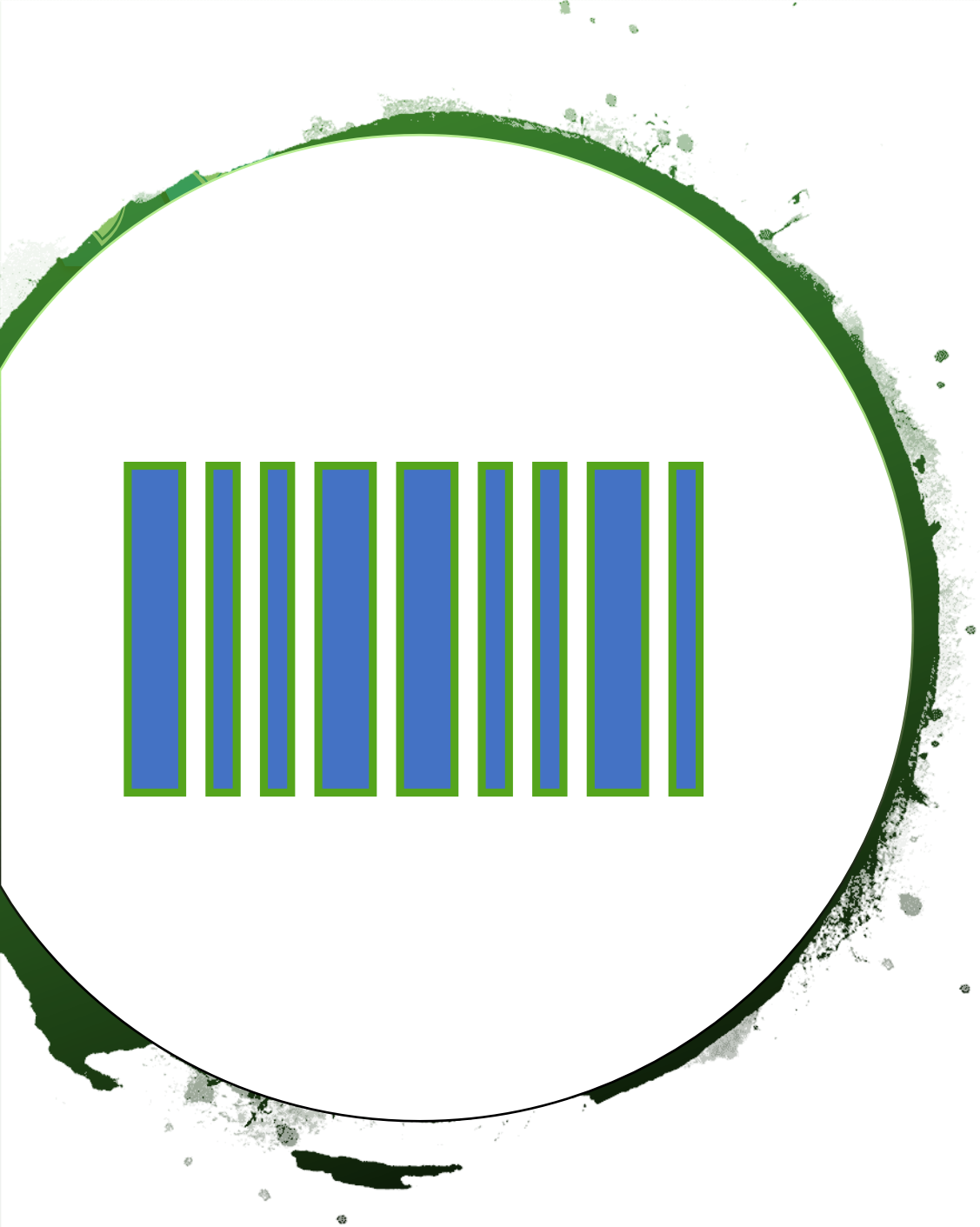
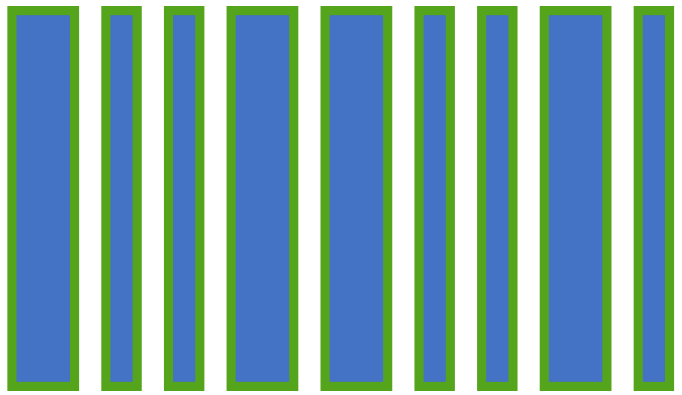
What’s New in Drainage and Utilities 2022 R 1

Hosted by Ian Rosam and Presented by: Jonathan Smith



For a complete list of product versions, enhancements and compatibility requirements, please refer to the ***OpenRoads Designer 2022 R 1 Readme*** at the following link:

https://docs.bentley.com/LiveContent/



Note:

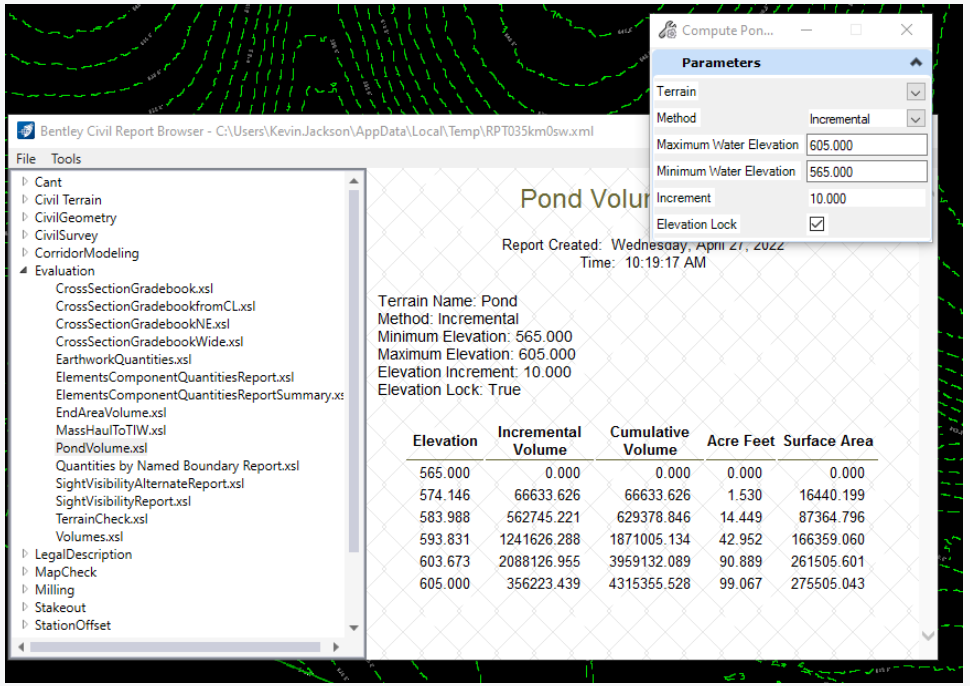
This release is considered a "Major" version in that data created with 2022 R 1 will need to be downgraded in order to be opened with a previous release.

OpenRoads Designer 2022 Release 1

Drainage and Utilities

Compute Pond Volumes

Computes the volume of a pond at a certain elevation or incremental pond volumes



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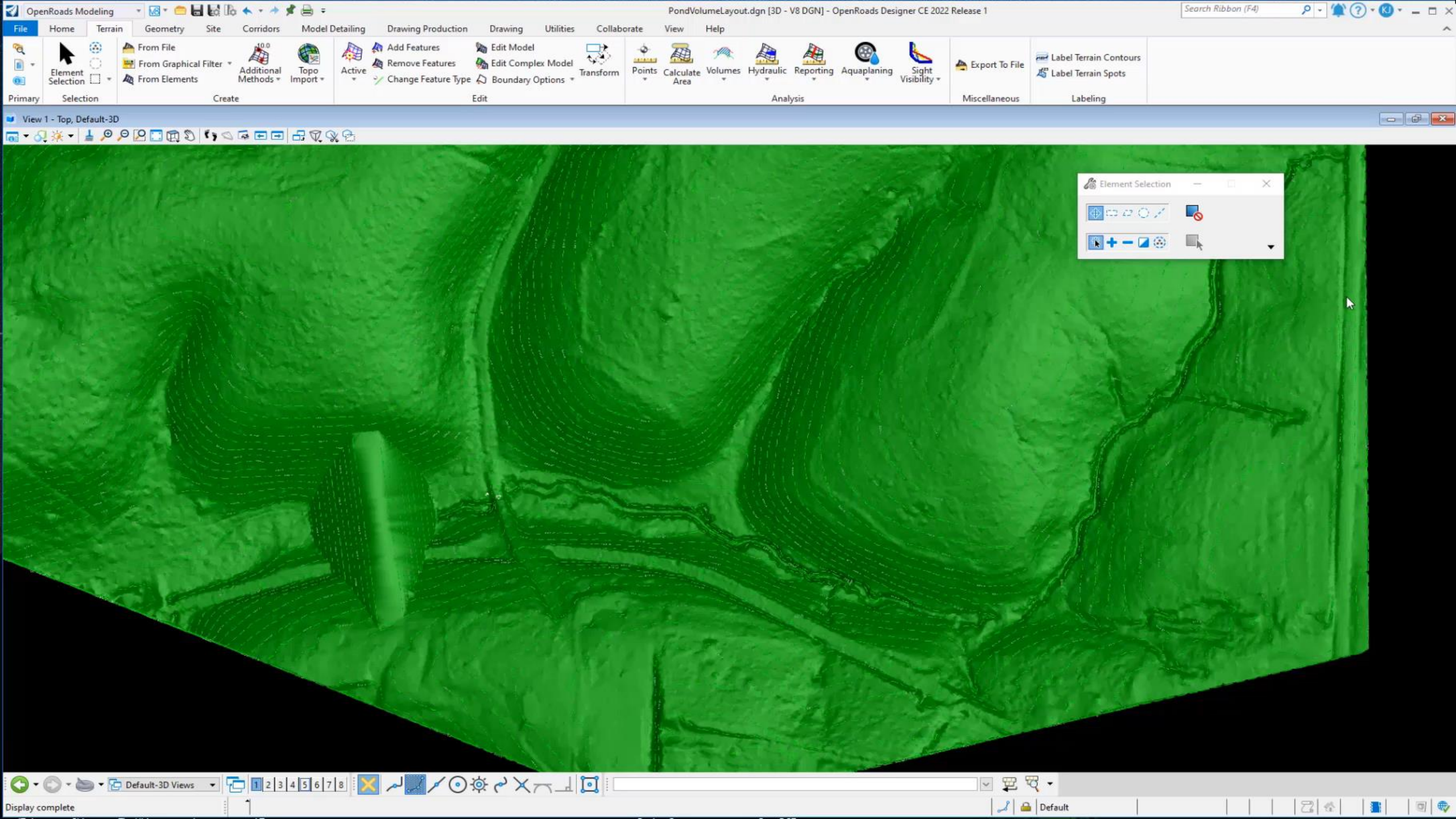
OpenRoads Modeling
PondVolumeLayout.dgn [3D - V8 DGN] - OpenRoads Designer CE 2022 Release 1
Search Ribbon (F4)
File
Home
Terrain
Geometry
Site
Corridors
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Collaborate
View
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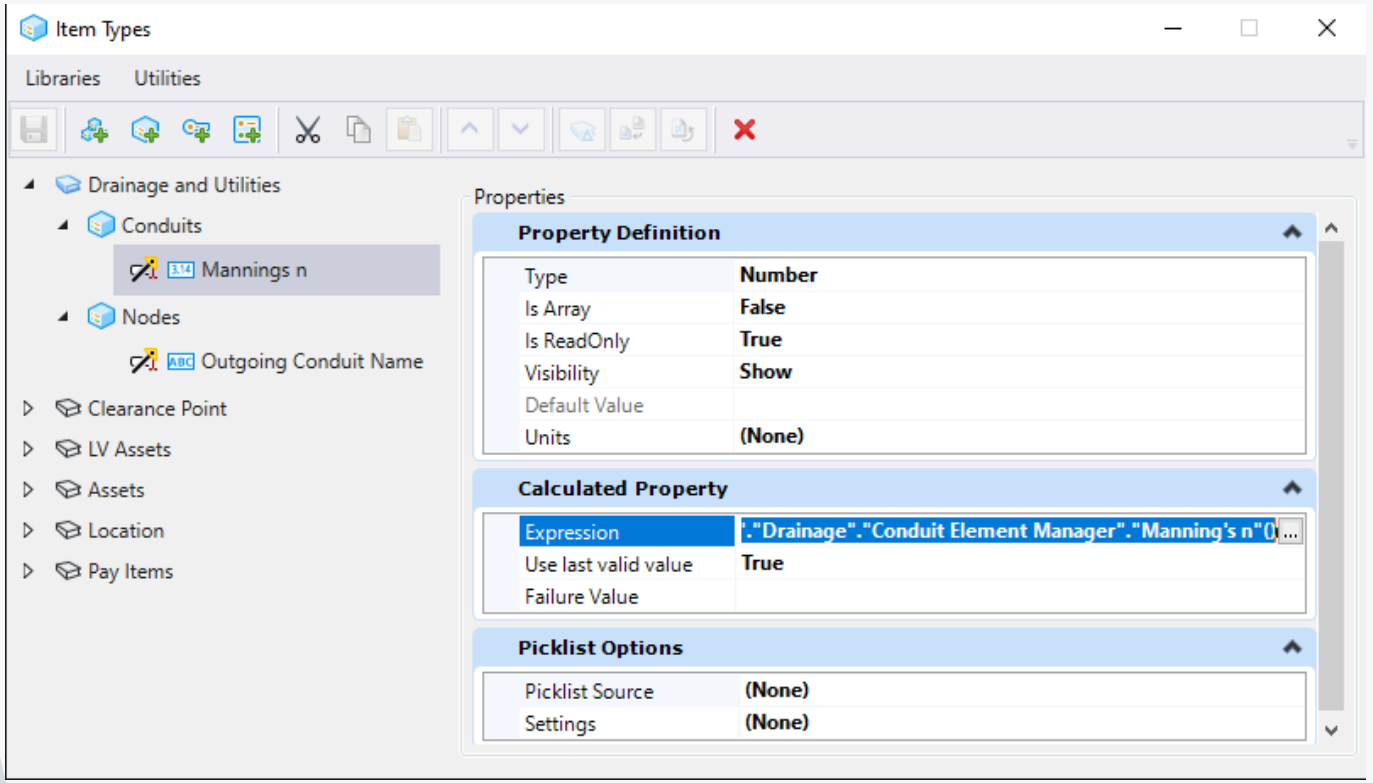
Primary
Element Selection
Selection
From File
From Graphical Filter
From Elements
Additional Methods
Topo Import
Create
Active
Add Features
Remove Features
Change Feature Type
Edit Model
Edit Complex Model
Boundary Options
Transform
Edit
Points
Calculate Area
Volumes
Hydraulic
Reporting
Aquaplaning
Sight Visibility
Analysis
Export To File
Miscellaneous
Label Terrain Contours
Label Terrain Spots
Labeling
View 1 - Top, Default-3D
Element Selection
Default-3D Views
Display complete
Default

Item Types

Support for Item Types in D&U feature definitions, and Single Source of Truth



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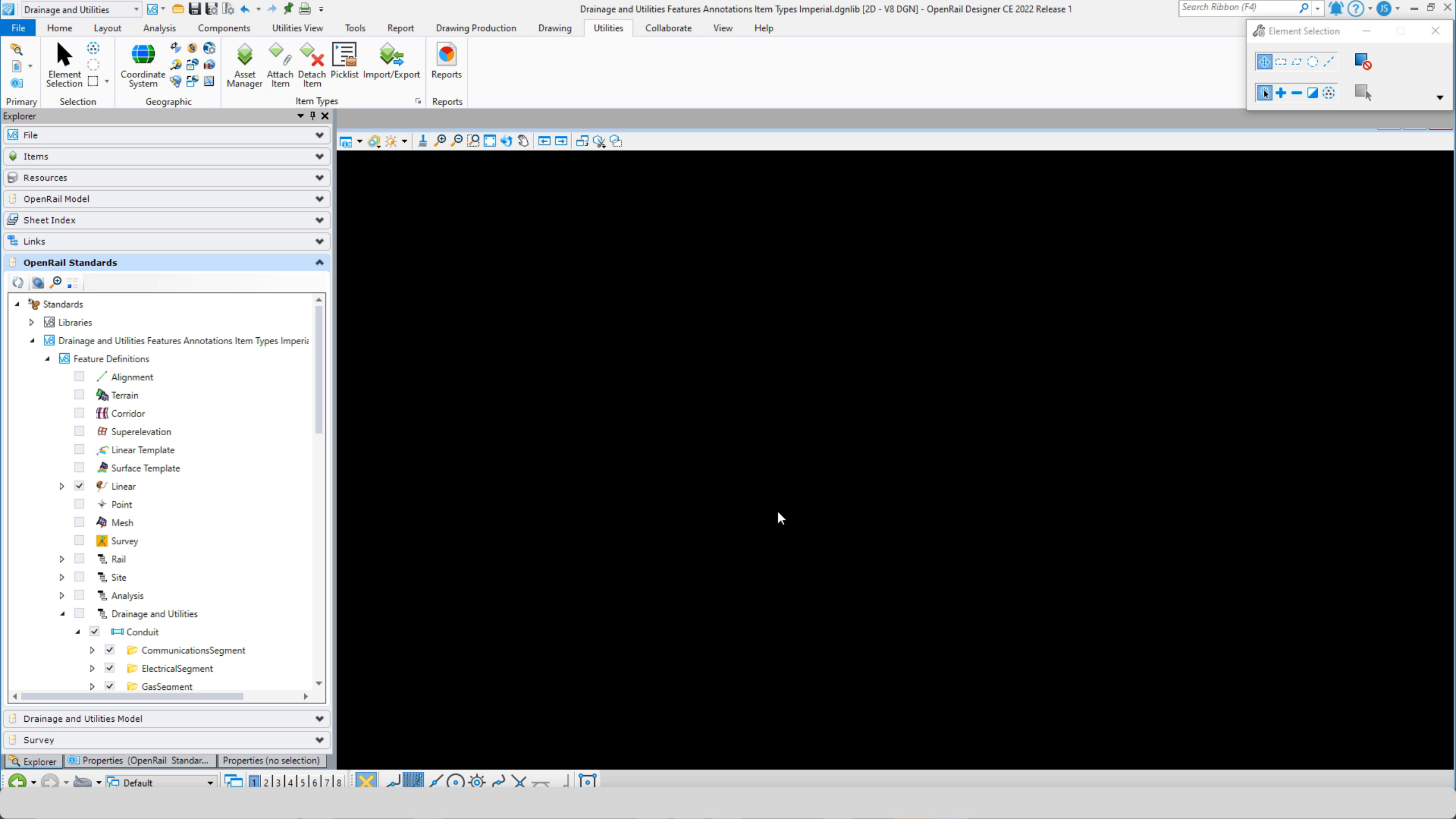
Drainage and Utilities
Drainage and Utilities Features Annotations Item Types Imperial.dgnlib [2D - V8 DGN] - OpenRail Designer CE 2022 Release 1
Search Ribbon (F4)
File
Home
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Components
Utilities View
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Standards
Libraries
Drainage and Utilities Features Annotations Item Types Imperia
Feature Definitions
Alignment
Terrain
Corridor
Superelevation
Linear Template
Surface Template
Linear
Point
Mesh
Survey
Rail
Site
Analysis
Drainage and Utilities
Conduit
CommunicationsSegment
ElectricalSegment
GasSegment
Drainage and Utilities Model
Survey
Explorer
Properties (OpenRail Standar...
Properties (no selection)
Default

Conduit Symbology

Show the inner and outer walls for a conduit in plan and profile models.

Better control of HGL and EGL symbology in profile.

Multiple HGL's on a profile.

Previous versions

Symbology	
Linear Feature Symbology	Storm Water (Concrete)
Profile Feature Symbology	Storm Water
Solid Feature Symbology	Storm Water (Concrete)

2022 Release 1

Symbology	
Center Feature Symbology	Storm Water (Concrete)
Outer Element Template	Storm Water\Conduits\Pipes\Plan\Storm Water
Inner Element Template	Storm Water\Conduits\Pipes\Plan\Storm Water
Outer Profile Element Template	Storm Water\Conduits\Pipes\Profile\Storm Water
Inner Profile Element Template	Storm Water\Conduits\Pipes\Profile\Storm Water
Profile Feature Symbology	Storm Water
Solid Feature Symbology	Storm Water (Concrete)

HGL/EGL Display Settings	
Display HGL	True
HGL Element Template	Storm Water\Conduits\Hydraulic Grade Line
Display EGL	False
EGL Element Template	Storm Water\Conduits\Energy Grade Line

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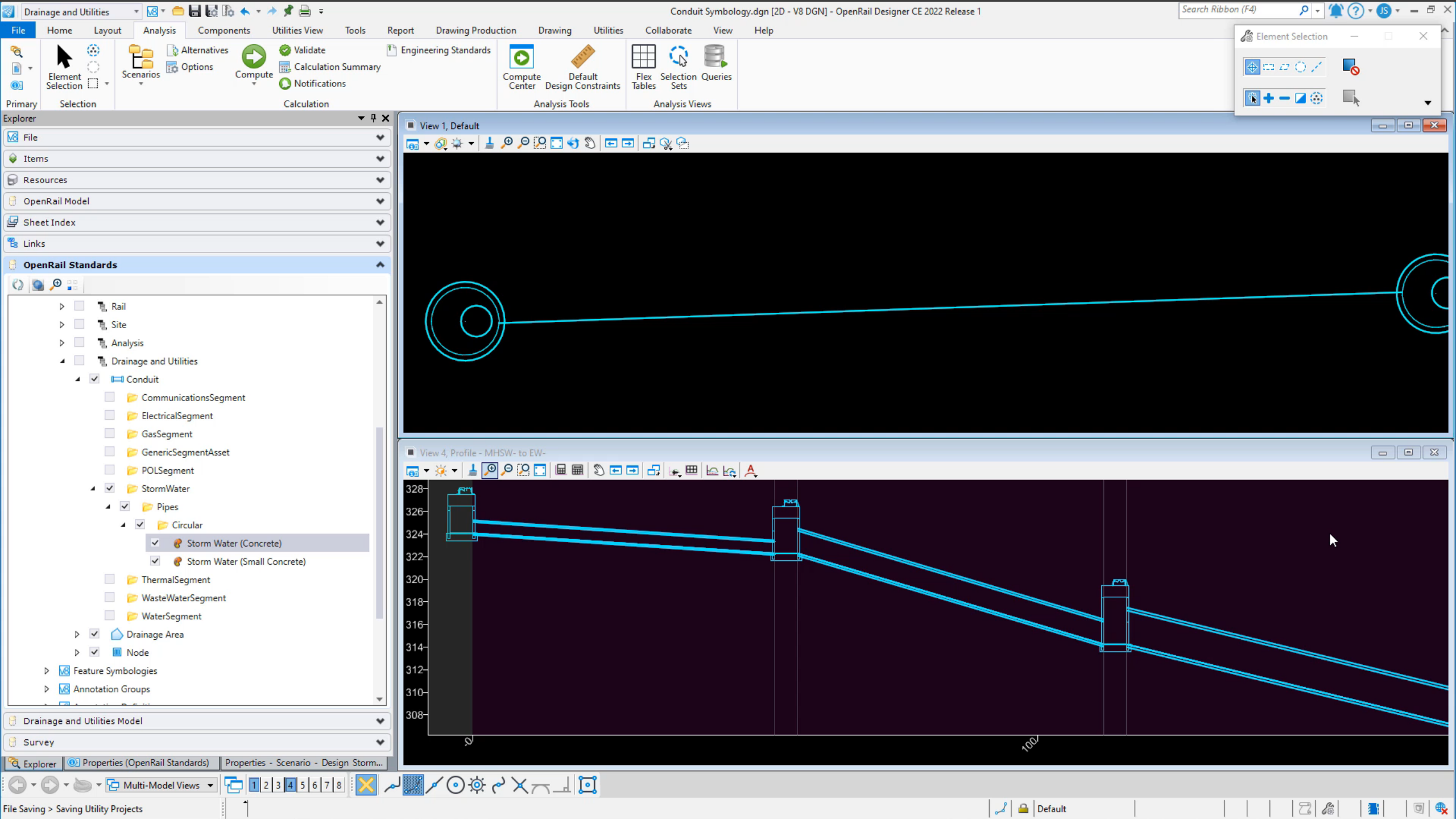
Drainage and Utilities
Conduit Symbology.dgn [2D - V8 DGN] - OpenRail Designer CE 2022 Release 1
Search Ribbon (F4)
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Scenarios
Alternatives
Options
Compute
Validate
Calculation Summary
Notifications
Engineering Standards
Calculation
Compute Center
Default Design Constraints
Analysis Tools
Flex Tables
Selection Sets
Queries
Analysis Views
Explorer
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OpenRail Model
Sheet Index
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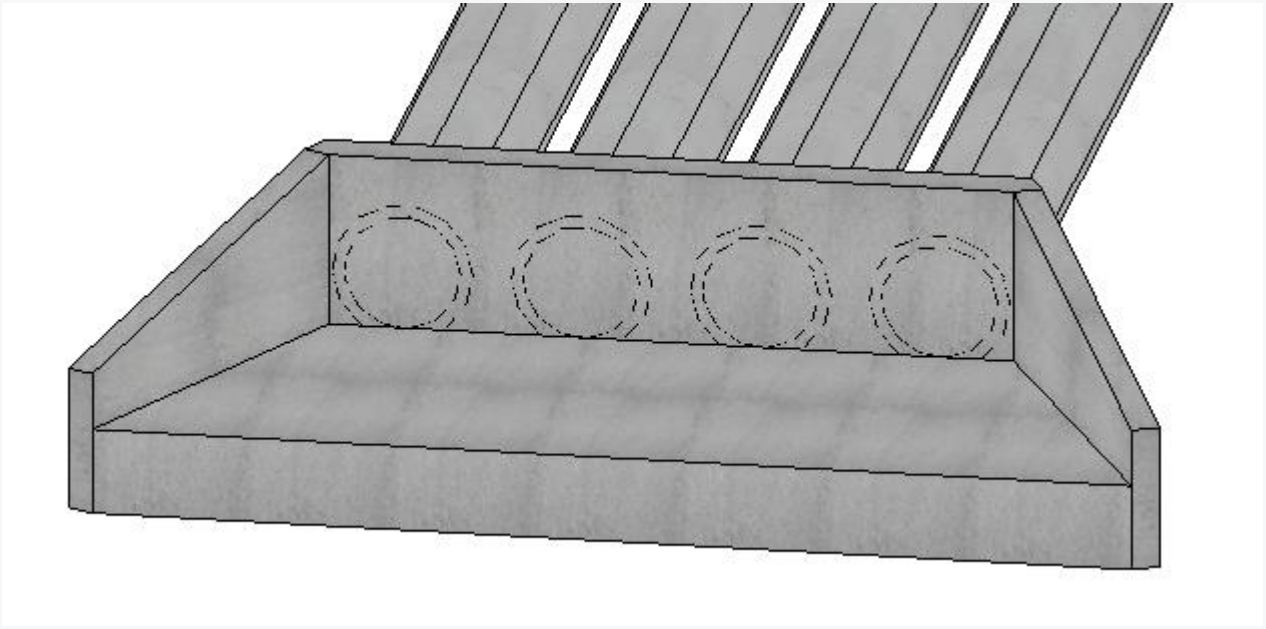
OpenRail Standards
Rail
Site
Analysis
Drainage and Utilities
Conduit
CommunicationsSegment
ElectricalSegment
GasSegment
GenericSegmentAsset
POLSegment
StormWater
Pipes
Circular
Storm Water (Concrete)
Storm Water (Small Concrete)
ThermalSegment
WasteWaterSegment
WaterSegment
Drainage Area
Node
Feature Symbologies
Annotation Groups
Drainage and Utilities Model
Survey
Explorer
Properties (OpenRail Standards)
Properties - Scenario - Design Storm...
View 1, Default
View 4, Profile - MHSW- to EW-
328
326
324
322
320
318
316
314
312
310
308
0
100
Element Selection
Multi-Model Views
File Saving > Saving Utility Projects
Default

Gap between multiple barrels

Implemented a gap between barrels.

One extra property, but a lot of benefits and simplification



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Drainage and Utilities

Multiple Barrels.dgn [3D - V8 DGN] - OpenRail Designer CE 2022 Release 1

Search Ribbon (F4)

File | Home | Layout | Analysis | Components | Utilities View | Tools | Report | Drawing Production | Drawing | Utilities | Collaborate | View | Help

Primary | Selection | Layout | Profile Runs | Toggles

Element Selection | Place Node | Place Nodes | Insert Node | Place Conduit | Place Lateral | Place Gutter | Place Catchment | Place Pond | Place Low Impact Develo... | Place Land Use Area | Extract From Graphic | Filter Manager | Hydraulic Run From Node | Hydraulic Runs to Outfall | Utility Run From Links | Project Run | Civil Accudraw | Civil Message Center

Element Selection

View 1, Default

View 2, Default-3D

FlexTable: Conduit Table (Multiple Barrels -- Default.stsw)

	Label	Start Node	Set Invert to Start?	Invert (Start) (m)	Stop Node	Set Invert to Stop?	Invert (Stop) (m)	Section Type	Diameter (mm)	Length (Scaled) (m)
517: SS-	SS-	HW-	☑	99.089	HW-1	☑	99.089	Circle	600	37.831
518: SS-1	SS-1	HW-	☑	99.089	HW-1	☑	99.089	Circle	600	37.831
519: SS-2	SS-2	HW-	☑	99.089	HW-1	☑	99.089	Circle	600	37.831
520: SS-3	SS-3	HW-	☑	99.089	HW-1	☑	99.089	Circle	600	37.831

4 of 4 elements displayed

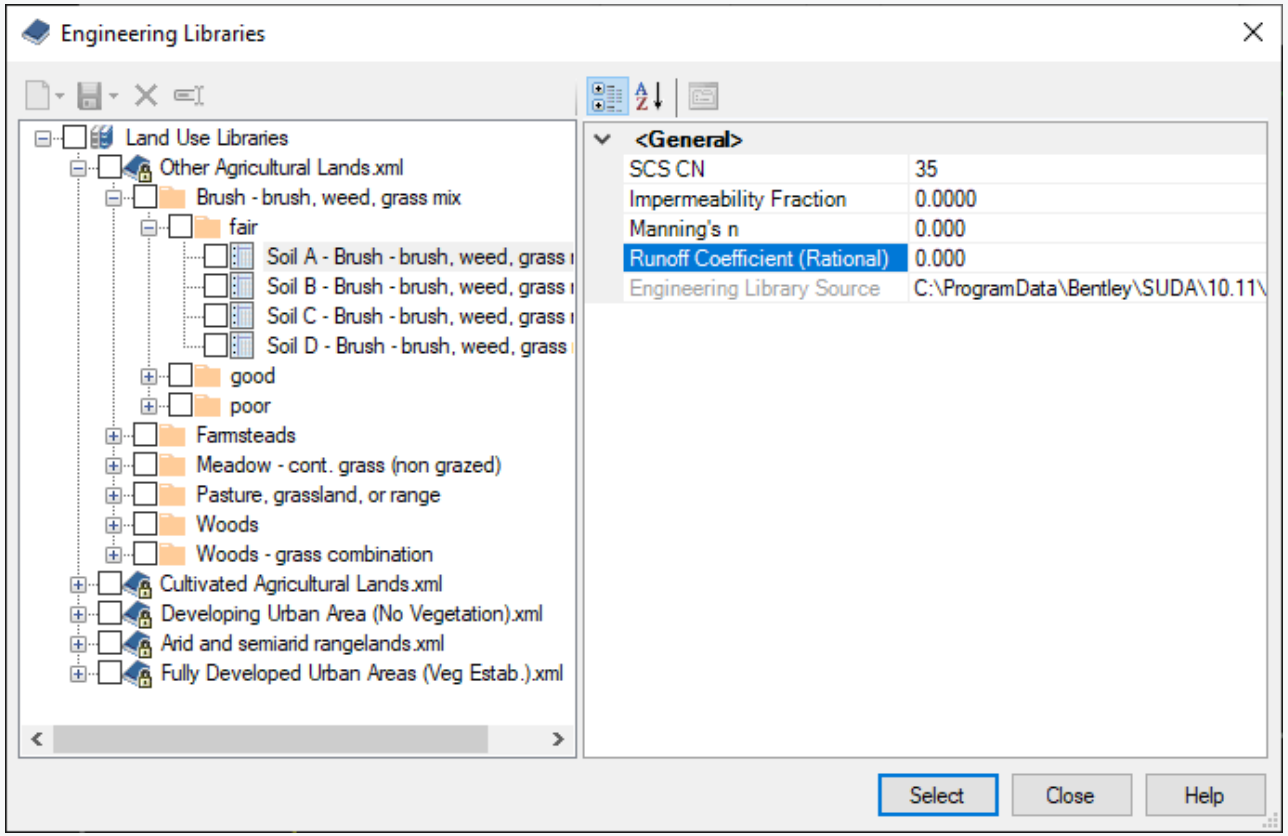
Explorer | Properties | Properties: (select a single element)

Multi-Model Views | 1 2 3 4 5 6 7 8

Display complete | Default | 384.18875, 393.27527, 89.99334

Land Use Polygons

New functionality to identify different land use areas. Catchment areas inherit from land use areas, and calculate a weighted runoff coefficient.



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Drainage and Utilities

Land Use Polygons.dgn [2D - V8 DGN] - OpenRail Designer CE 2022 Release 1

Search Ribbon (F4)

File | Home | Layout | Analysis | Components | Utilities View | Tools | Report | Drawing Production | Drawing | Utilities | Collaborate | View | Help

Primary | Selection | Layout | Profile Runs | Toggles

Element Selection | Place Node | Place Nodes | Insert Node | Place Conduit | Place Lateral | Place Gutter | Place Catchment | Place Pond | Place Low Impact Develo... | Place Land Use Area | Extract From Graphic | Filter Manager | Hydraulic Run From Node | Hydraulic Runs to Outfall | Utility Run From Links | Project Run | Civil Accudraw | Civil Message Center

Properties - Surface Polygon - Grass Land Use-1 (210)

Utilities | Drainage

Grass Land Use-1 | 75%

Add to Selection

<Show All>

Property Search

<General>	
ID	210
Label	Grass Land Use-1
Notes	
GIS-IDs	<Collection: 0 items>
Hyperlinks	<Collection: 0 items>
Feature Definition	DrainageArea\Surface Polygon\Grass
<Geometry>	
Geometry	<Collection: 4 items>
Scaled Area (ha)	0.767
Active Topology	
Is Active?	True
Land Cover	
Land Cover Type	<None>
Impermeability Fraction Adjustment Type	<None>
Manning's n Adjustment Type	<None>
SCS CN Adjustment Type	<None>
Rational C Adjustment Type	User Defined
Rational C (User Defined)	0.350
Type/Operations	
Type	Land Use
Priority	0: Lowest/Auto
Results	
Calculation Messages	<Collection: 0 items>

Land Cover

Element Selection

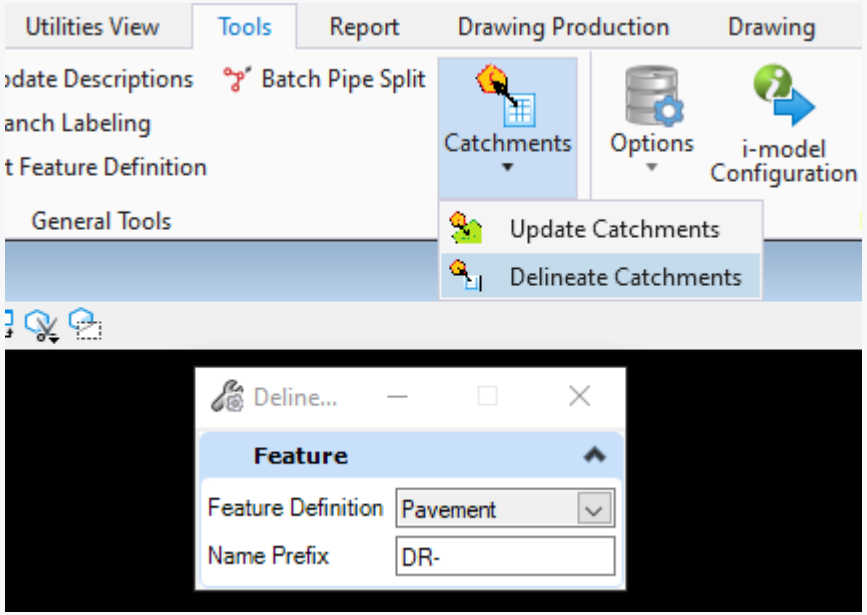
Explorer | Properties | Properties - Surface Polygon - Grass Land U...

Default | 1 2 3 4 5 6 7 8

Display complete | Polygon: Grass Land Use-1, Level: Util_Storm_Areas | Default | : 1 | 169.70957, 482.95909

Delineate Catchment

Added functionality to delineate catchment areas for existing inlets



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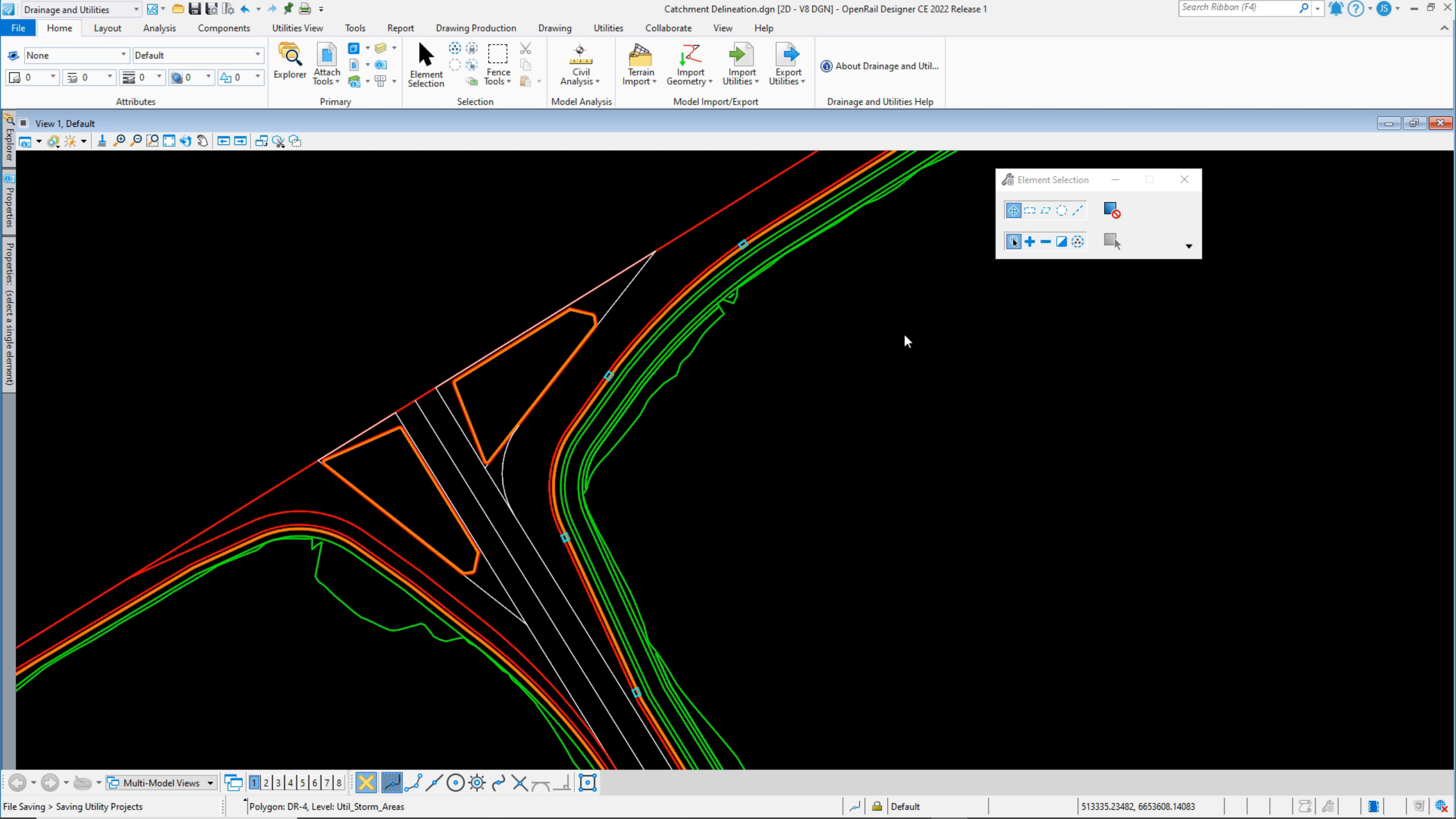
Drainage and Utilities
Catchment Delineation.dgn [2D - V8 DGN] - OpenRail Designer CE 2022 Release 1
Search Ribbon (F4)
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Model Import/Export
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Drainage and Utilities Help
View 1, Default
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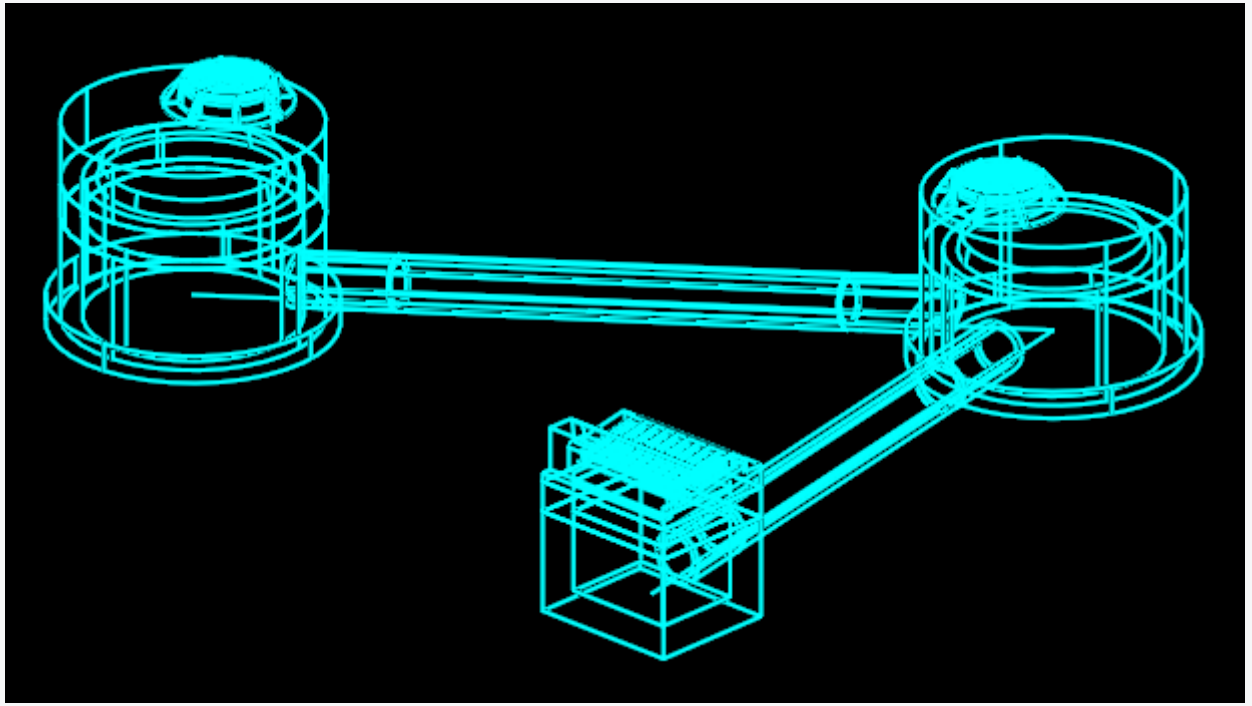
Explorer
Properties
Properties: (select a single element)
Multi-Model Views
File Saving > Saving Utility Projects
Polygon: DR-4, Level: Util_Storm_Areas
Default
513335.23482, 6653608.14083

Connection Point

Added a connection point, as opposed to a connection ring or region.



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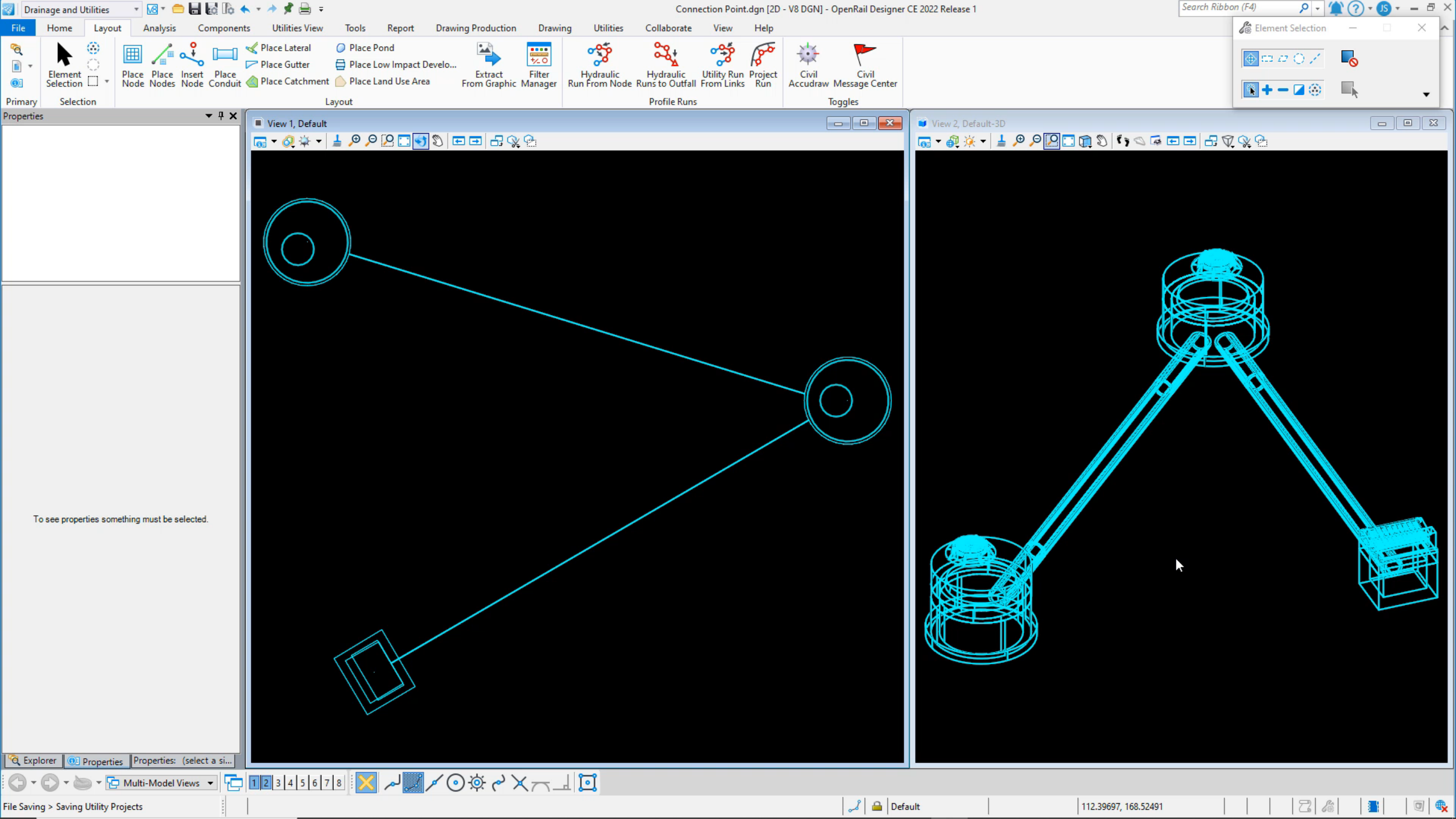
Drainage and Utilities
Connection Point.dgn [2D - V8 DGN] - OpenRail Designer CE 2022 Release 1
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View
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Element Selection
Primary
Selection
Place Node
Place Nodes
Insert Node
Place Conduit
Place Lateral
Place Gutter
Place Catchment
Place Pond
Place Low Impact Develo...
Place Land Use Area
Extract From Graphic
Filter Manager
Layout
Hydraulic Run From Node
Hydraulic Runs to Outfall
Utility Run From Links
Project Run
Profile Runs
Civil Accudraw
Civil Message Center
Toggles
Element Selection
Properties
To see properties something must be selected.
Explorer
Properties
Properties: (select a si...
View 1, Default
View 2, Default-3D
Multi-Model Views
1 2 3 4 5 6 7 8
File Saving > Saving Utility Projects
Default
112.39697, 168.52491

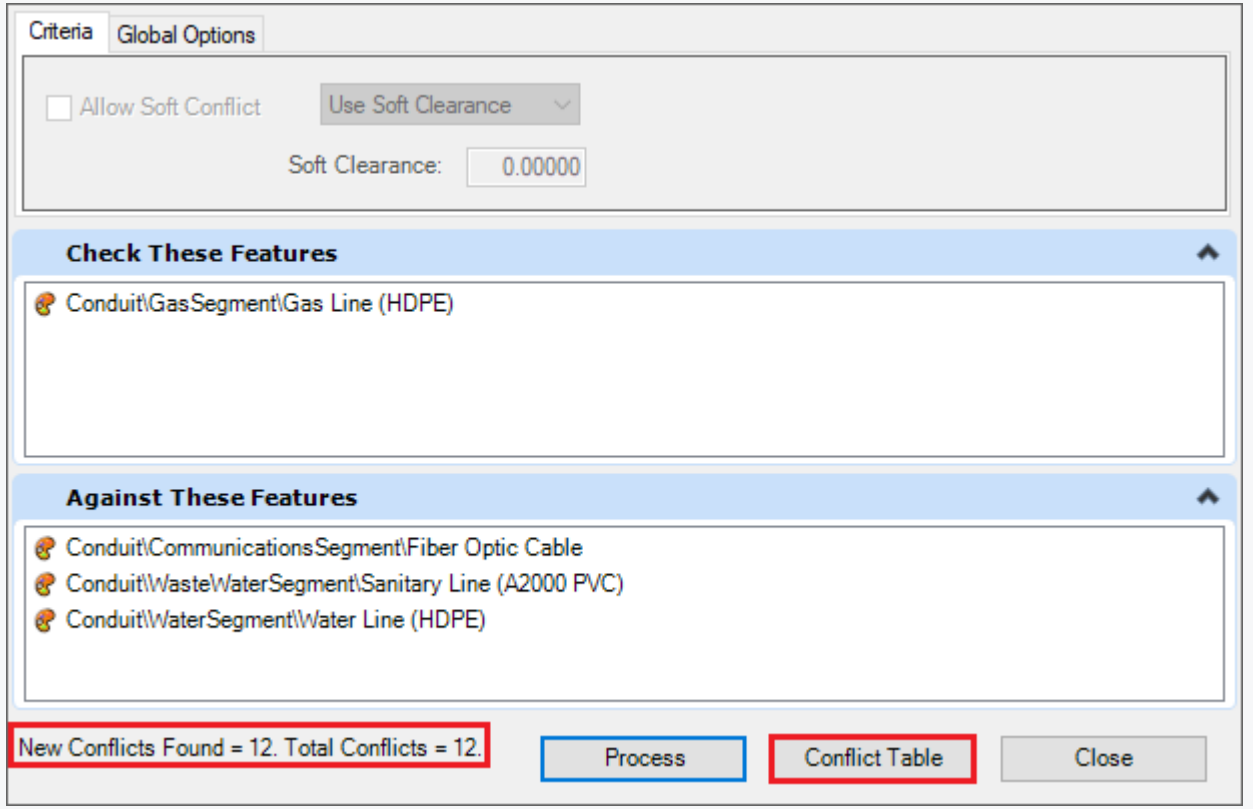
Conflict Detection

Resolved issues with references

Fixed bugs

Added a Conflicts count

Added a button to open the Conflicts FlexTable



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What may be new in Drainage and Utilities 2022 R 2

Presented by:

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Enhanced API

- The WaterObjects.NET API has been available in OpenFlows for some time
- It works with Drainage and Utilities, but it needs direct access to the databases
- We recently added the ability to export a Utilities Submodel, to help here
- However, it would be easier if the API simply let you specify the DGN file, and state which database to use (Drainage or Utilities)
- The New OpenFlows API does this
- It also simplifies the code that you need to write
- This improved functionality can be used to write XML files, for DanDas (for example)
- Let’s see what it looks like

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Thank you!

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