left and Right Offset abbreviations from File > Project Options.
- Layout > Pipe was enhanced to layout the pipe elevations based on the centerline of the pipe.
- Edit\Review Utility was enhanced to edit the utility centerline similar to the Surface > Edit Surface > Edit Feature Point command.

# Edit Utility Points

- Added the ability to edit S&S Utility points
- Similar to Surface Edit Feature Point command
- “Report” button launches a report on Utility vertices’ XYZ and segments’ length and slope

**Edit/Review Utility**

Utility User Data

Utility ID: U3

Utility Name: ExWater

Feature Style: WATER LINE

Shape: Circle

Width: 12.00

Height: 12.00

Stored Elevation:  Top  Center  Bottom

Point: 1 of 3

Center View

Northing: 2026201.63

Easting: 2052938.30

Elevation: 939.00

Back

Length: 0.00

Direction: N 0°00'00" E

Slope: 0.00%

Elevation:

Ahead

Length: 35.90

Direction: N 76°27'07" E

Slope: 0.00%

Elevation: 939.00

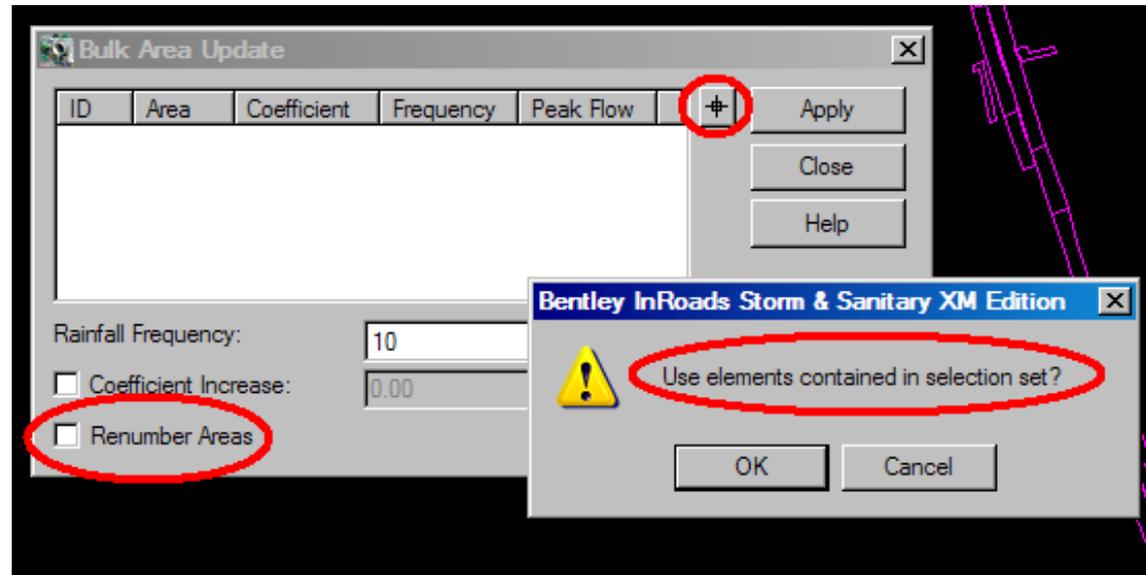
Buttons: New Style..., Report..., Help, Apply, Close

## V8i Updates

- View > Drainage As Solids display has been improved.
- Layout > Pipe. Locate buttons to pick elevations graphically were added for Invert In and Invert Out.
- Edit/Review > Styles tab. Read only fields were added to note the assigned style.
- Edit/Review > Inlets. Target buttons were added for slopes and inverts for pipes and elevations for inlets.
- Edit/Review. When scrolling through a network with the Edit Up and Edit Down buttons, the current ID, Upstream ID, and Downstream ID displays in the message center.
- Network > Design. Clear ALL existing design tables was added.
- Cross Section > Update Cross Section > Storm and Sanitary leaf. The All or None buttons were replaced with right click options in the list view.

# Renumber Areas Using Bulk Area Update

- Create Selection Set of the Areas to renumber.
- Use Pick Button and Click "OK" at the prompt.
- Check Renumber Areas and Click Apply.



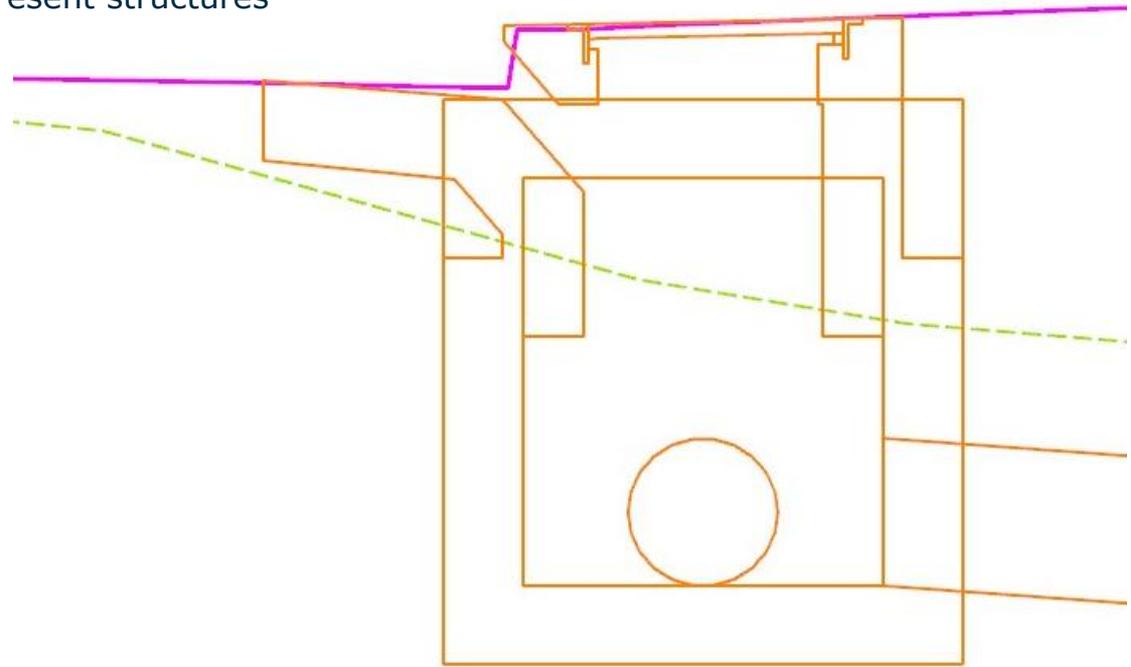
- Make sure rainfall frequency is correct.

# InRoads reads S&S files!

- Storm & Sanitary files are InRoads-readable
  - No S&S license required
- Display and Plans Production functions
  - Plan/3D Drainage Display and Notes
  - Cross Section Display and Notes
  - Profile Notes

# Cross Sections See Drainage

- Storm & Sanitary are integrated into Cross Sections
  - Similar to Features w/ bandwidth
  - Cells can be used to represent structures



# InRoads Survey to Drainage

- Streamlined data flow from Survey to Storm & Sanitary
- Part of InRoads Survey

**Survey Data To Drainage**

Name:

Description:

Structure:

Attribute Mapping:

Key	Map	Use
Inlet	IN	
ID	ID	IN.ID
Description	Desc	IN.Desc
Class	Class	IN.Class
Type	Type	IN.Type
Length	L	IN.L
Width	W	IN.W

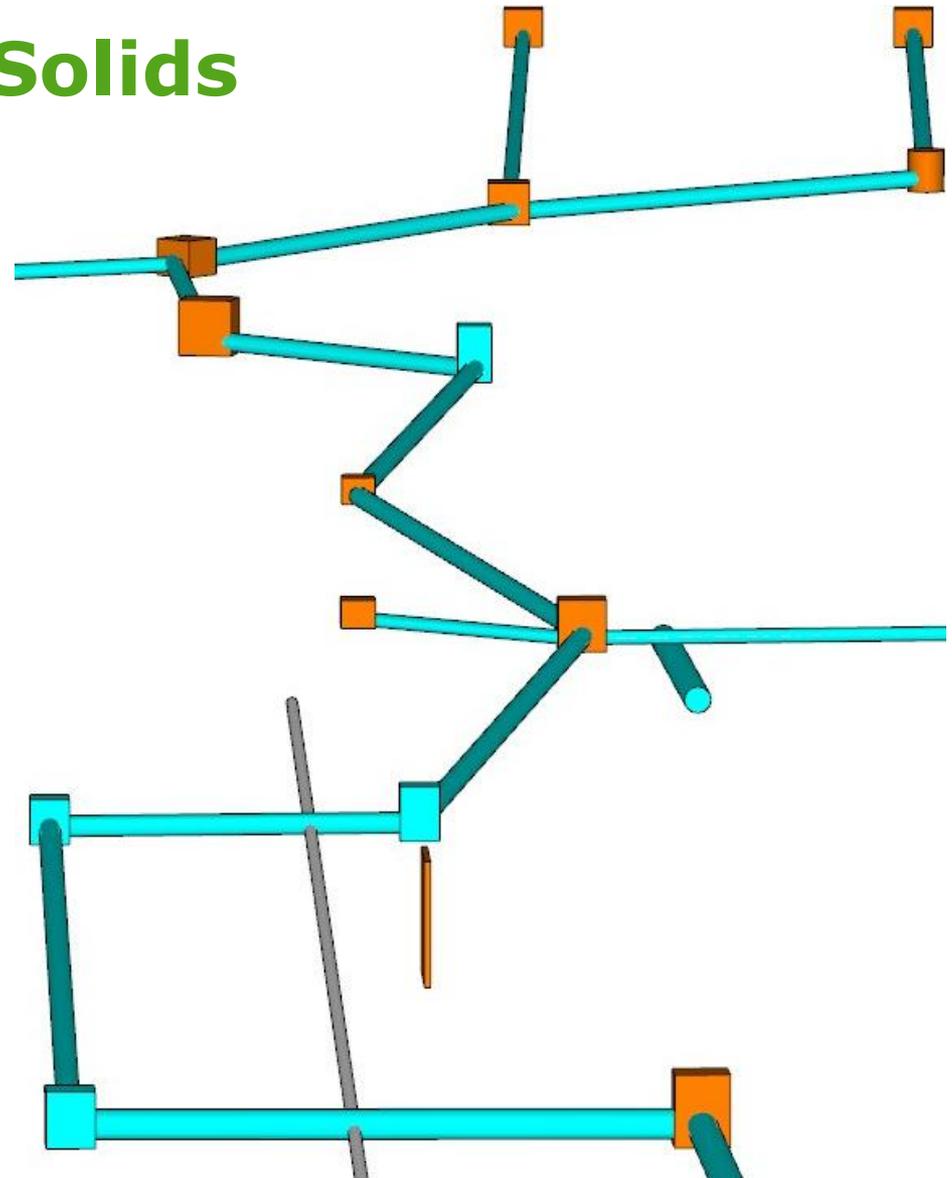
Style Mapping

Available Styles:

Mapped Styles:

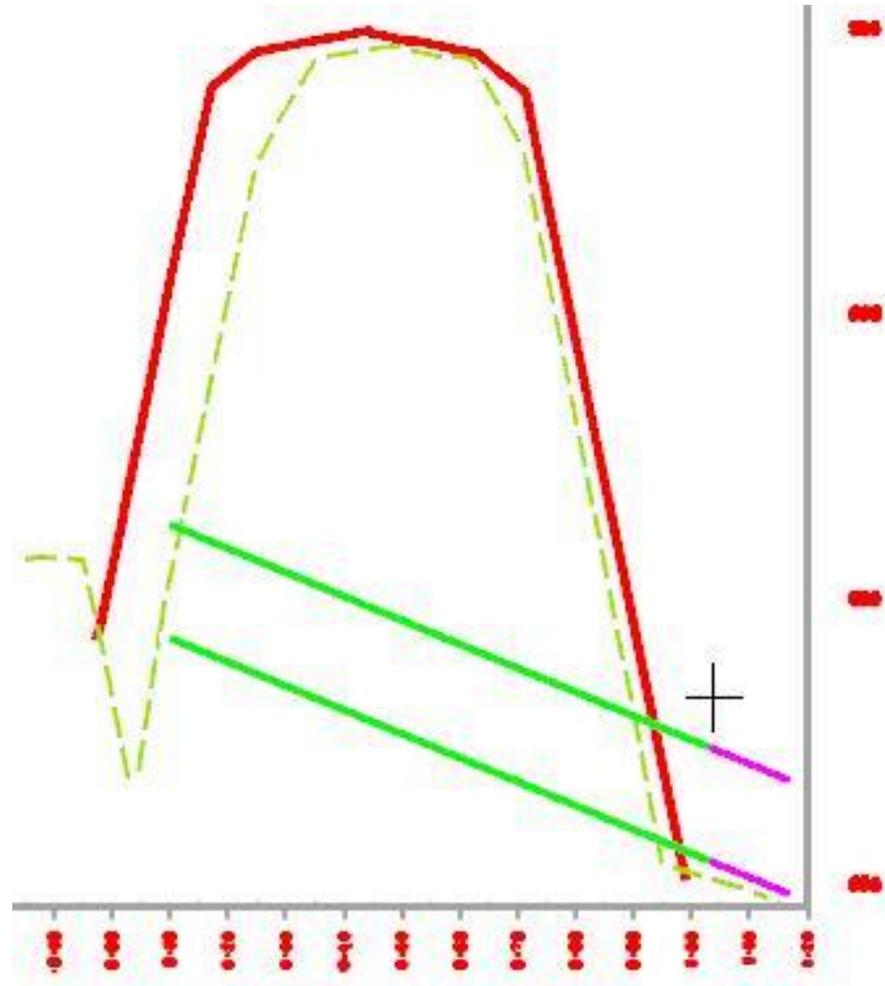
# View Drainage as Solids

- Smart Solids!
- Visual Collision Detection
- Introduced in v8.9 SP1
- Improved in v8.11
- Application Add-in



# Extend Pipe and Channel in Profile

- “Extend Culvert” now works for pipes and channels



# Interface and Workflow Streamlined

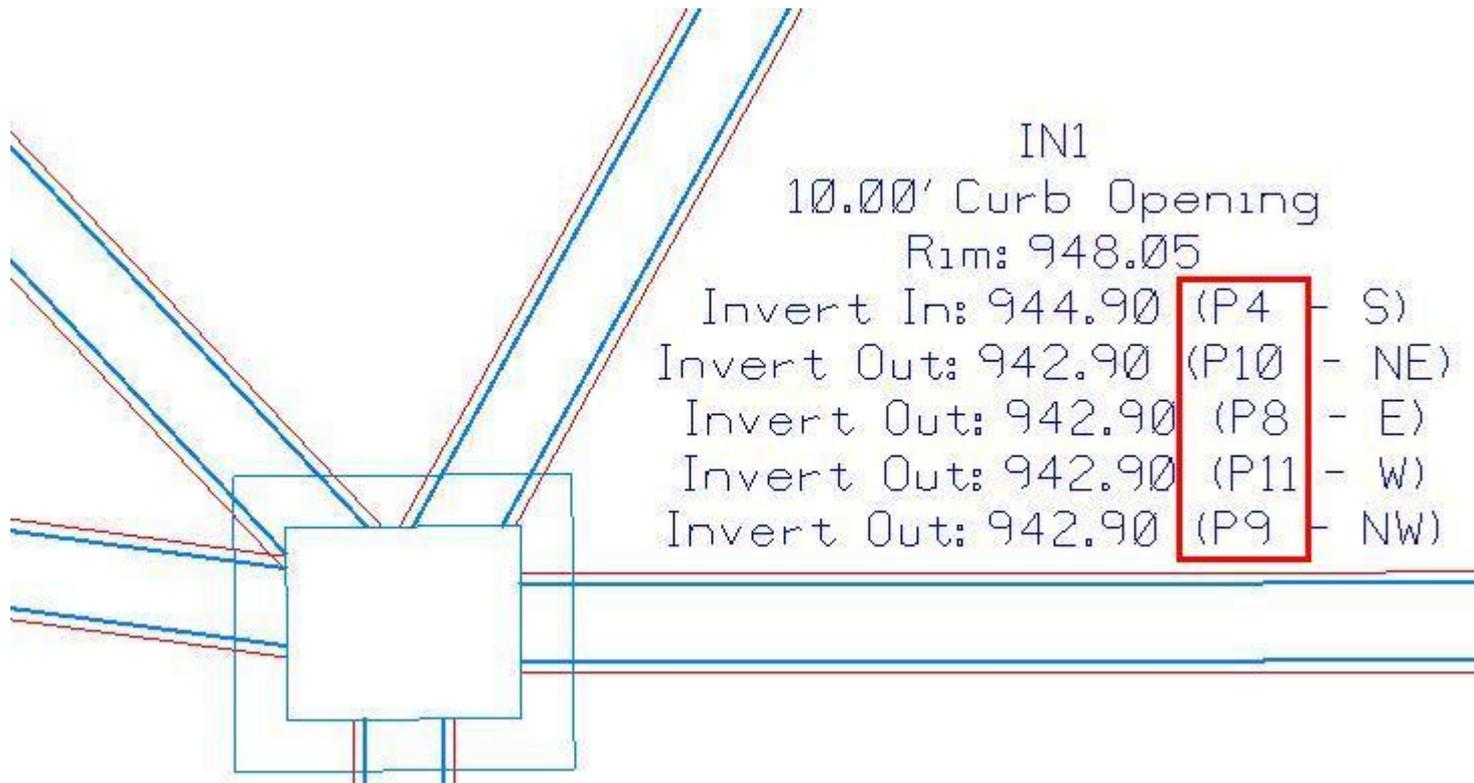
- Laying Out and Editing Drainage Structures have always been a streamlined intuitive workflow, fully-integrated with the CAD and InRoads environments
- Recent Release continue making adds and edits faster and more intuitive

# Improvements to dialogs

- Layout > Pipe: Locate Buttons for Invert In and Invert Out
- Edit/Review
  - Locate Buttons for Inverts, Rims and Pipe Slopes, Gutter Slopes
  - Styles tab has additional feedback

# Pipe ID Annotation

- Plan and Profile Annotation can now label attached Pipes' ID and Locations at junctions



# Updates in Sequence...

## V8.9 Updates

- Edit/Review > Inlet > Gutter tab – Added locate buttons for the slope fields.
- Drainage > Network > Renumber – Areas can be renumbered.
- Tools > Drainage > Structures File – The Drainage Structures File and the Sizes dialog boxes are now re-sizeable.
- Structure > Extend Culvert in Profile – Added the ability to extend Free Entrance and Free Exit ends of Pipes and Channels.

## V8.9 (SP1) Updates

- View > Drainage As Solids - Added new command to display pipes, culverts, manholes, inlets and utilities as Smart Solids for 3D viewing and visual collision detection.
- This is enabled through Tools > Application Add-Ins.
- When enabled, reports can now contain all inverts for manholes and inlets.

## V8.9 (SP2) Updates

- View > Annotate Structures and Evaluation > Profile > Annotate Drainage Profile. The option to annotate the ID of all inverts at structures was added.

## V8i Updates

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# Haestad Integration



Bentley InRoads<sup>®</sup>  
Storm & Sanitary V8i

- **StormCAD <-> InRoads:** Import and export InRoads Storm & Sanitary projects in StormCAD
- **PondPack <-> InRoads:** Import InRoads pond definitions into PondPack
- **CivilStorm <-> InRoads:** Import and export InRoads Storm & Sanitary projects in CivilStorm



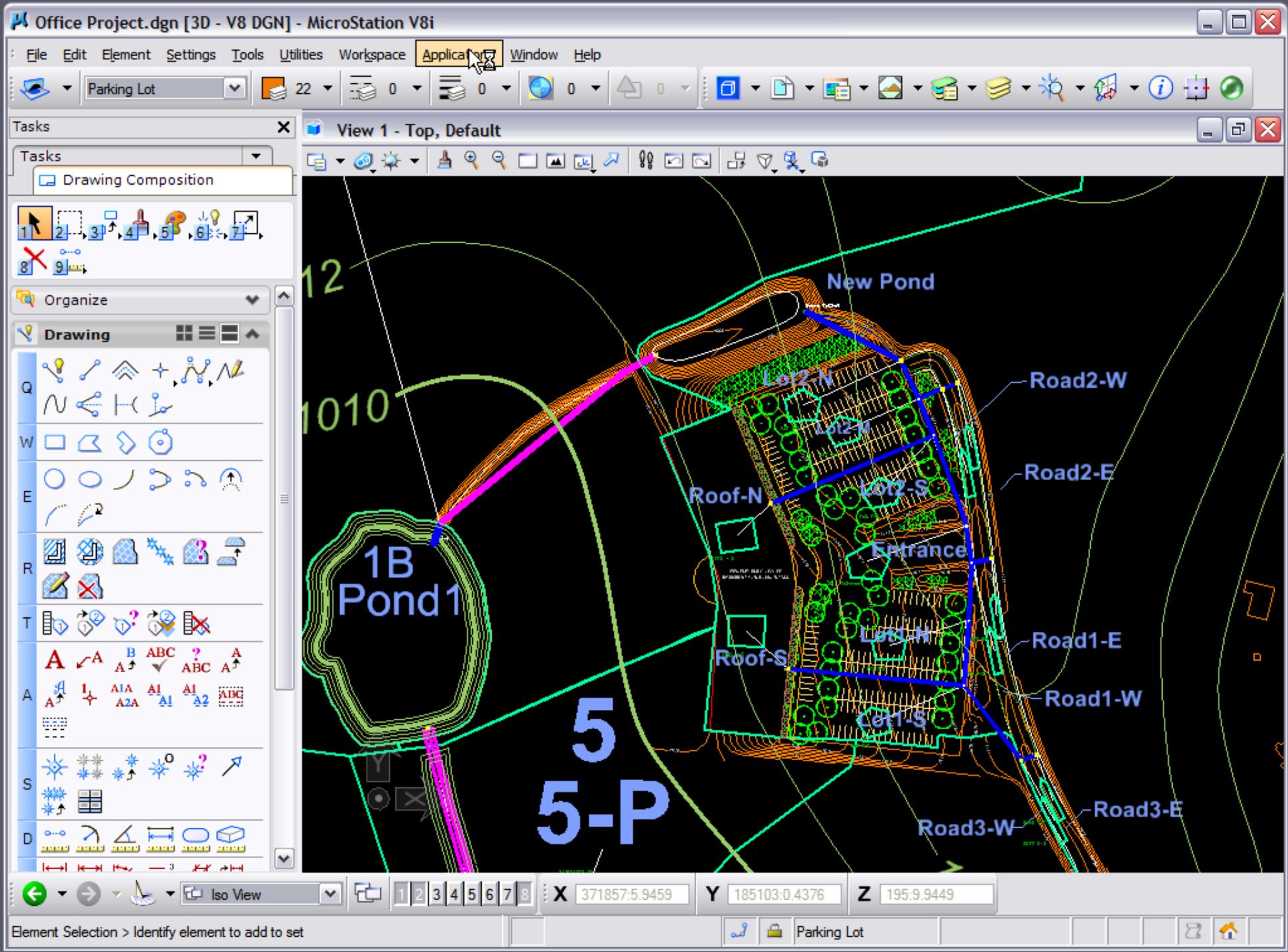
Bentley StormCAD<sup>®</sup> V8i



Bentley CivilStorm<sup>®</sup> V8i



Bentley PondPack<sup>®</sup> V8i



# Thanks!