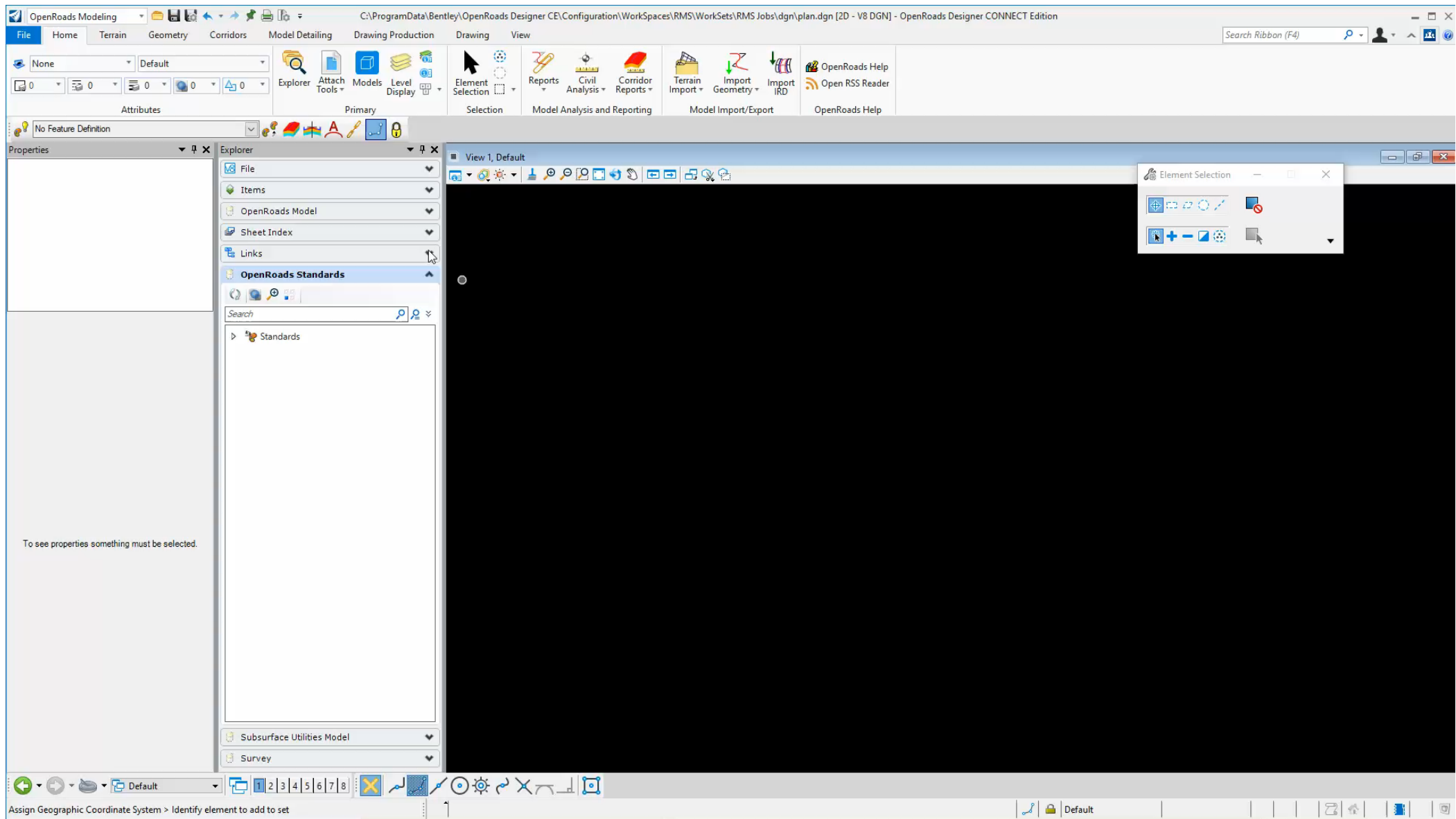


OpenRoads Designer Drawing Production

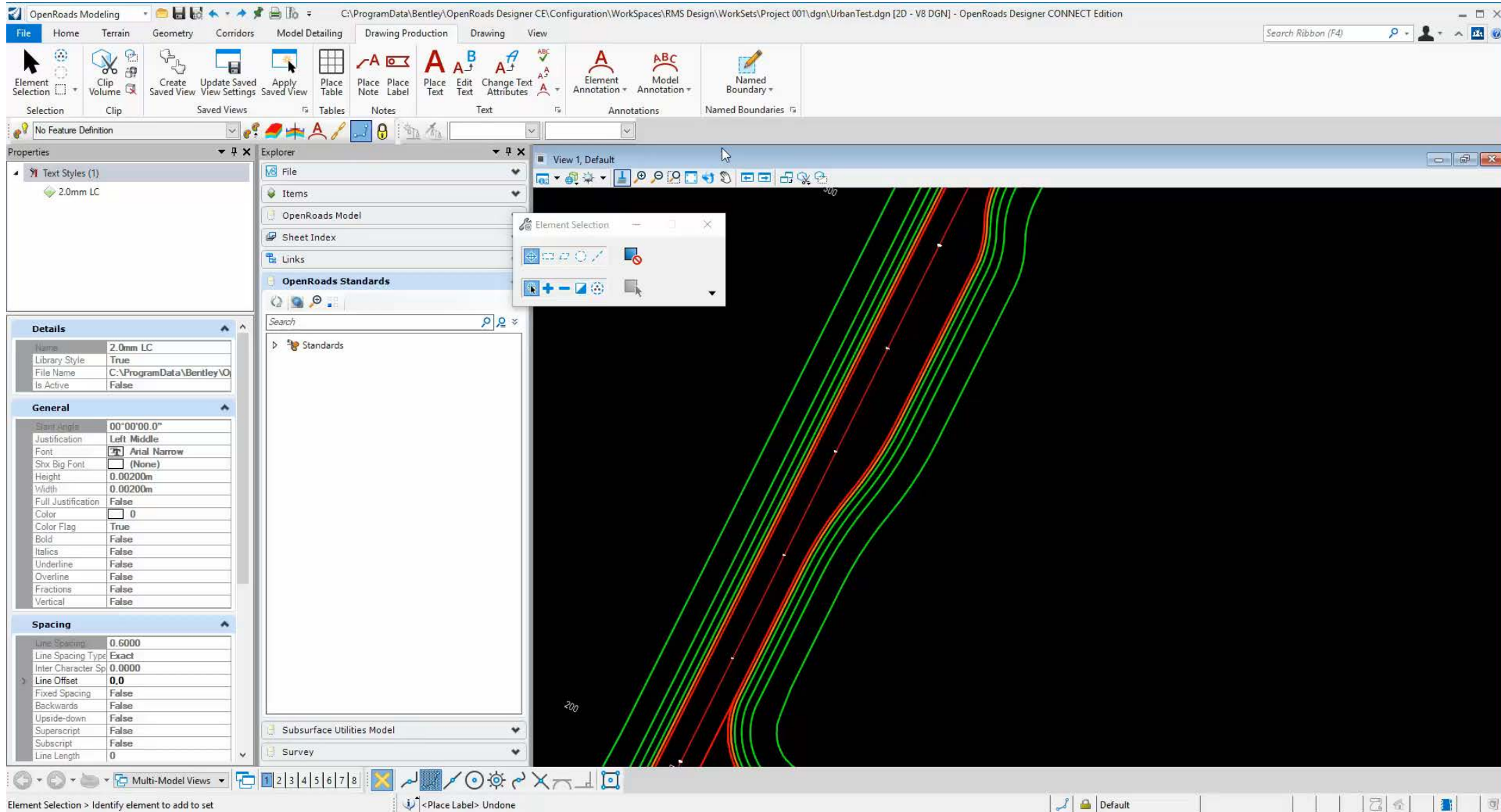
Paul Cusack – Senior Consultant

Bentley[®]
Advancing Infrastructure

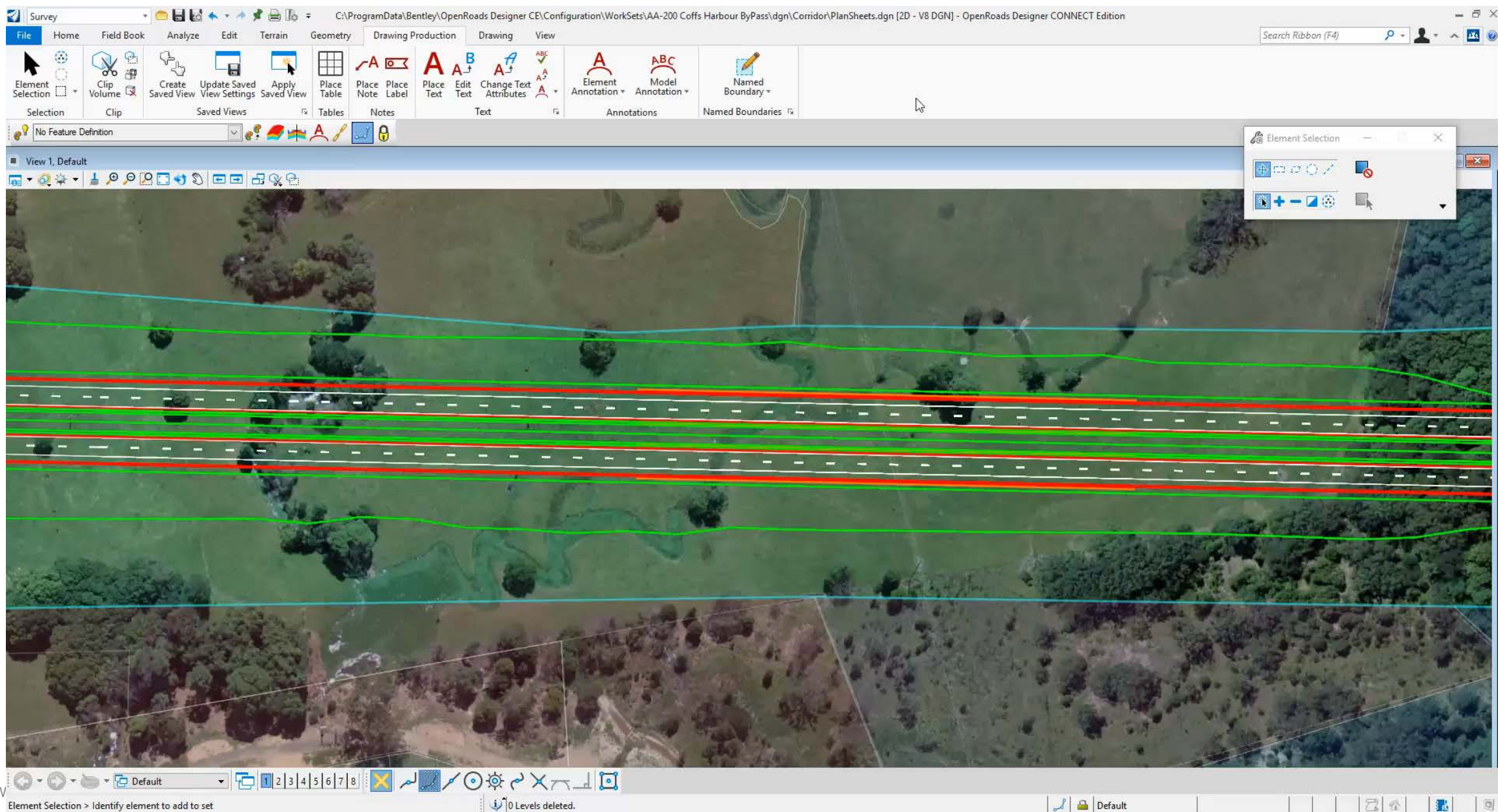
Background Map



Text Styles, Text Favorites & Labels



Chainage and Side Slope Annotation (Slope Signature)



Annotation Group for Side Slope Annotation

The screenshot displays the OpenRoads Designer CONNECT Edition interface. The ribbon at the top includes tabs for File, Home, Terrain, Geometry, Corridors, Model Detailing, Drawing Production, and Drawing. The Properties panel on the left shows the 'Geom_Baseline' properties. The Explorer panel on the left shows the 'OpenRoads Standards' tree, with 'Annotation Groups' expanded. The 'Tadpole' annotation group is selected, and its properties are shown in the 'Manage Annotations' dialog. The 'Location' tab in the dialog shows the 'Feature definition of low point of the side slope'.

Manage Annotations Dialog - Side Slope Annotation

Location	
Features	TL_End Cond Fill Tie, TL
Interval	20.0000
Left Offset	-100.0000
Right Offset	100.0000
Minors Per Major	1
Minors Size Scale	0.2500
Intervals to Skip	0
Intervals to Draw	1

Annotate	
With	Line
Template	

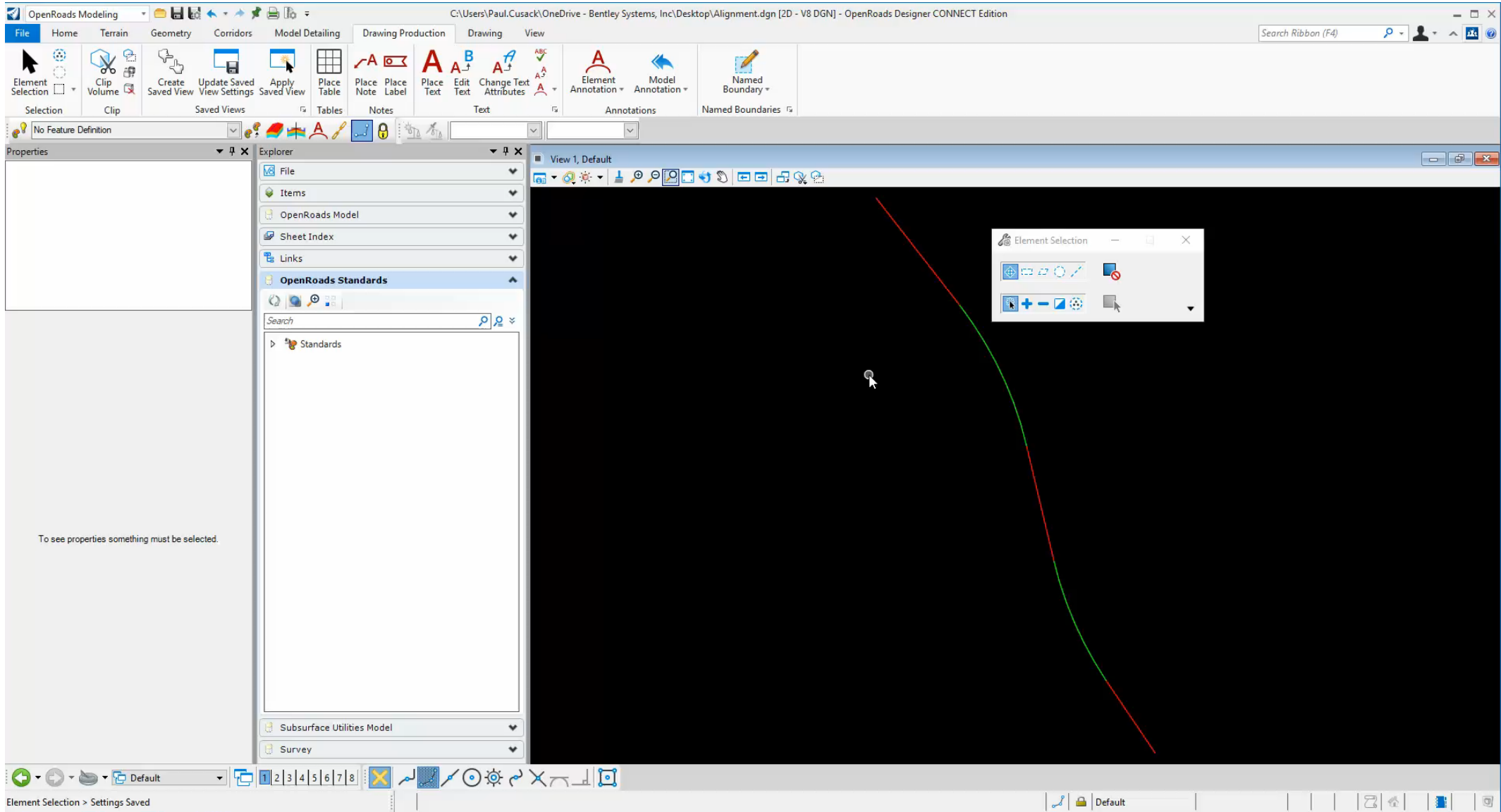
Placement	
Rotation Option	Perpendicular
Rotation	180°00'00.0"

Line	
Length	0.1000

Cell	
Name	Tadpole
X Scale	1.0000
Y Scale	1.0000
Z Scale	1.0000
Apply Active Cell Sc	False

Feature definition of low point of the side slope

Plan Alignment Annotation



Annotation Group for Alignment Annotation

Manage Annotations

Annotation Group: CH-100m-20m Geom

☒ Display ☐ Hide Selected ☐ Highlight Selected

Location

Location: **Horizontal Points**

Annotate

With: **Line**
Template: **Annotation\Plan\Horizo**

Leader

Place Leader	True
Offset Begin	0.0000
Offset End	0.0000
Arrow Size	0.0000
Arrow Width	0.0000
Circle Size	0.0000
Square Size	0.0000
Triangle Size	0.0040
Extension Size	0.0000
Template	

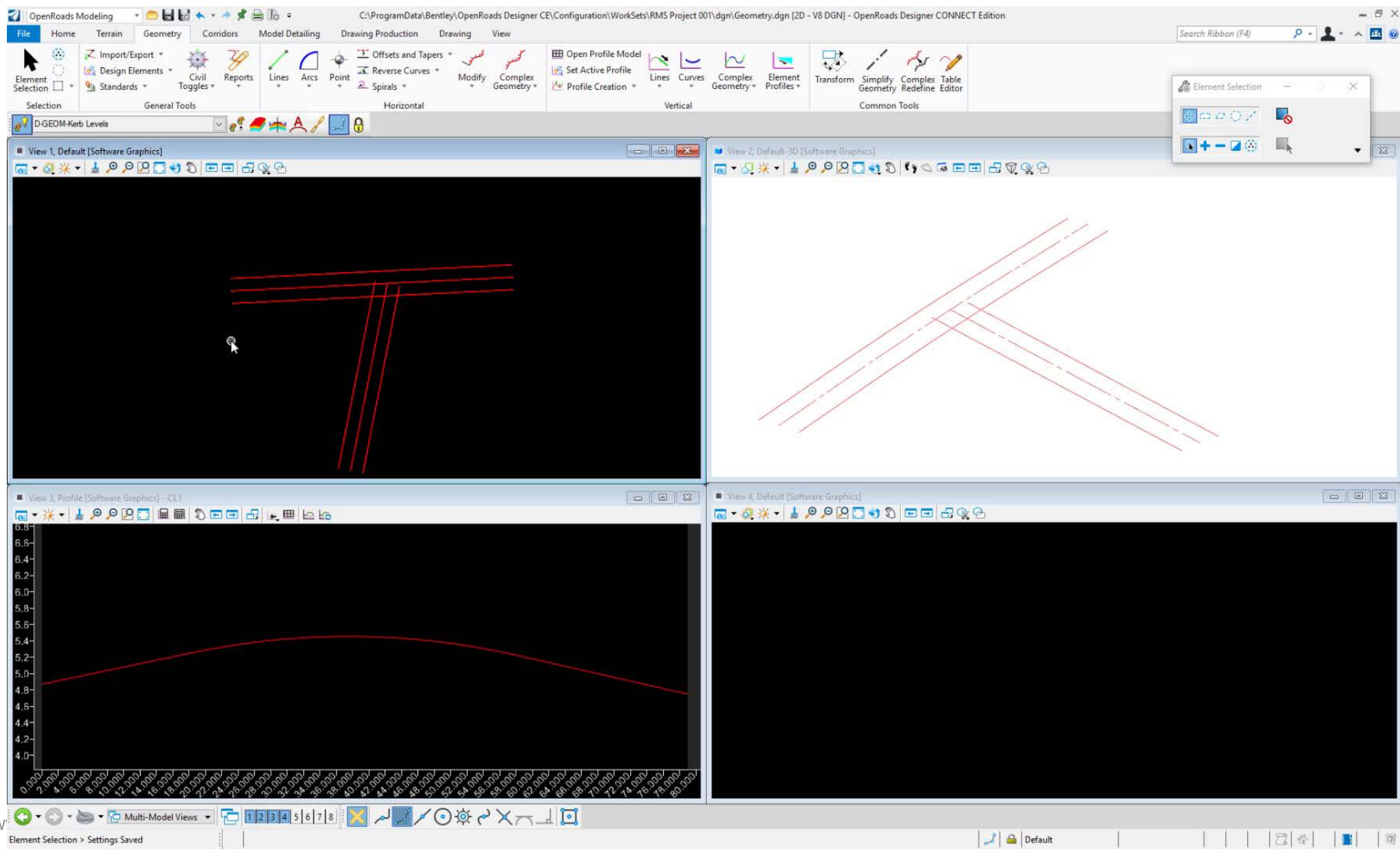
Placement

Rotation Option	Radius Direction
Rotation	180°00'00.0"
Perpendicular Offs	Offset Value
Perpendicular Offs	0.0000
Tangential Offset C	Offset Value
Tangential Offset	0.0000

Line

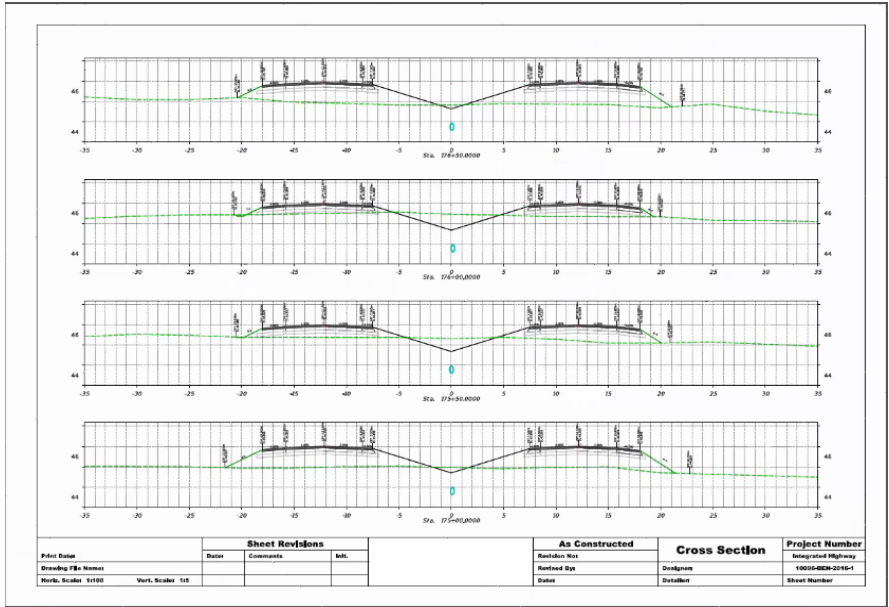
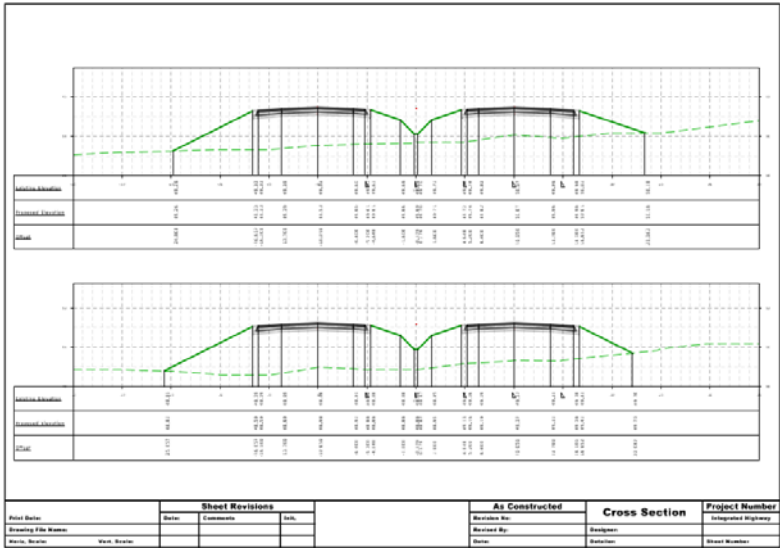
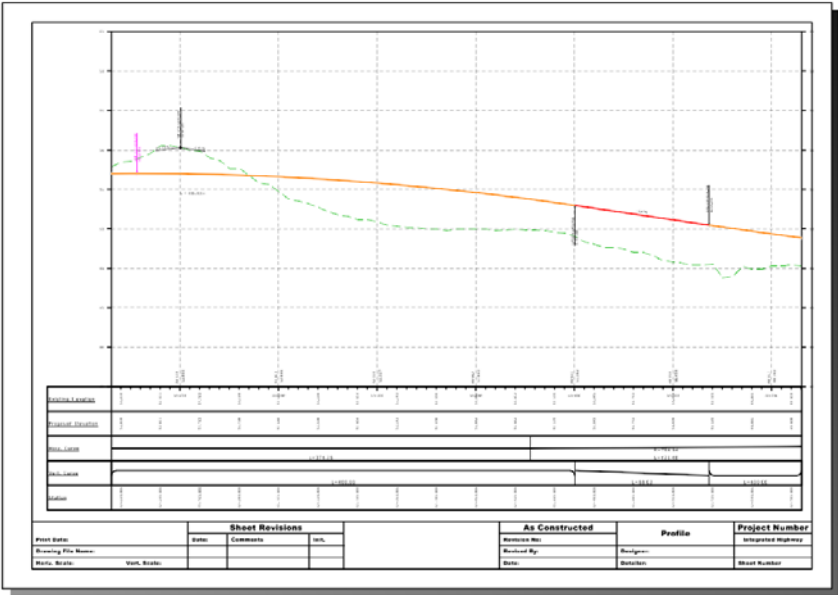
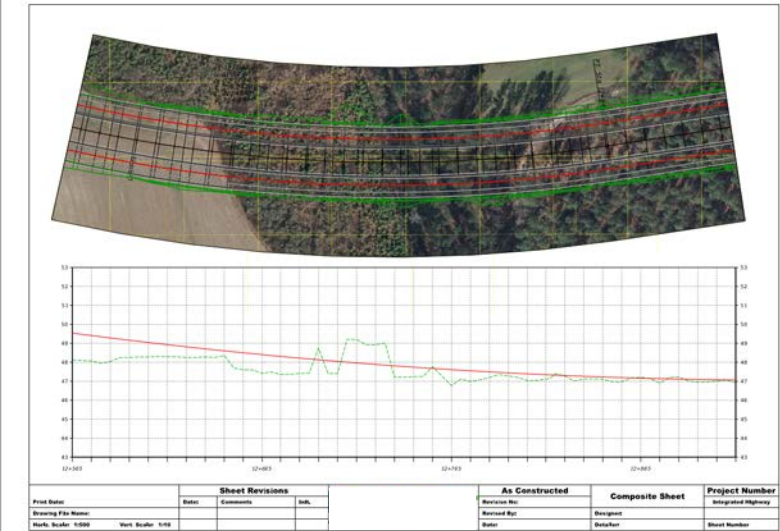
Length	0.0000
--------	---------------

Plan Annotation – Annotation of Profile elevation in plan view



Drawing Production

- Annotation for:
 - ☐ Plan
 - ☐ Profiles
 - ☐ Cross Sections



Plan Drawing Production

Place Named Boundary Civil Plan

Drawing Seed:

A1 PLAN

Detail Scale:

1:1000

Name:

Plan 1

Description:

Group:

(New)

Name:

Plans-1

Description:

☐ Start Location:

☐ Stop Location:

Length:

700.000000

Left Offset:

-200.000000

Right Offset:

200.000000

Overlap:

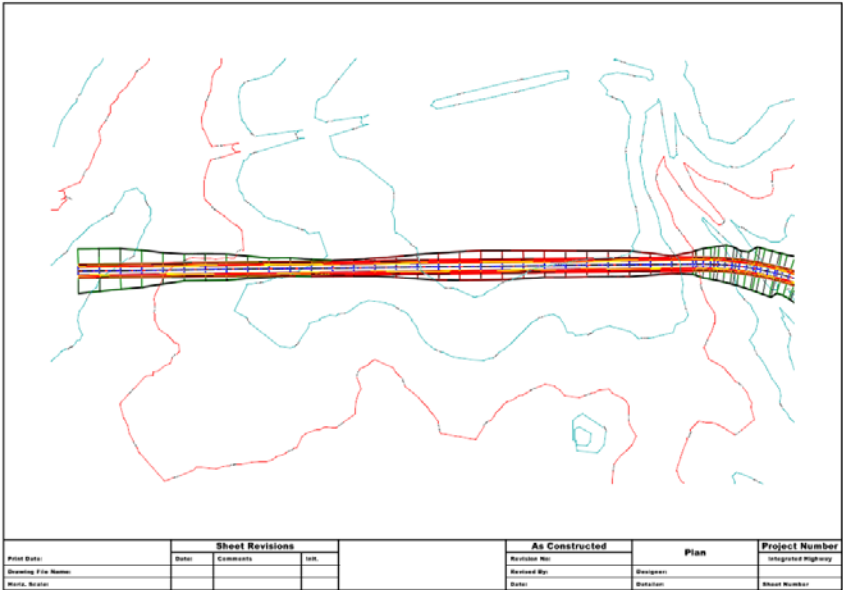
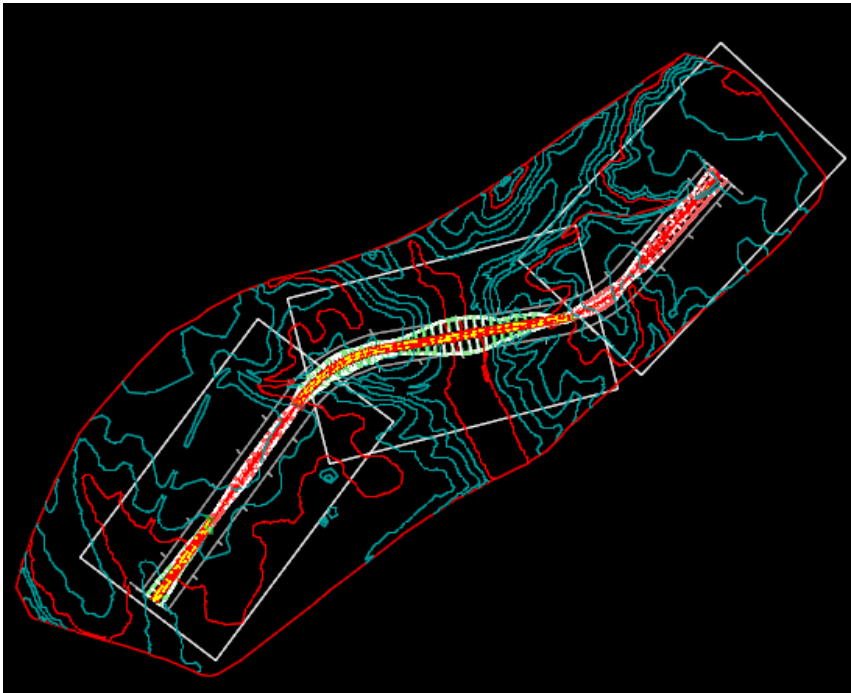
50.000000

Boundary Chords:

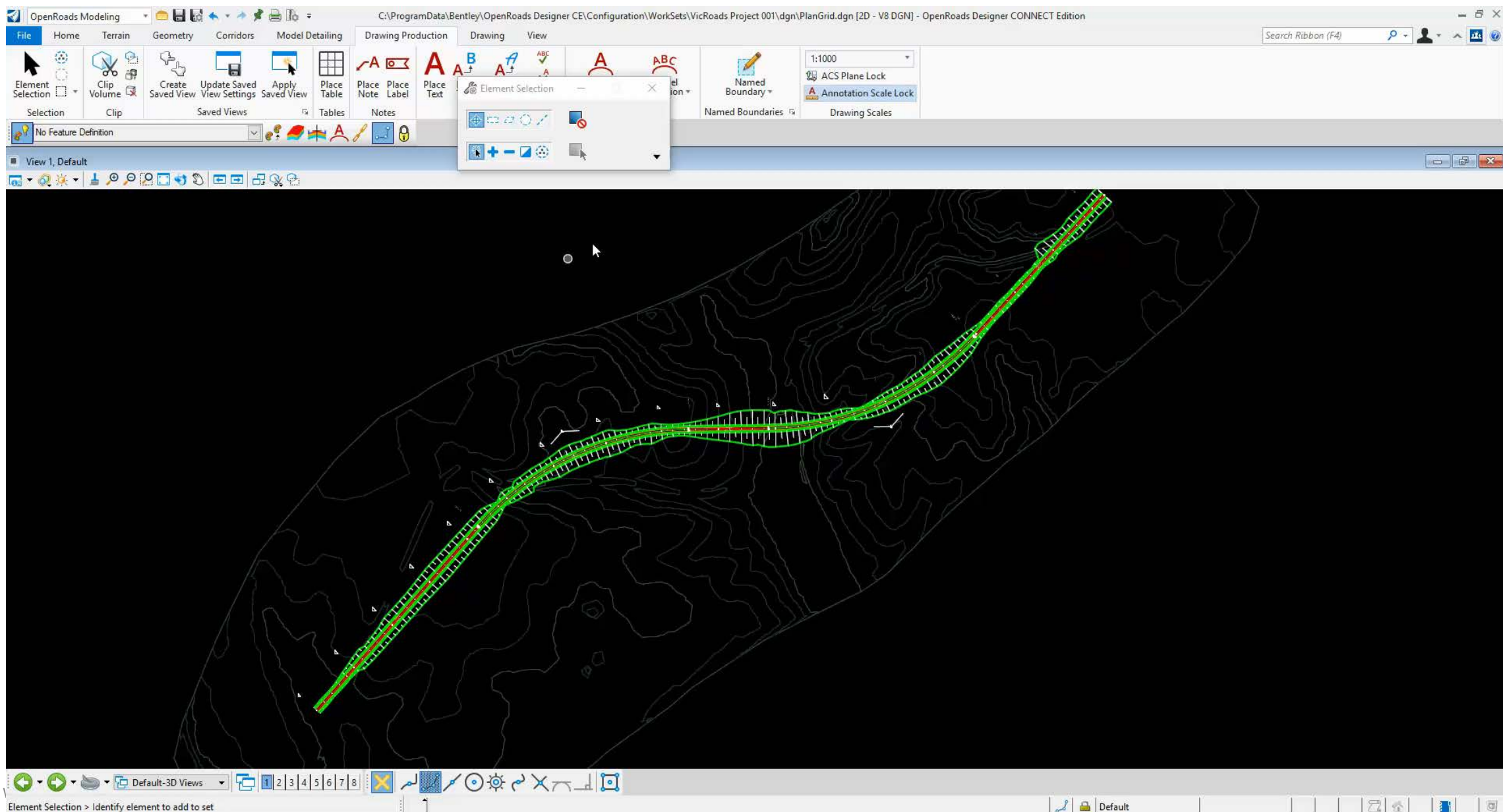
0

☒ Create Drawing

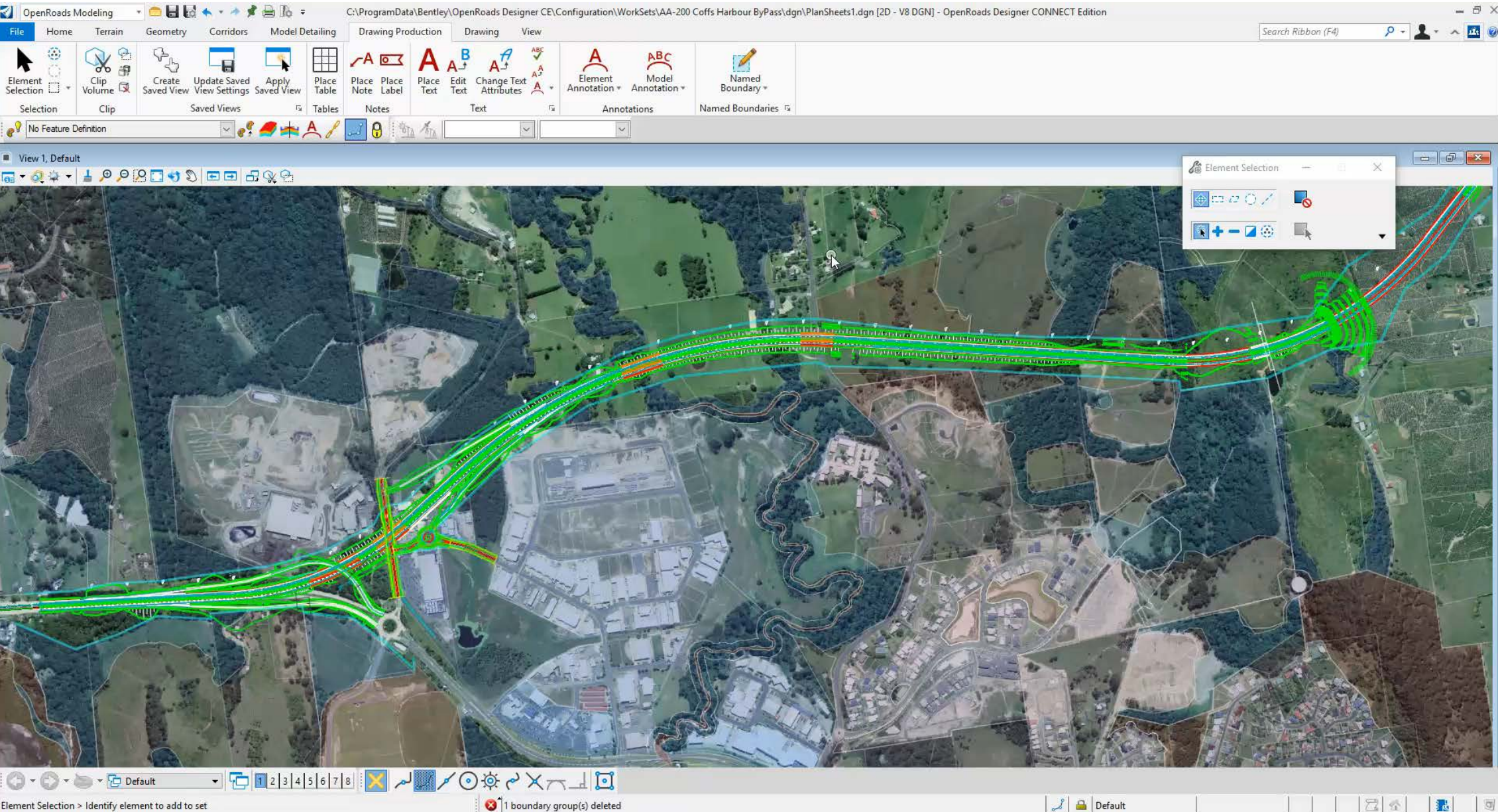
☒ Show Dialog



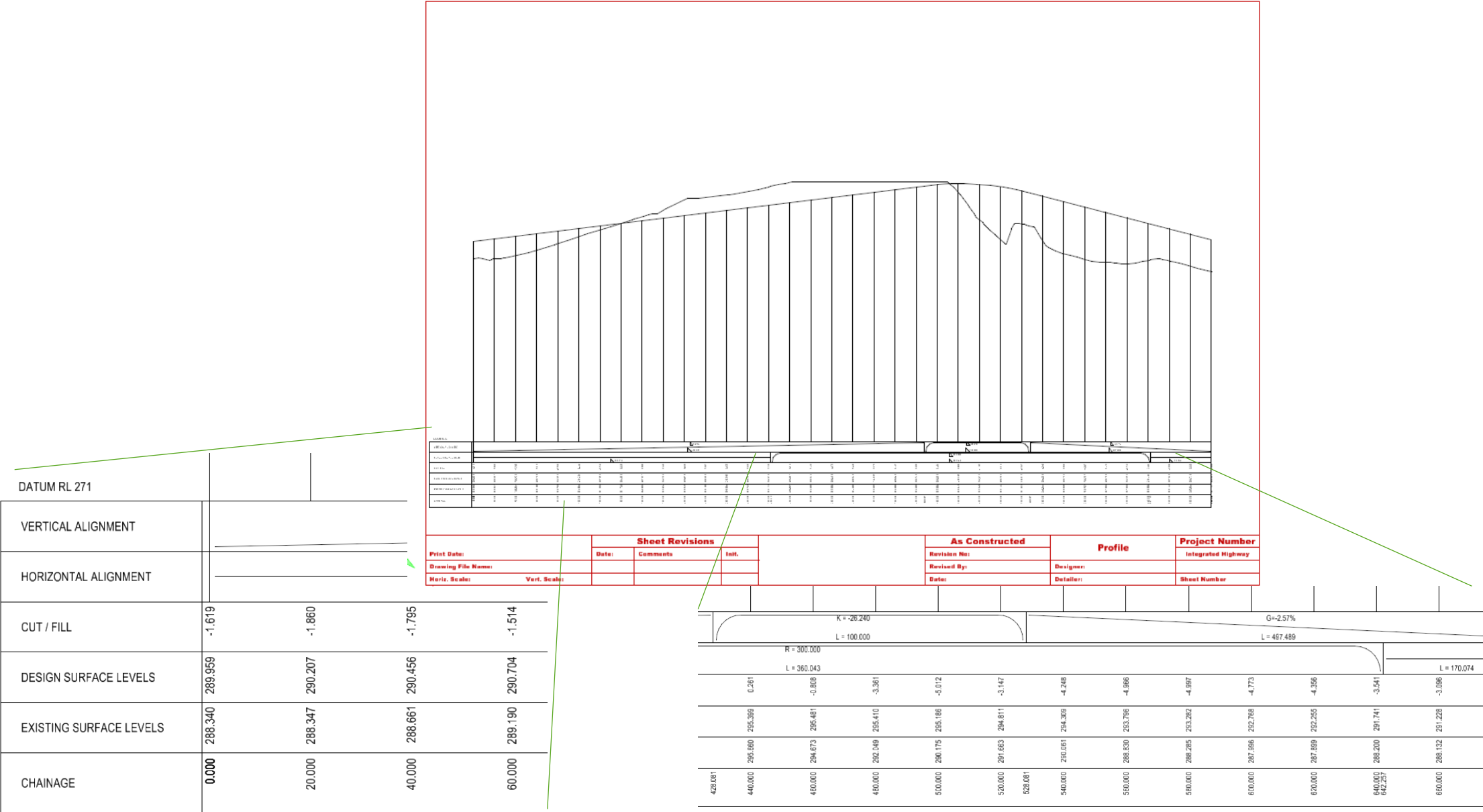
Plan Grid Annotation



Plan Drawing Sheets

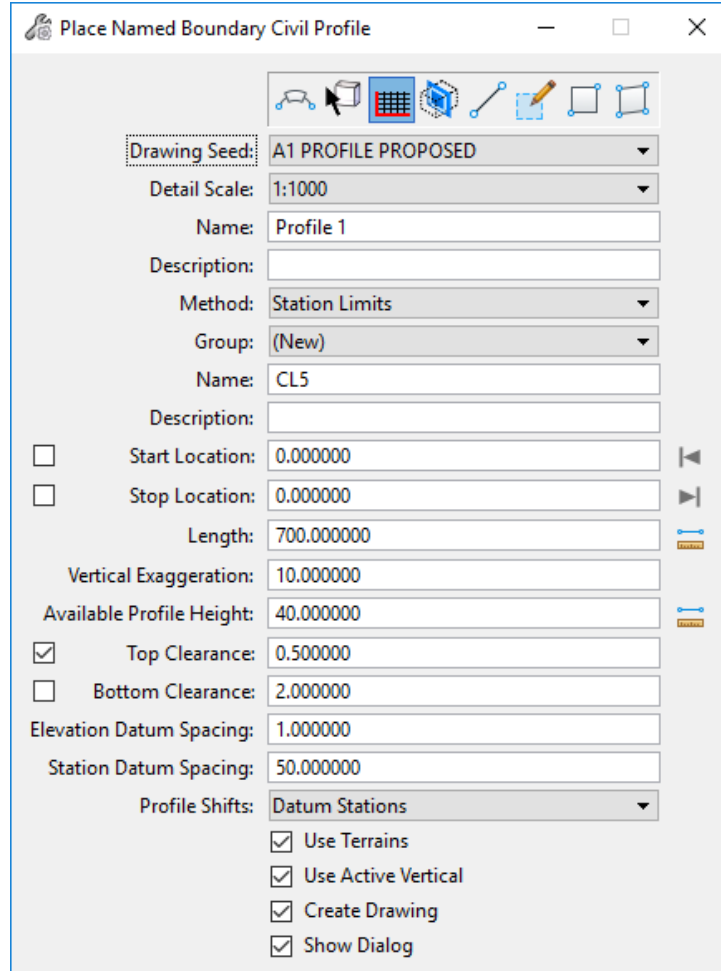


Profile Drawing Production

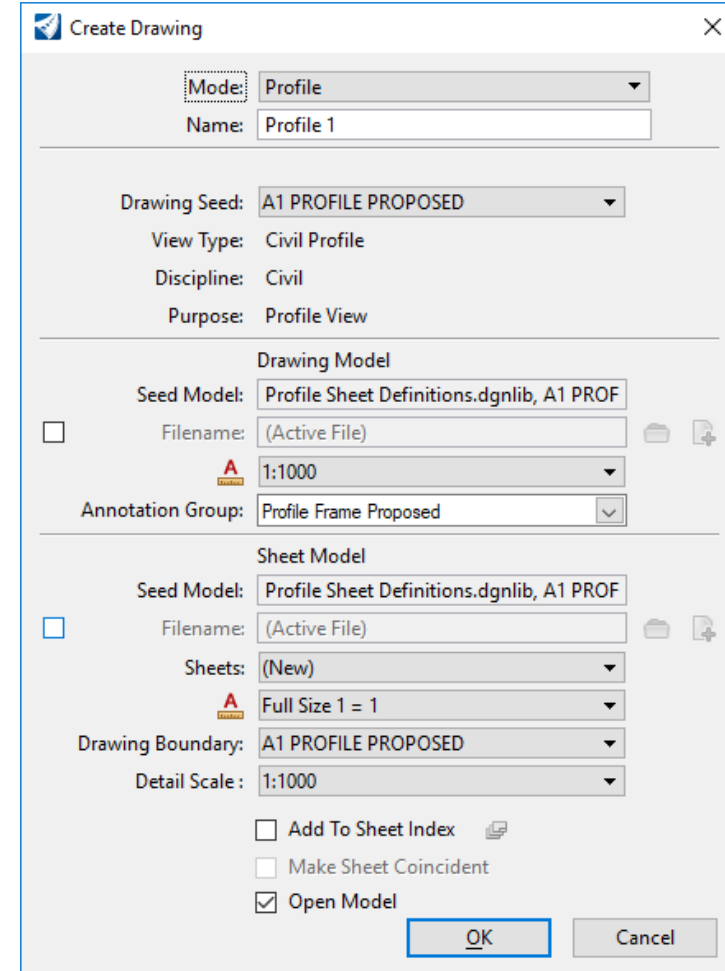


Profile Annotation

- Named Boundaries
 - Drawing and Sheet Seeds
 - Annotation Groups
 - Element Templates
 - Text Styles
 - Text Favourites

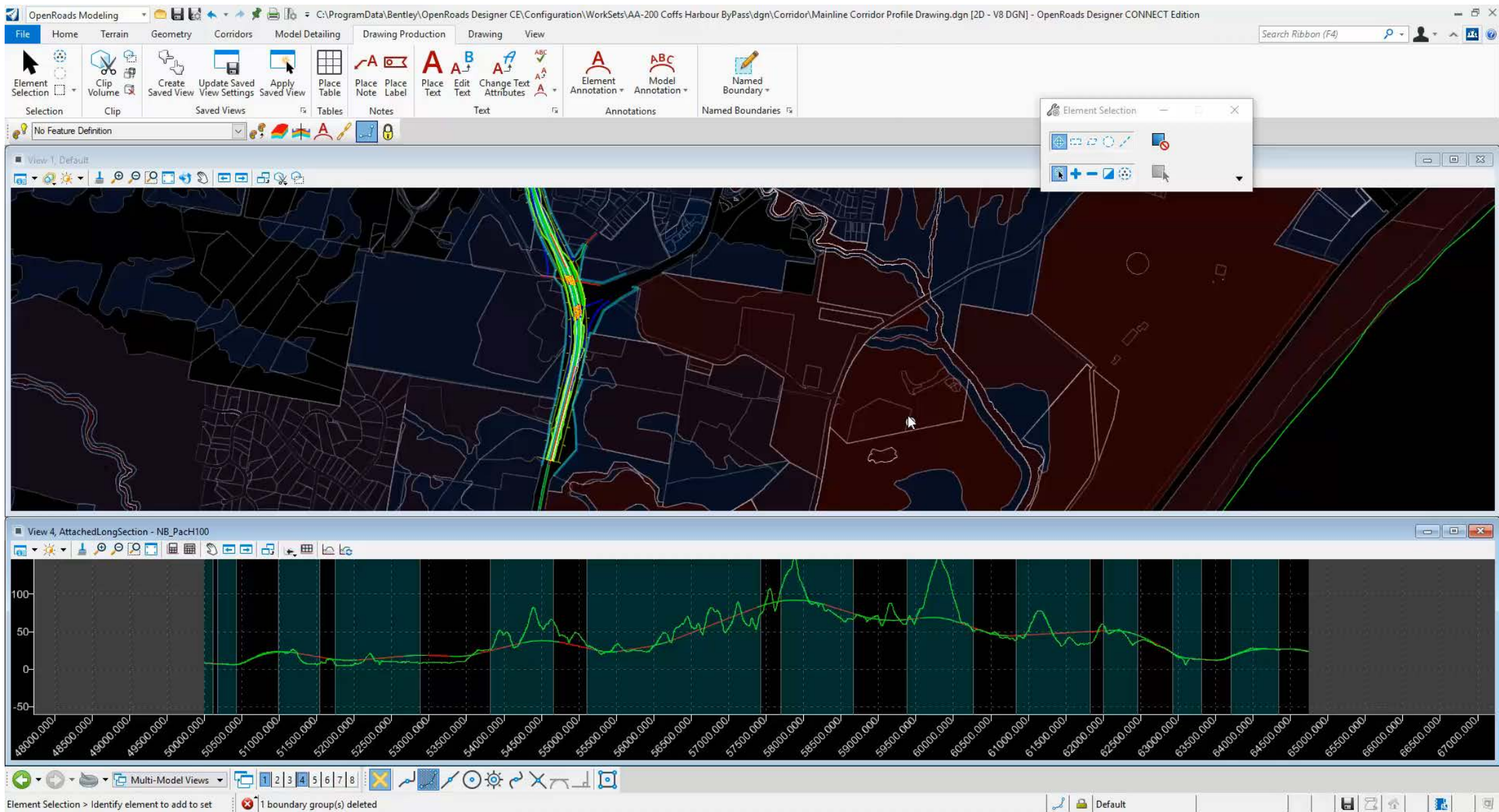


The 'Place Named Boundary Civil Profile' dialog box is used to define a profile boundary. It includes fields for 'Drawing Seed' (A1 PROFILE PROPOSED), 'Detail Scale' (1:1000), 'Name' (Profile 1), 'Description', 'Method' (Station Limits), 'Group' ((New)), and 'Name' (CL5). It also has checkboxes for 'Start Location' and 'Stop Location', and a 'Length' field (700.000000). Other fields include 'Vertical Exaggeration' (10.000000), 'Available Profile Height' (40.000000), 'Top Clearance' (0.500000), 'Bottom Clearance' (2.000000), 'Elevation Datum Spacing' (1.000000), 'Station Datum Spacing' (50.000000), and 'Profile Shifts' (Datum Stations). At the bottom, there are checkboxes for 'Use Terrains', 'Use Active Vertical', 'Create Drawing', and 'Show Dialog'.



The 'Create Drawing' dialog box is used to create a drawing from a profile. It includes fields for 'Mode' (Profile), 'Name' (Profile 1), 'Drawing Seed' (A1 PROFILE PROPOSED), 'View Type' (Civil Profile), 'Discipline' (Civil), and 'Purpose' (Profile View). It also has a 'Drawing Model' section with 'Seed Model' (Profile Sheet Definitions.dgnlib, A1 PROF), 'Filename' ((Active File)), and 'Annotation Group' (Profile Frame Proposed). A 'Sheet Model' section includes 'Seed Model' (Profile Sheet Definitions.dgnlib, A1 PROF), 'Filename' ((Active File)), 'Sheets' ((New)), and 'Full Size 1 = 1'. Other fields include 'Drawing Boundary' (A1 PROFILE PROPOSED), 'Detail Scale' (1:1000), 'Add To Sheet Index', 'Make Sheet Coincident', and 'Open Model'. The 'OK' and 'Cancel' buttons are at the bottom right.

Profile Drawing Production Workflow



Profile Annotation Group

Manage Annotations

Annotation Group: Profile Frame Proposed

Frame Proposed

Grid Annotation - Frame

Rows

Display Properties

Row List

Show	Type	Title	Definition
<input checked="" type="checkbox"/>	Symbol	VERTICAL ALIGNMENT	Profile along [Active Profile]
<input checked="" type="checkbox"/>	Label		Length along [Active Profile]
<input checked="" type="checkbox"/>	Label		K along [Active Profile]
<input checked="" type="checkbox"/>	Label		Slope along [Active Profile]
<input checked="" type="checkbox"/>	Symbol	HORIZONTAL ALIGNMENT	Alignment along [Horizontal Alignment]
<input checked="" type="checkbox"/>	Label		Length along [Horizontal Alignment]
<input checked="" type="checkbox"/>	Label		Radius along [Horizontal Alignment]
<input checked="" type="checkbox"/>	Label		Length along [Horizontal Alignment]
<input checked="" type="checkbox"/>	Label	CUT / FILL	Delta Z along [Active Profile] to [Active Surface]
<input checked="" type="checkbox"/>	Label	DESIGN SURFACE LEVELS	Z
<input checked="" type="checkbox"/>	Label	EXISTING SURFACE LEVELS	Z along [Active Surface]
<input checked="" type="checkbox"/>	Label	CHAINAGE	Station
<input checked="" type="checkbox"/>	Label		Station
<input checked="" type="checkbox"/>	Label		Station

Row Properties - DESIGN SURFACE LEVELS

Location	Title	Text	Collision	Frame
Filter(s)				
Horizontal Stations: Even Locked along [Horizontal Alignment] every 20				

Display

Hide Selected

Highlight Selected

DATUM RL 22

VERTICAL ALIGNMENT		
HORIZONTAL ALIGNMENT		
CUT / FILL	0.000 0	0.000 0
DESIGN SURFACE LEVELS	0.000 0	0.000 0
EXISTING SURFACE LEVELS	0.000 0	0.000 0
CHAINAGE	0.000 0	0.000 0

Vertical Geometry Annotation on alignment

Manage Annotations

Annotation Group: Vertical Alignment Annotation

Profile Tangent Slope Annotation

Profile VPI Circle

Profile VPI Sta / Elev Annotation

Profile Low/High Pnt Circle

Profile High Pnt Sta / Elev Annotation

Profile Low Pnt Sta / Elev Annotation

Profile VPI Sag / Crest Triangle

Location

LocationIn Vertical Components

Annotate

WithText

TemplateAnnotation\Profile\LD-LSEC-Text

Leader

Place Leader	False
Offset Begin	0.0000
Offset End	0.0000
Arrow Size	0.0000
Arrow Width	0.0000
Circle Size	0.0100
Square Size	0.0000
Triangle Size	0.0000
Extension Size	0.0000
Template	

Placement

Rotation Option	Tangent
Rotation	00°00'00.0"
Vertical Offset Option	Offset Value
Vertical Offset	0.0025
Horizontal Offset Option	Offset Value
Horizontal Offset	0.0000
Perpendicular Offset Option	Offset Value
Perpendicular Offset	0.0000
Tangential Offset Option	Offset Value
Tangential Offset	0.0000

View 5, Profile 2

CH 1026.516
RL 232.112

LP CH 1021.193
RL 219.424

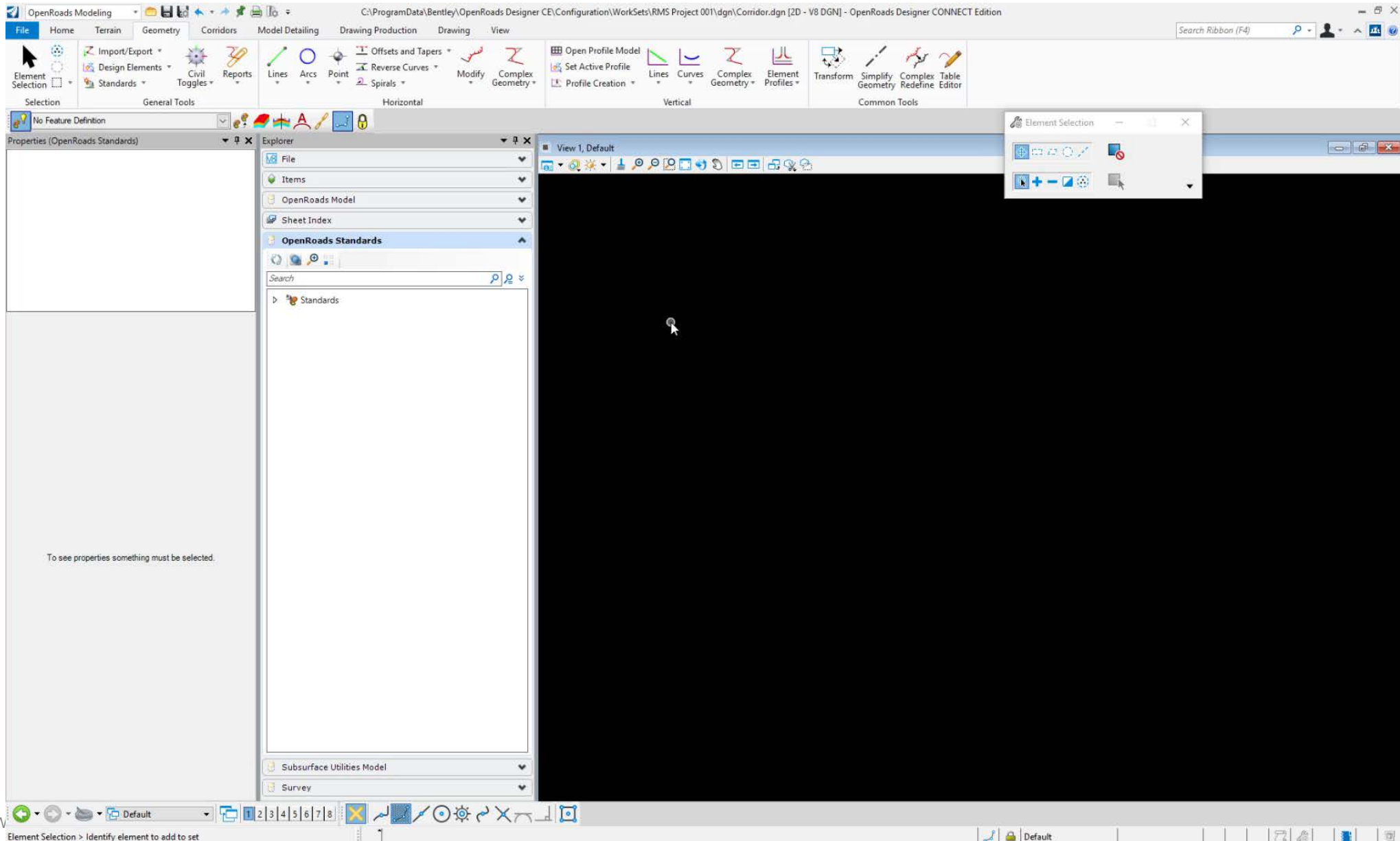
CH 1026.516
RL 232.112

CH 1026.516
RL 232.112

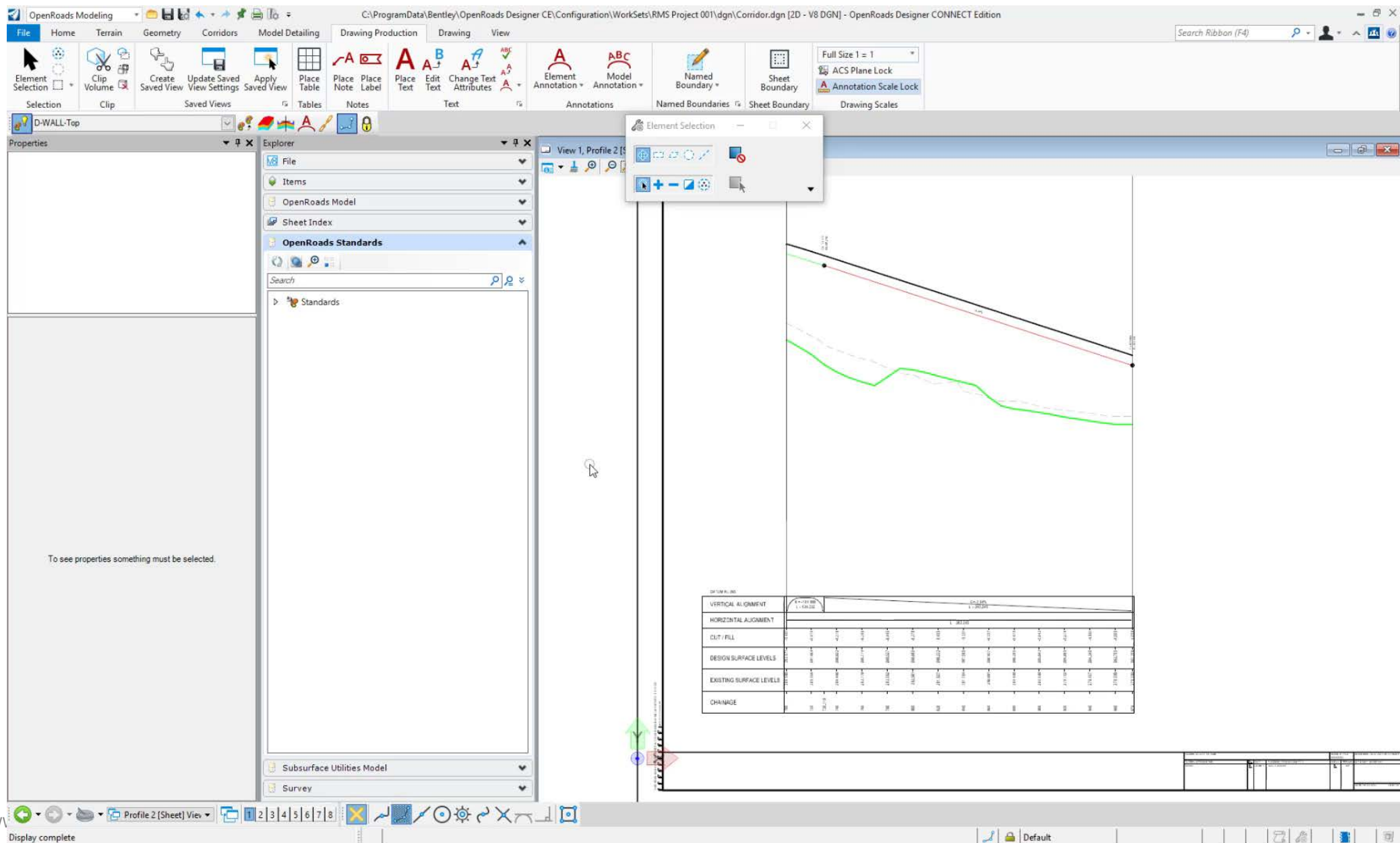
User Question

- I've created a profile using the RMS Workspace but how do I configure it to show some additional content for a retaining wall profile and make that a new standard for my company?

Creating a new proposed profile with retaining wall



Customising the profile annotation



Additional Configuration for symbology & levels (Optional)

Manage Annotations

Annotation Group: A1 2.5mm Profile Frame Proposed

Show	Type	Title	Definition
<input type="checkbox"/>	ABC		Cross Slope along Left
<input type="checkbox"/>	ABC		Cross Slope along Right
<input checked="" type="checkbox"/>	ABC	WALL HEIGHT	Delta Z along Wall Bottom to Wall Top
<input checked="" type="checkbox"/>	ABC	WALL TOP	Z along Wall Top
<input checked="" type="checkbox"/>	ABC	WALL BOTTOM	Z along Wall Bottom
<input checked="" type="checkbox"/>	ABC	CUT / FILL	Delta Z along [Active Profile] to [Active Surface]
<input type="checkbox"/>	ABC	LEFT EDGE	Z along Left Edge
<input type="checkbox"/>	ABC	RIGHT EDGE	Z along Right Edge
<input checked="" type="checkbox"/>	ABC	DESIGN SURFACE LEVELS	Z
<input checked="" type="checkbox"/>	ABC	EXISTING SURFACE LEVELS	Z along [Active Surface]
<input checked="" type="checkbox"/>	ABC	CHAINAGE	Station

Row Properties - WALL HEIGHT

Location	Title	Text	Collision	Frame
Draw Border			<input checked="" type="checkbox"/>	
Border Line Template				Annotation\Profile\D-LSEC-Cut-Fill Box
Lines				
Draw Vertical Line			<input type="checkbox"/>	
Vertical Line Template				Annotation\Profile\D-LSEC-Cut-Fill Box
Draw Horizontal Line			<input type="checkbox"/>	
Horizontal Line Template				Annotation\Profile\D-LSEC-Cut-Fill Box
Draw Leader Line			<input type="checkbox"/>	
Leader Line Template				Annotation\Profile\D-LSEC-Descenders

View 4, Profile 1

DATUM RL 271

VERTICAL ALIGNMENT

HORIZONTAL ALIGNMENT

WALL HEIGHT

WALL TOP

WALL BOTTOM

CUT / FILL

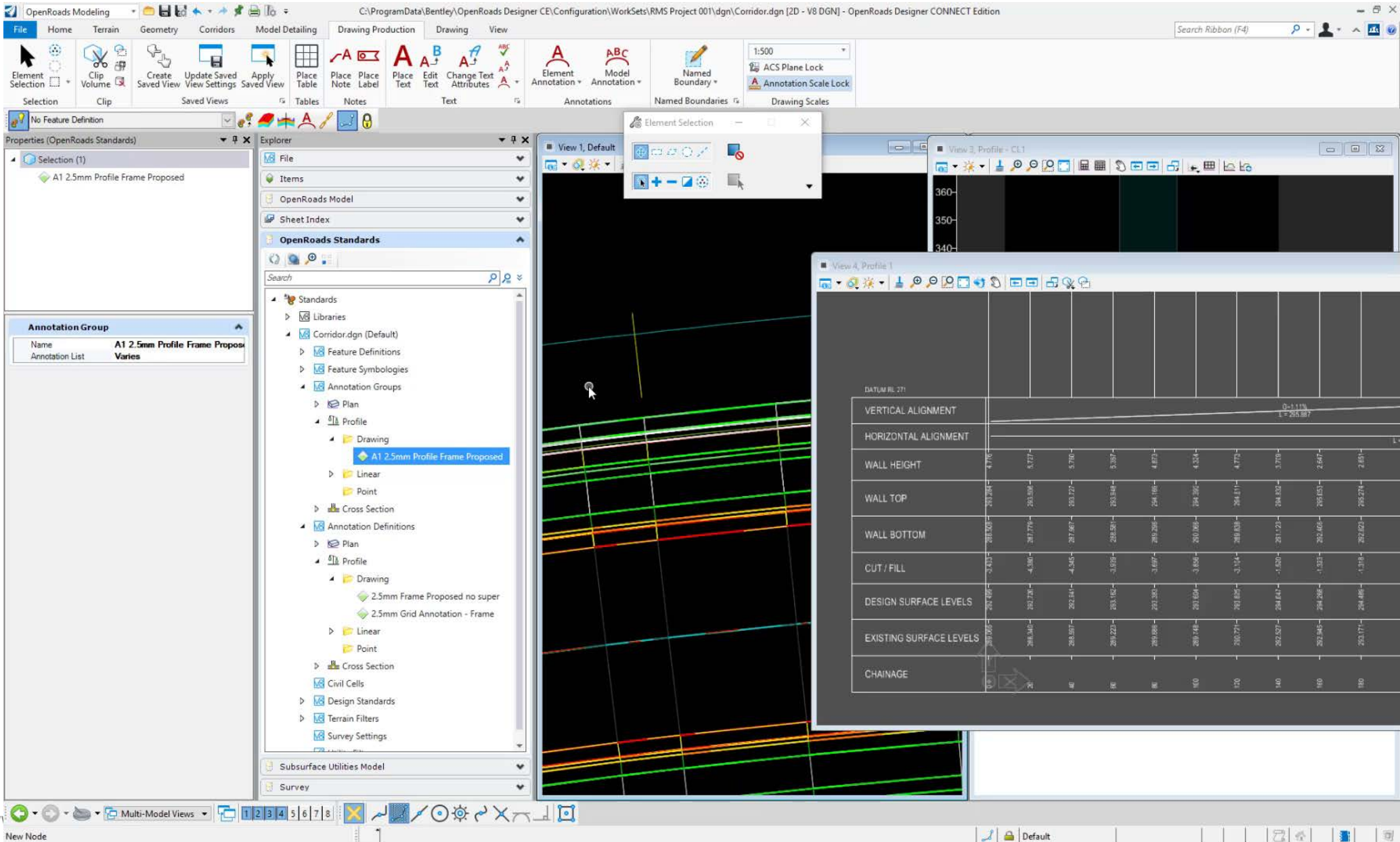
DESIGN SURFACE LEVELS

EXISTING SURFACE LEVELS

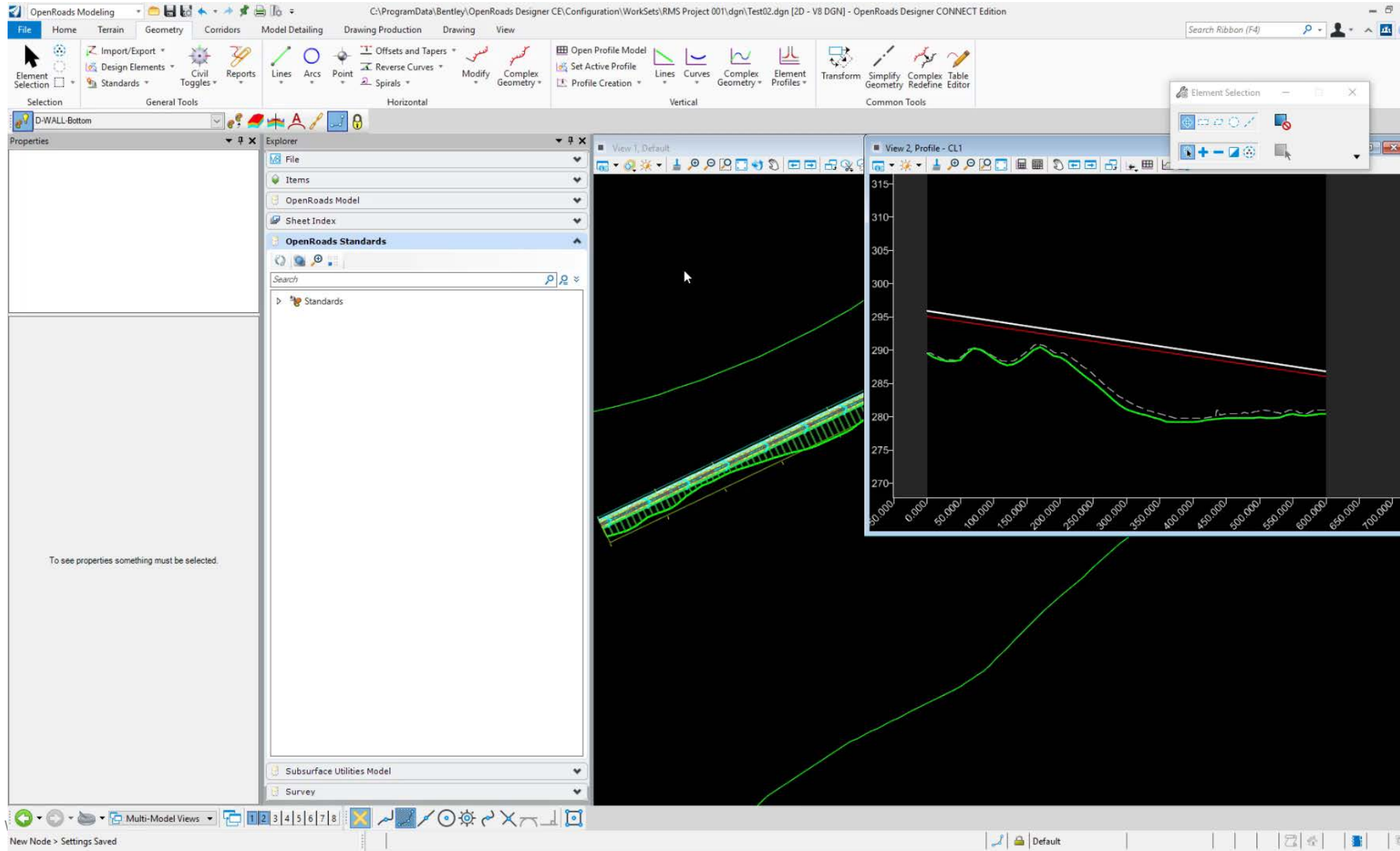
CHAINAGE

Text: WALL HEIGHT
Level: D-LSEC-Cut-Fill Title
A1 2.5mm Profile Frame Proposed

Exporting to my company area for future use



Testing the new Annotation Group in a new DGN

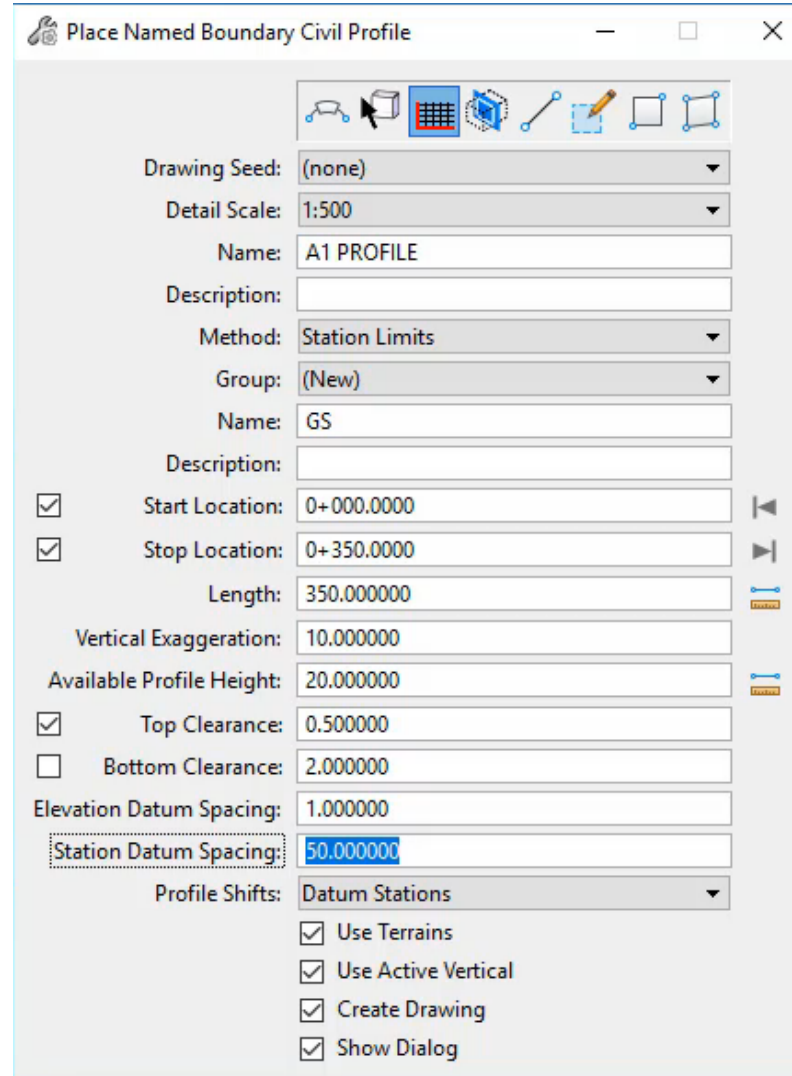


User Question

- How do I setup my own company sheet border?

Drawing production sheet seeds

- Profile Sheet Definition DGNLIB:
 - Copy from Plan or Profile Start Seed DGN and name “Profile Sheet Definitions.dgnlib”
 - Open File
 - Use Place Named Boundary



The 'Place Named Boundary Civil Profile' dialog box is used to define a profile. It includes fields for Drawing Seed, Detail Scale, Name, Description, Method, Group, and Name. It also has checkboxes for Start Location, Stop Location, Length, Vertical Exaggeration, Available Profile Height, Top Clearance, Bottom Clearance, Elevation Datum Spacing, and Station Datum Spacing. The Profile Shifts section includes checkboxes for Use Terrains, Use Active Vertical, Create Drawing, and Show Dialog.

Place Named Boundary Civil Profile

Drawing Seed: (none)

Detail Scale: 1:500

Name: A1 PROFILE

Description:

Method: Station Limits

Group: (New)

Name: GS

Description:

☒ Start Location: 0+000.0000

☒ Stop Location: 0+350.0000

Length: 350.000000

Vertical Exaggeration: 10.000000

Available Profile Height: 20.000000

☒ Top Clearance: 0.500000

☐ Bottom Clearance: 2.000000

Elevation Datum Spacing: 1.000000

Station Datum Spacing: 50.000000

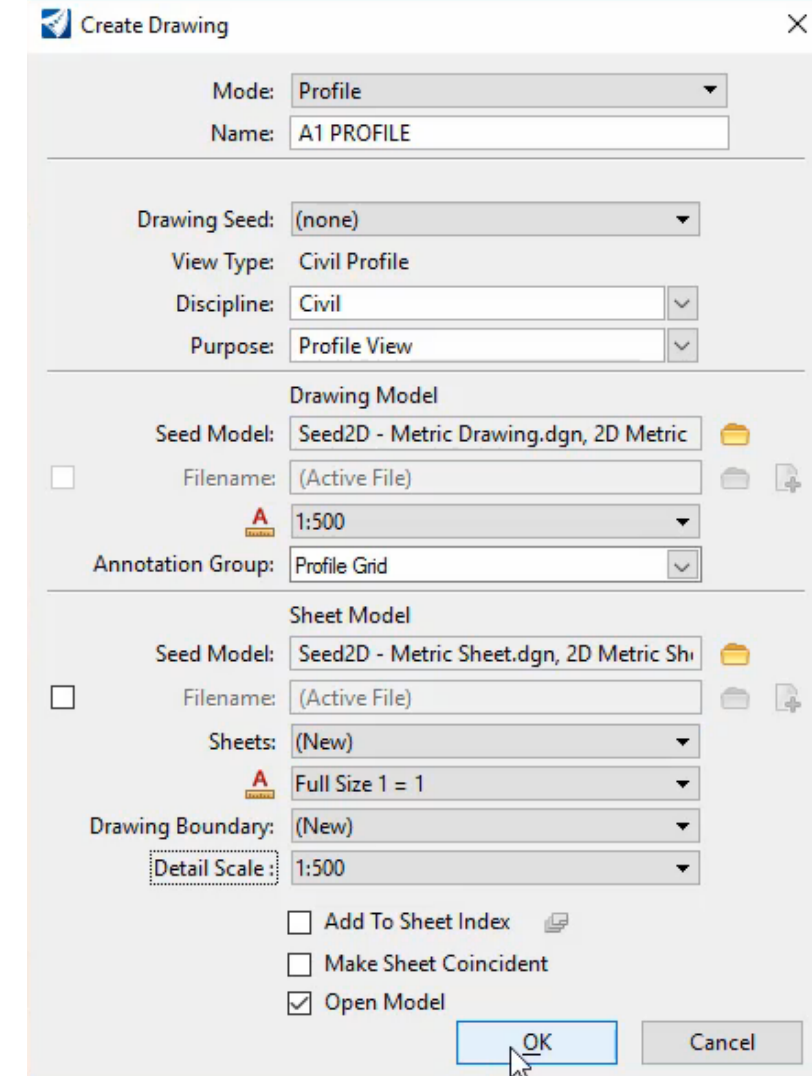
Profile Shifts: Datum Stations

☒ Use Terrains

☒ Use Active Vertical

☒ Create Drawing

☒ Show Dialog



The 'Create Drawing' dialog box is used to create a drawing. It includes fields for Mode, Name, Drawing Seed, View Type, Discipline, Purpose, Seed Model, Filename, Annotation Group, Sheet Model, Filename, Sheets, Full Size, Drawing Boundary, and Detail Scale. It also has checkboxes for Add To Sheet Index, Make Sheet Coincident, and Open Model.

Create Drawing

Mode: Profile

Name: A1 PROFILE

Drawing Seed: (none)

View Type: Civil Profile

Discipline: Civil

Purpose: Profile View

Drawing Model

Seed Model: Seed2D - Metric Drawing.dgn, 2D Metric

Filename: (Active File)

Annotation Group: Profile Grid

Sheet Model

Seed Model: Seed2D - Metric Sheet.dgn, 2D Metric Sh

Filename: (Active File)

Sheets: (New)

Full Size 1 = 1

Drawing Boundary: (New)

Detail Scale: 1:500

☐ Add To Sheet Index

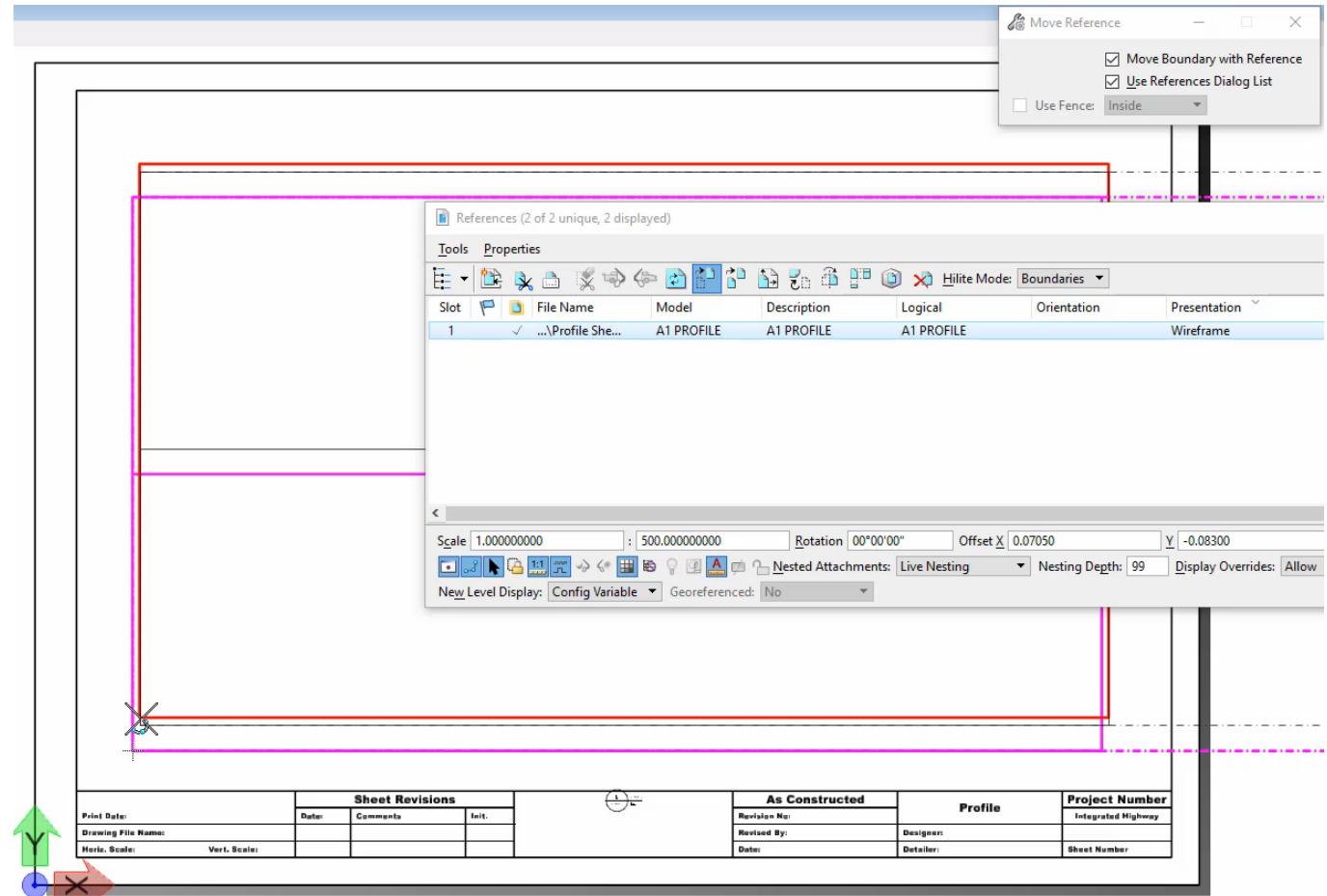
☐ Make Sheet Coincident

☒ Open Model

OK Cancel

Drawing production sheet seeds

- Profile Sheet Definition DGNLIB:
 - Place the title block cell in the new sheet model
 - Move boundary link outside sheet and adjust corners
 - Adjust the boundary location using move reference
 - Turn off constructions in view attributes and save settings



Setting up a new Profile Sheet Seed for my company

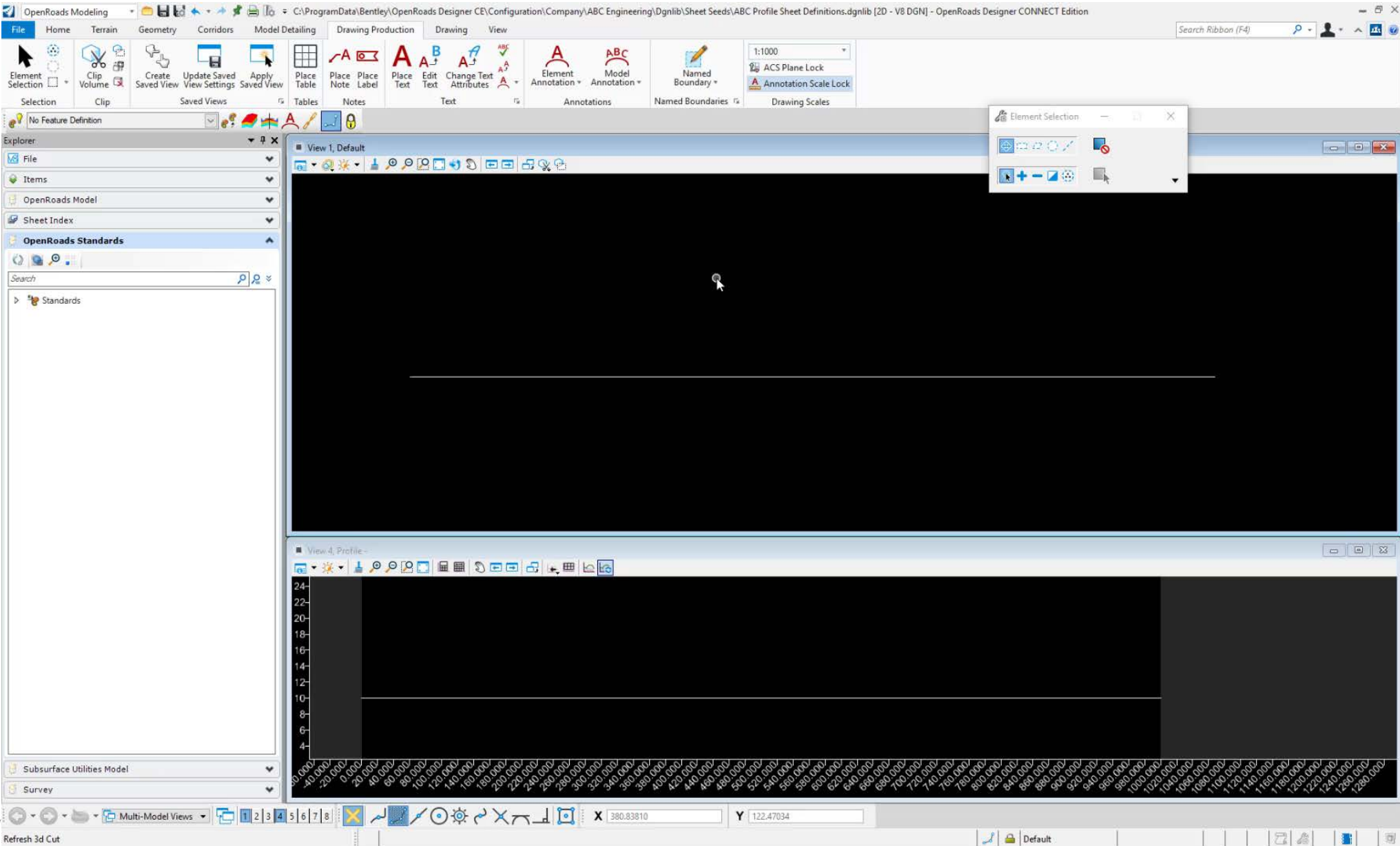
- Copy from

C:\ProgramData\Bentley\OpenRoads Designer
CE\Configuration\Organization-Civil\ANZ Design\Dgnlib\Sheet
Seeds**Plan or Profile Start Seed.dgn**

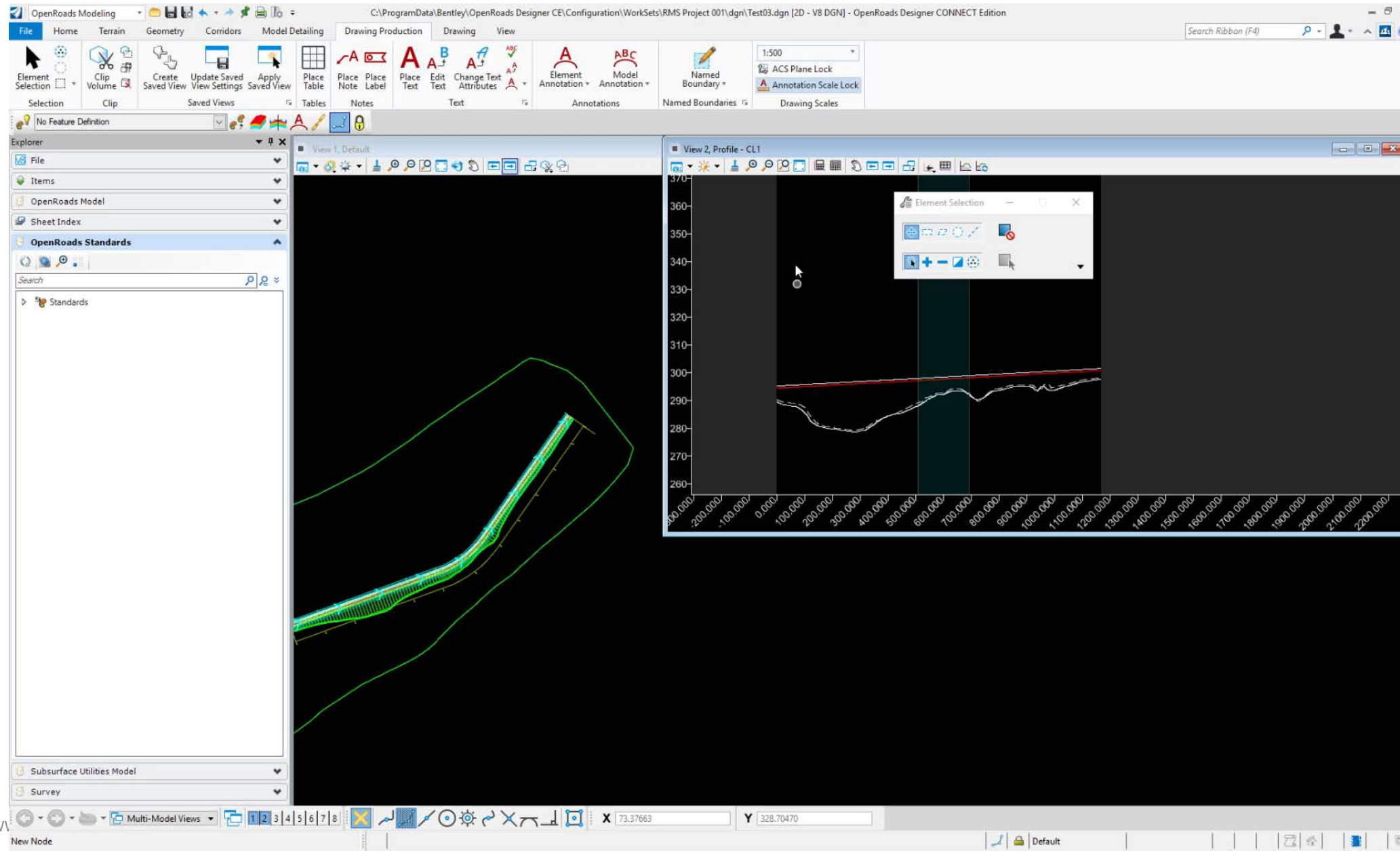
- To here, and rename to

C:\ProgramData\Bentley\OpenRoads Designer
CE\Configuration\Company\ABC Engineering\Dgnlib\Sheet
Seeds**ABC Profile Sheet Definitions.dgnlib**

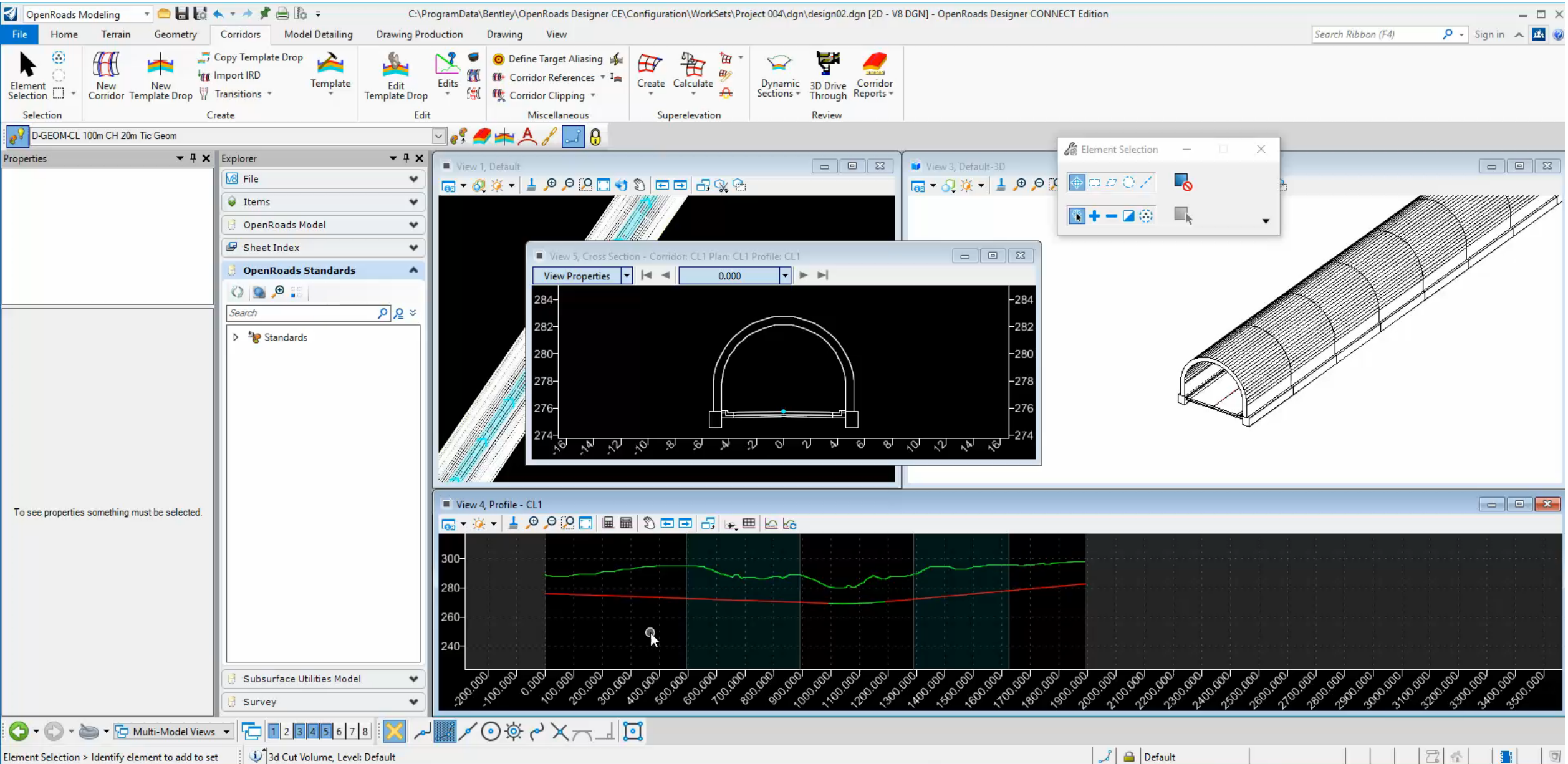
Setting up a new Profile Sheet Seed for my company



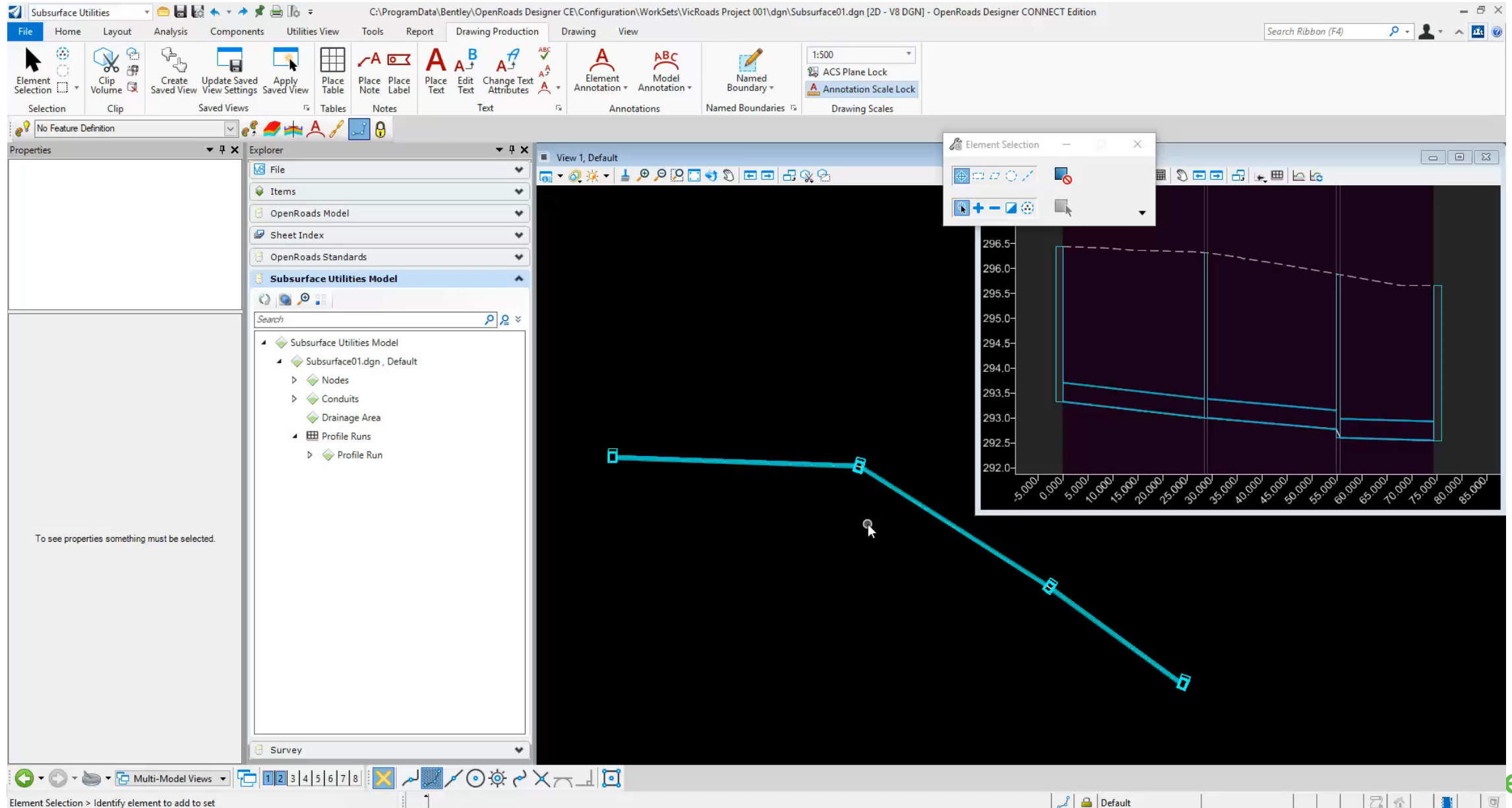
Test the new Sheet Seed



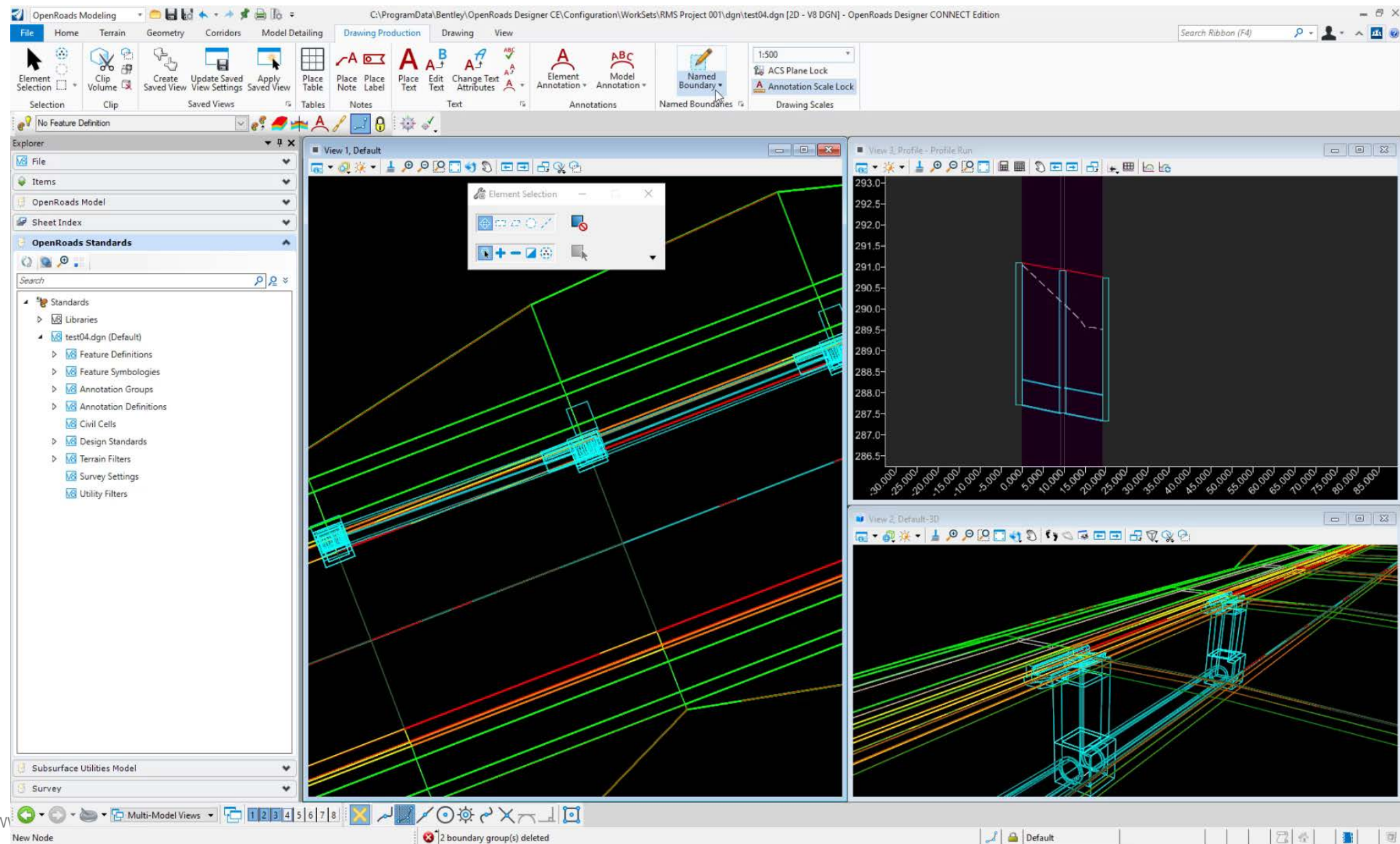
Profile 3D Cut



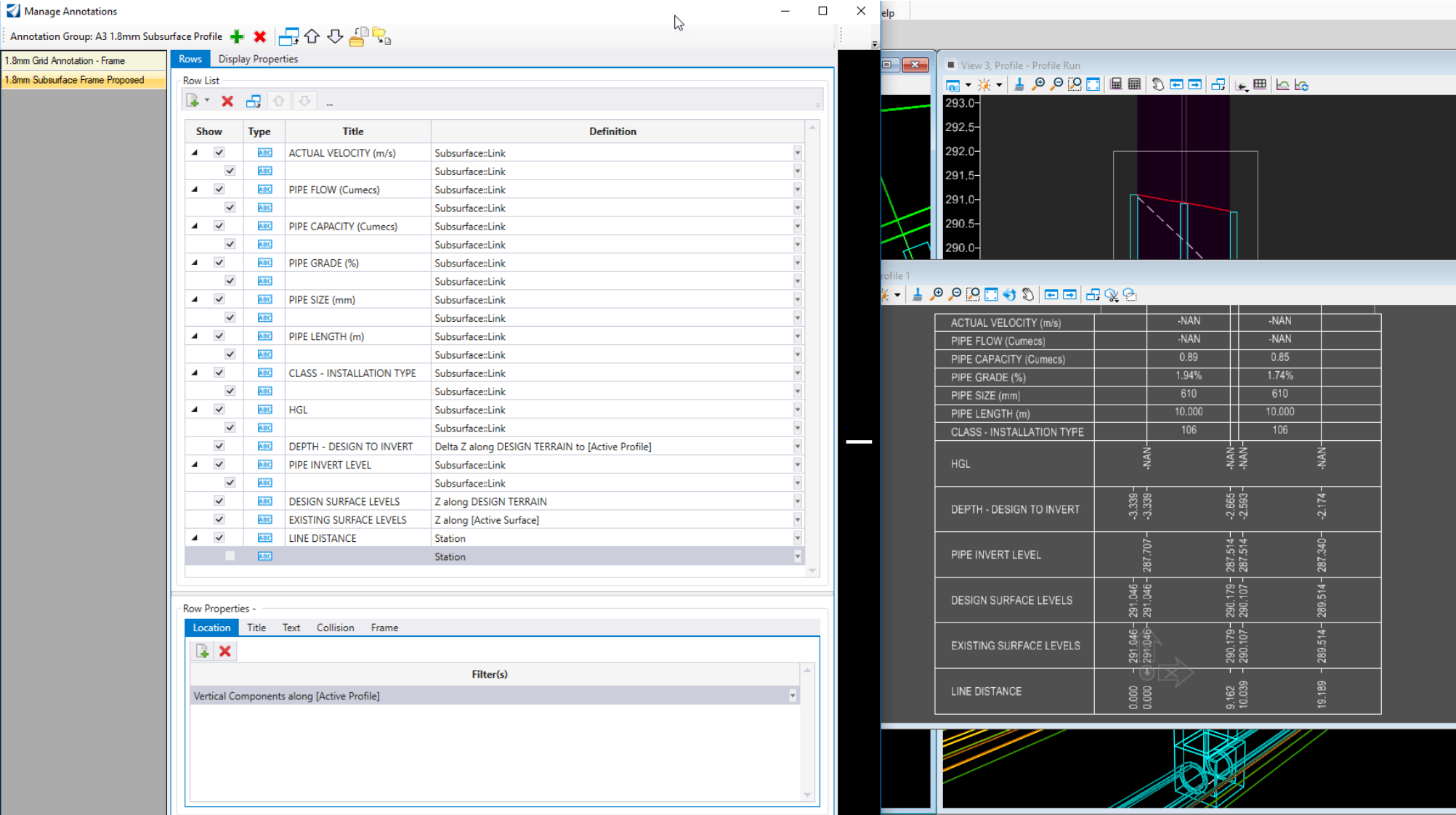
Subsurface Drawing production



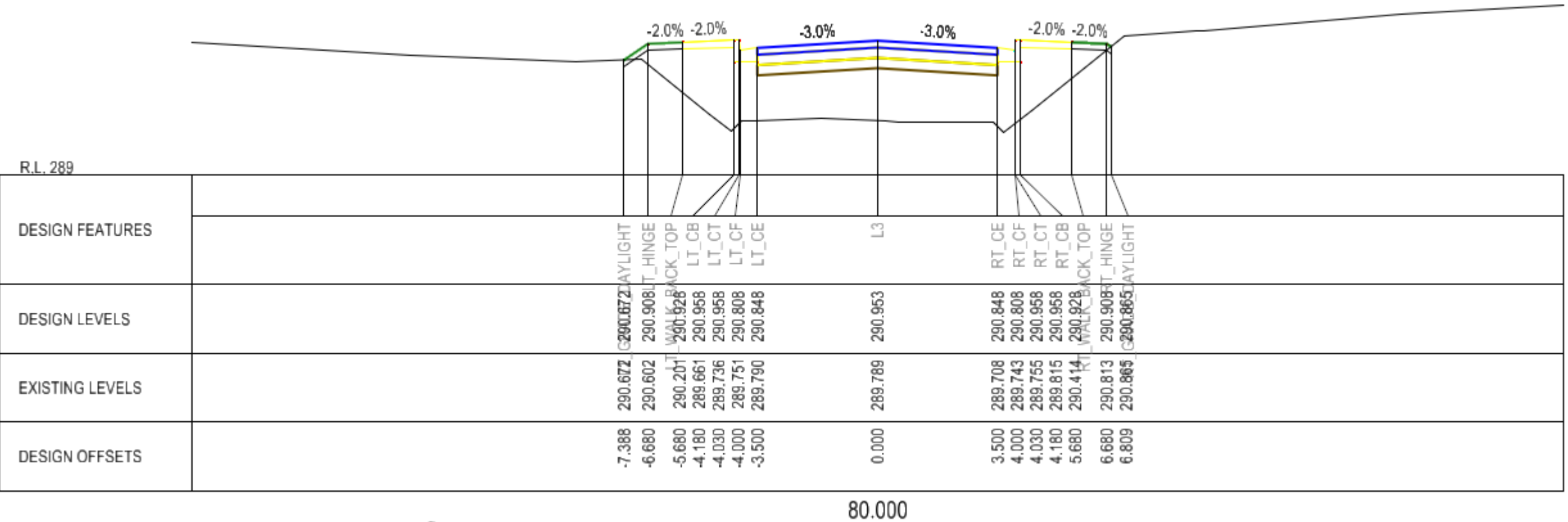
Subsurface Utilities Profile Drawings



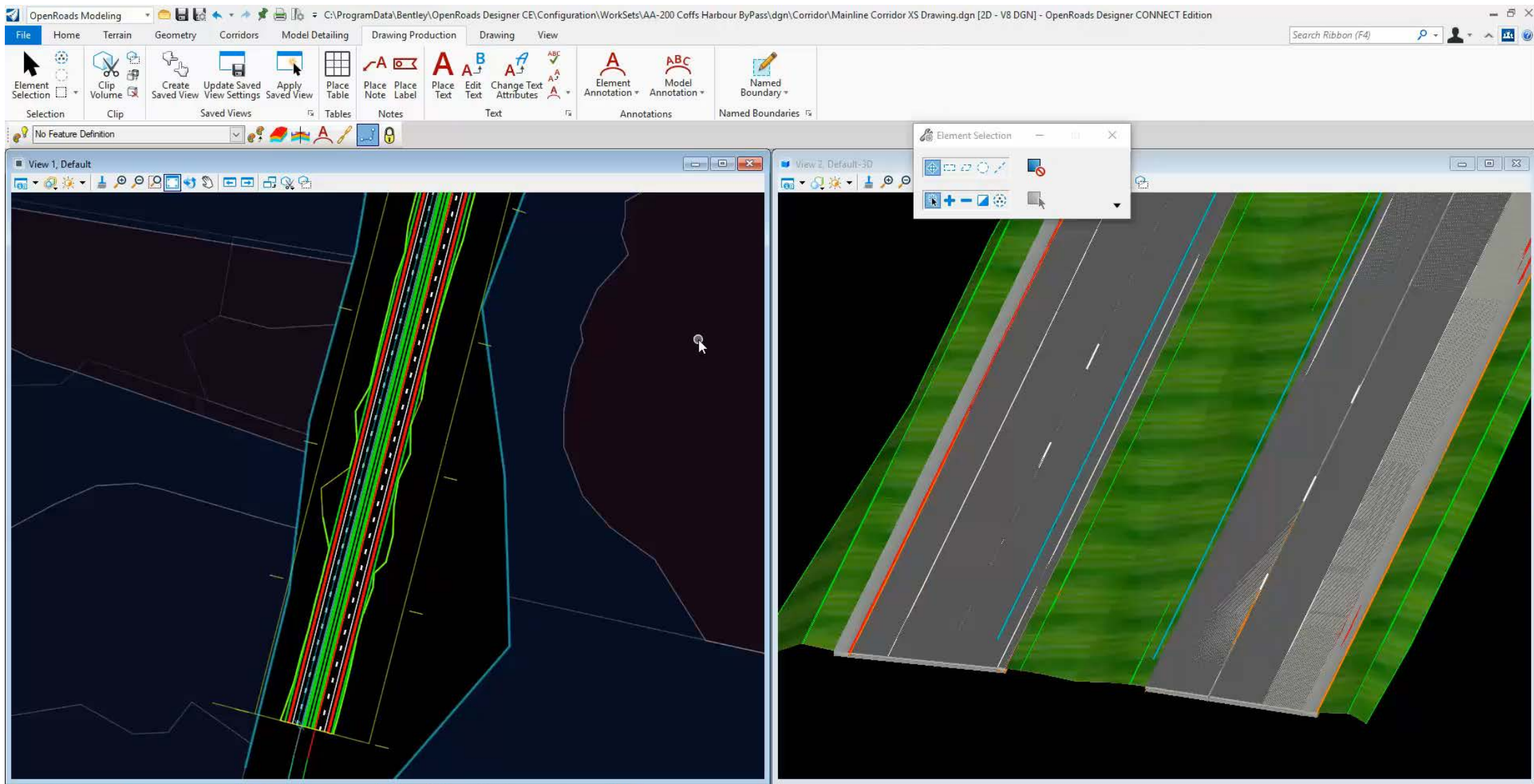
Subsurface Utilities Profile Annotation Group



Cross Section Drawing Production

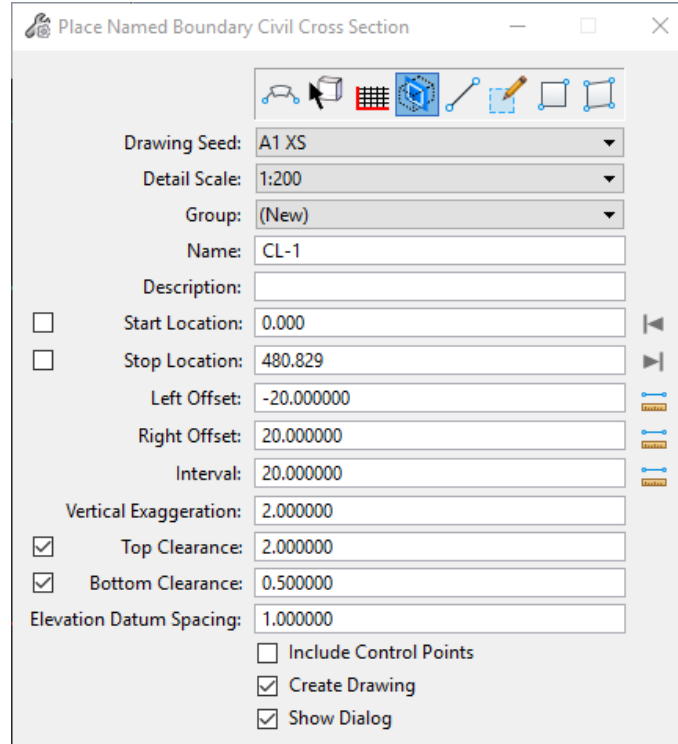


Cross Section Drawing Production Workflow



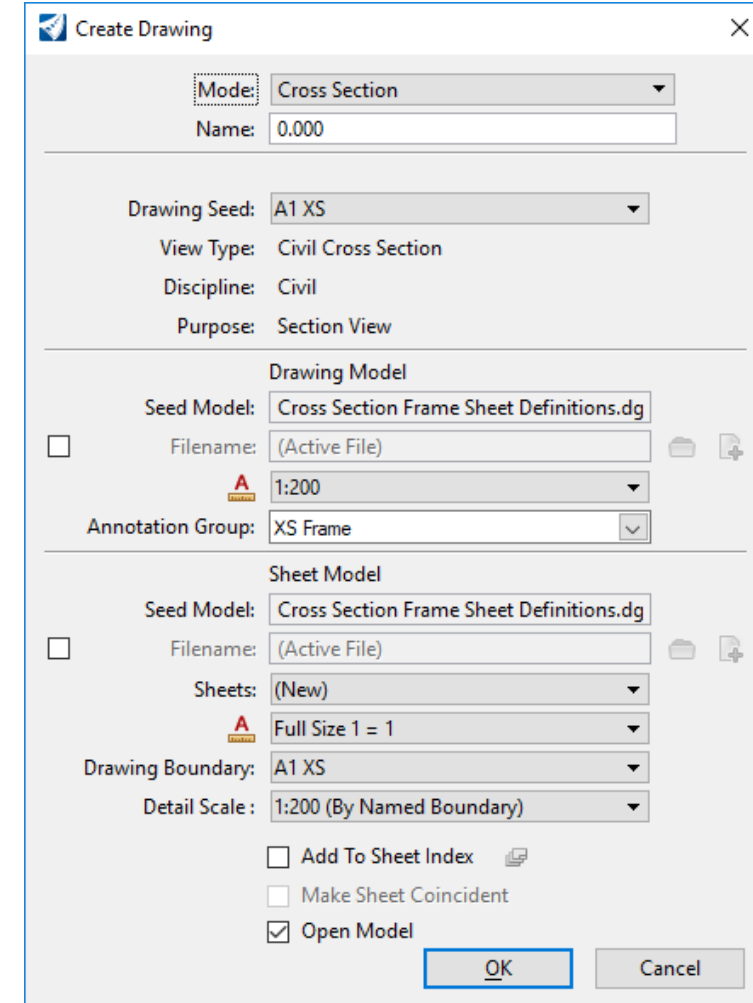
Cross Section Annotation

- Named Boundaries
 - Drawing and Sheet Seeds
 - Annotation Groups
 - Element Templates
 - Text Styles
 - Text Favourites



Place Named Boundary Civil Cross Section

Drawing Seed: A1 XS
Detail Scale: 1:200
Group: (New)
Name: CL-1
Description:
☐ Start Location: 0.000
☐ Stop Location: 480.829
Left Offset: -20.000000
Right Offset: 20.000000
Interval: 20.000000
Vertical Exaggeration: 2.000000
☒ Top Clearance: 2.000000
☒ Bottom Clearance: 0.500000
Elevation Datum Spacing: 1.000000
☐ Include Control Points
☒ Create Drawing
☒ Show Dialog



Create Drawing

Mode: Cross Section
Name: 0.000

Drawing Seed: A1 XS
View Type: Civil Cross Section
Discipline: Civil
Purpose: Section View

Drawing Model
Seed Model: Cross Section Frame Sheet Definitions.dg
☐ Filename: (Active File)
1:200
Annotation Group: XS Frame

Sheet Model
Seed Model: Cross Section Frame Sheet Definitions.dg
☐ Filename: (Active File)
Sheets: (New)
Full Size 1 = 1
Drawing Boundary: A1 XS
Detail Scale: 1:200 (By Named Boundary)
☐ Add To Sheet Index
☐ Make Sheet Coincident
☒ Open Model
OK Cancel

Cross Section Annotation Group

The screenshot displays the 'Manage Annotations' window for the 'XS Frame' group. The interface is divided into several sections:

- Annotation Group: XS Frame**: Located at the top left, with icons for adding, deleting, and moving annotations.
- Left Panel**: A list of annotation types including 'XS Datum Label1', 'XS Left Slope Annotation2', 'XS Right Slope Annotation2', 'XS Bottom Frame1', and 'XS Chainage Label'.
- Row List**: A table showing the configuration for various annotation rows. The 'DESIGN LEVELS' row is currently selected.
- Row Properties - DESIGN LEVELS**: A section for configuring the selected row, including a tabbed interface (Location, Title, Text, Collision, Frame) and an 'Expression' field.
- Preview**: A large black area on the right showing a visual representation of the cross-section. It includes a title 'R.L. 100' and four rows of yellow text: 'DESIGN FEATURES', 'DESIGN LEVELS', 'EXISTING LEVELS', and 'DESIGN OFFSETS'.

Show	Type	Title	Definition
<input type="checkbox"/>	Void		
<input checked="" type="checkbox"/>	Label	DESIGN FEATURES	Name
<input type="checkbox"/>	Label	LEVEL DIFFERENCE	Ground Delta Z
<input checked="" type="checkbox"/>	Label	DESIGN LEVELS	Z
<input checked="" type="checkbox"/>	Label	EXISTING LEVELS	Ground Z
<input checked="" type="checkbox"/>	Label	DESIGN OFFSETS	Offset

Location	Title	Text	Collision	Frame
<p>Expression:</p> <pre>(on_top) [AND] ~ (NOT point_feature_definition = "Alignment\Geom_Baseline") [AND] ~ (NOT point_feature_definition = "Linear\Template Points\Pavement\TL_Edge of Shld") [AND] ~ (NOT point_feature_definition = "Alignment\D-GEOM-CL 20m Chainage")</pre>				

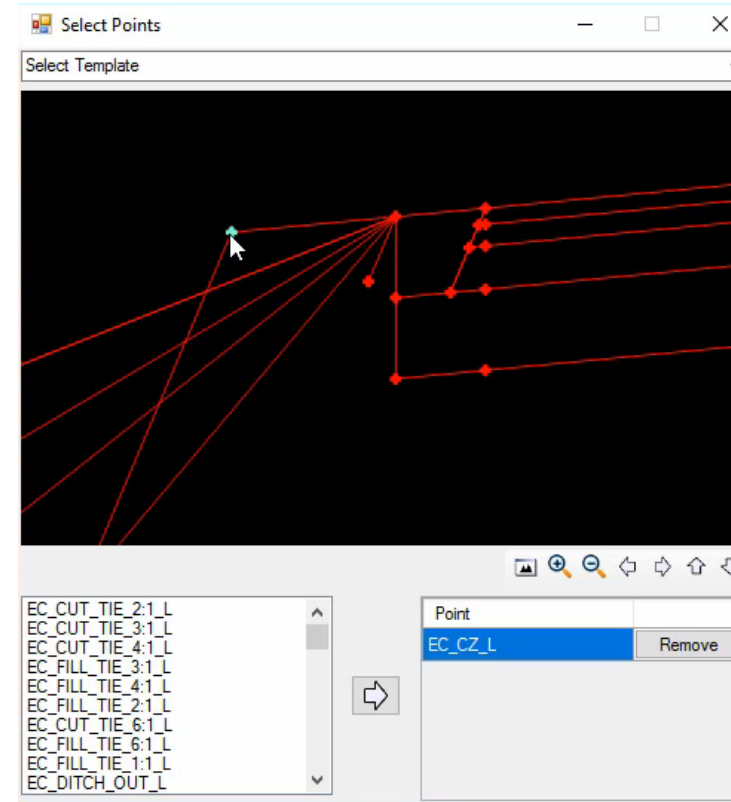
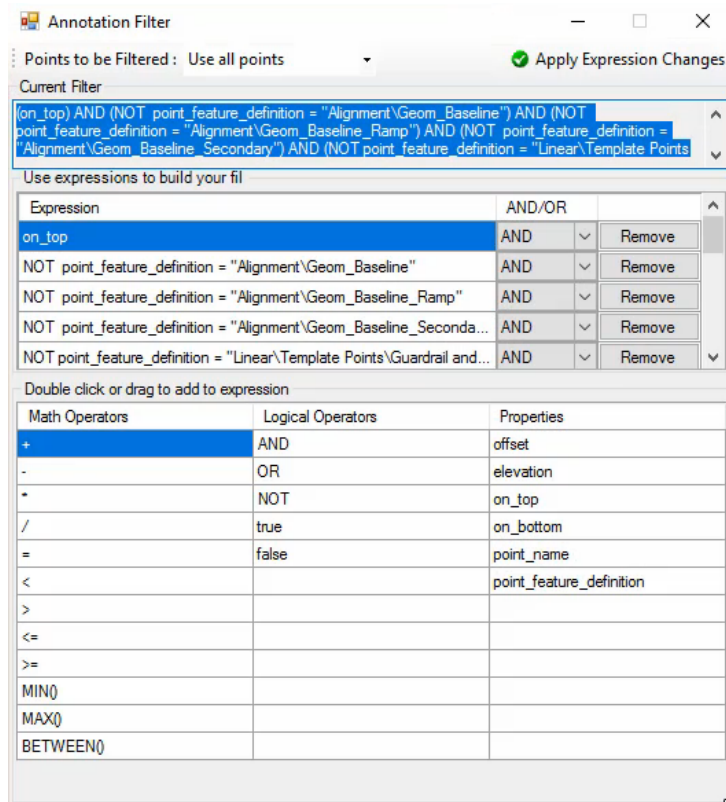
Preview Content:

R.L. 100

DESIGN FEATURES	
DESIGN LEVELS	
EXISTING LEVELS	
DESIGN OFFSETS	

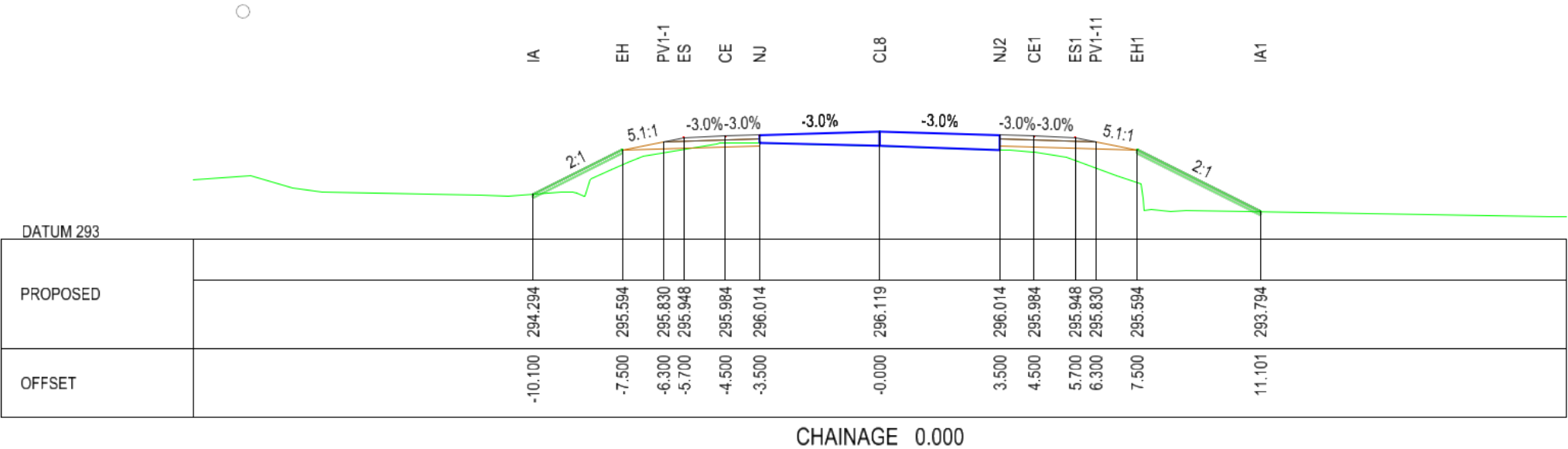
Cross Section Annotation Filtering

- Annotation filtering expressions or graphical point selection can be used to control which points are annotated



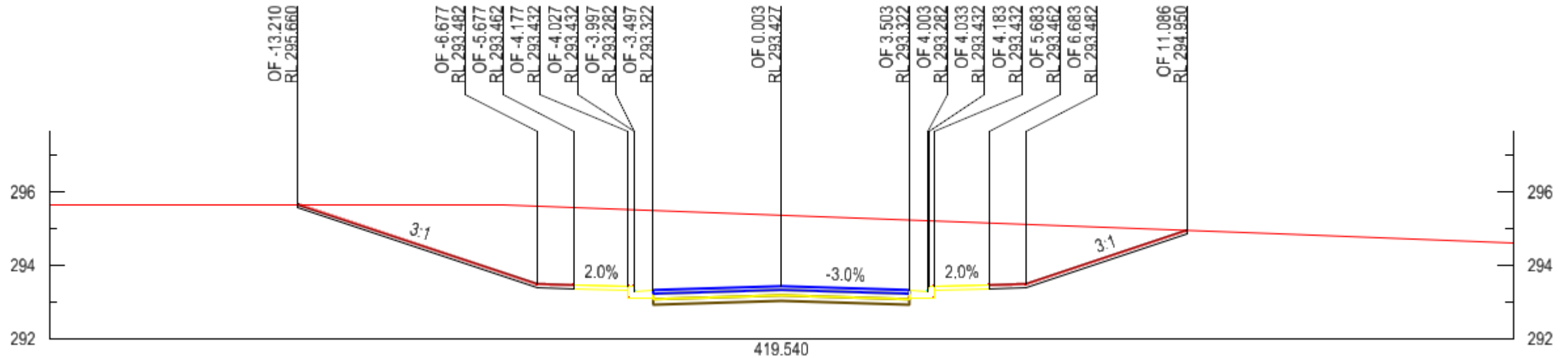
Cross Section Annotation Groups

- MRWA



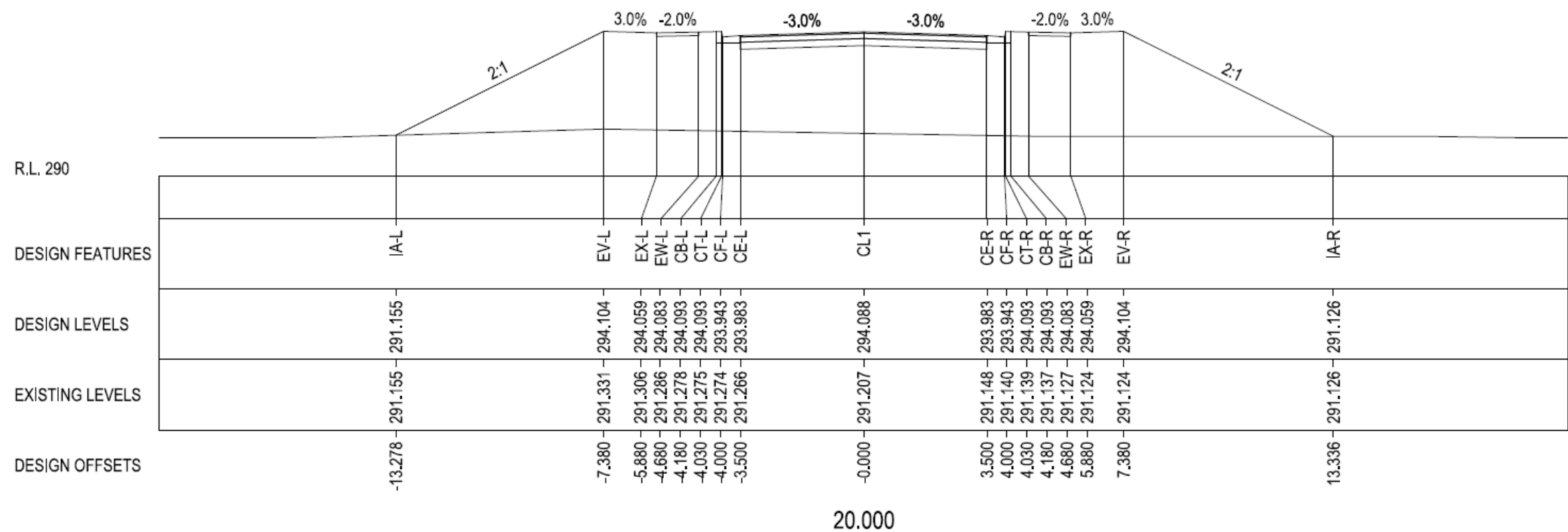
Cross Section Annotation Groups

- vicroads

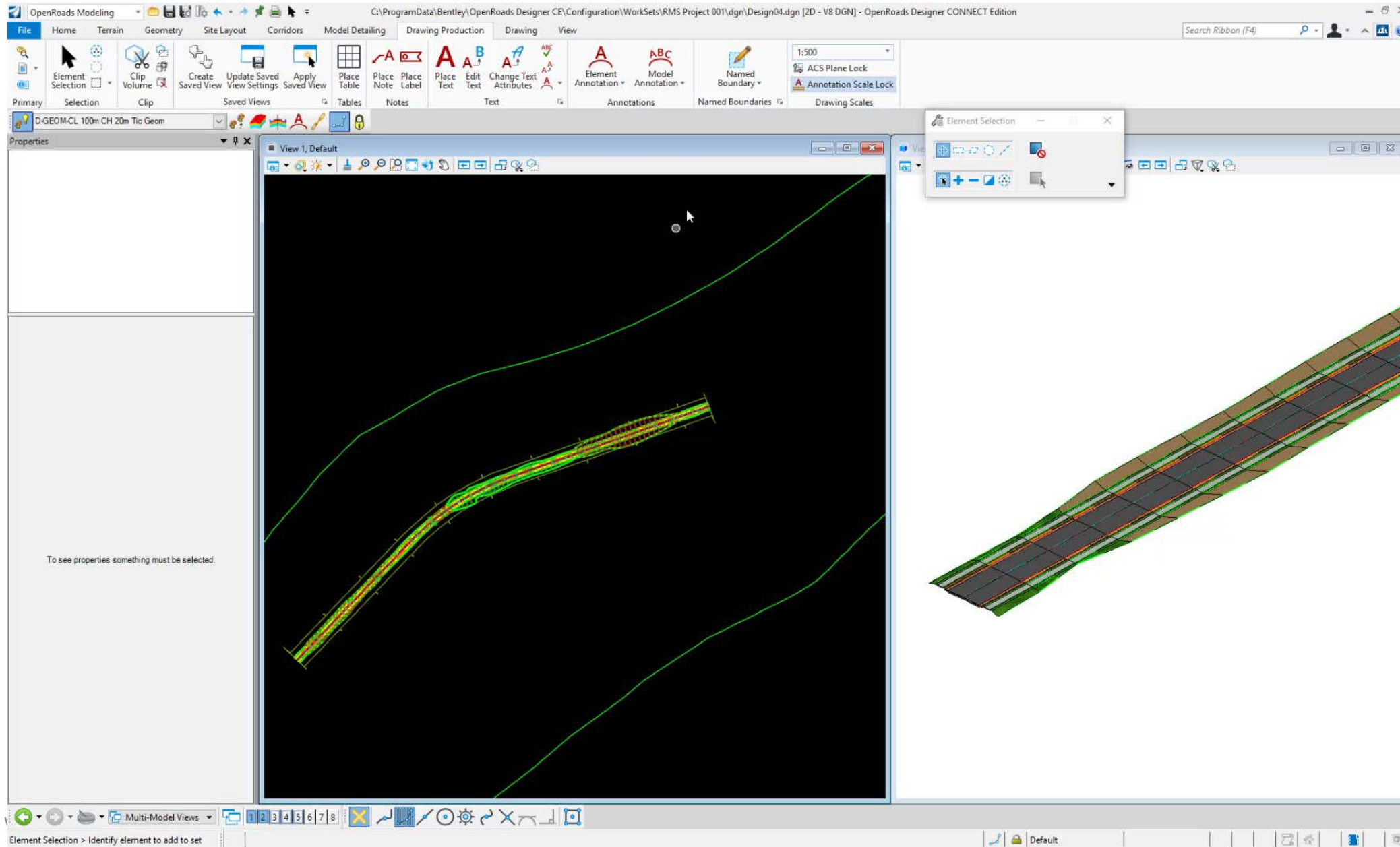


Cross Section Annotation Groups

- RMS



Annotation of end area volumes on cross sections



Sheet Index


Create Drawing

Mode: Plan
Name: Plan 4

Drawing Seed: A1 PLAN
View Type: Civil Plan
Discipline:
Purpose:

Drawing Model
Seed Model: Plan Sheet Definitions.dgnlib, A1 PLAN
Filename: (Active File)
Annotation Group: 1:1000
None

Sheet Model
Seed Model: Plan Sheet Definitions.dgnlib, A1 PLAN [S
Filename: (Active File)
Sheets: (New)
Full Size 1 = 1
Drawing Boundary: A1 PLAN
Detail Scale: 1:1000

☒ Add To Sheet Index 
☐ Make Sheet Coincident
☒ Open Model

OK Cancel

Sheet Index Folder Picker

RMS Jobs (15)
Cross Sections (9)
Plans (3)
Profiles (3)

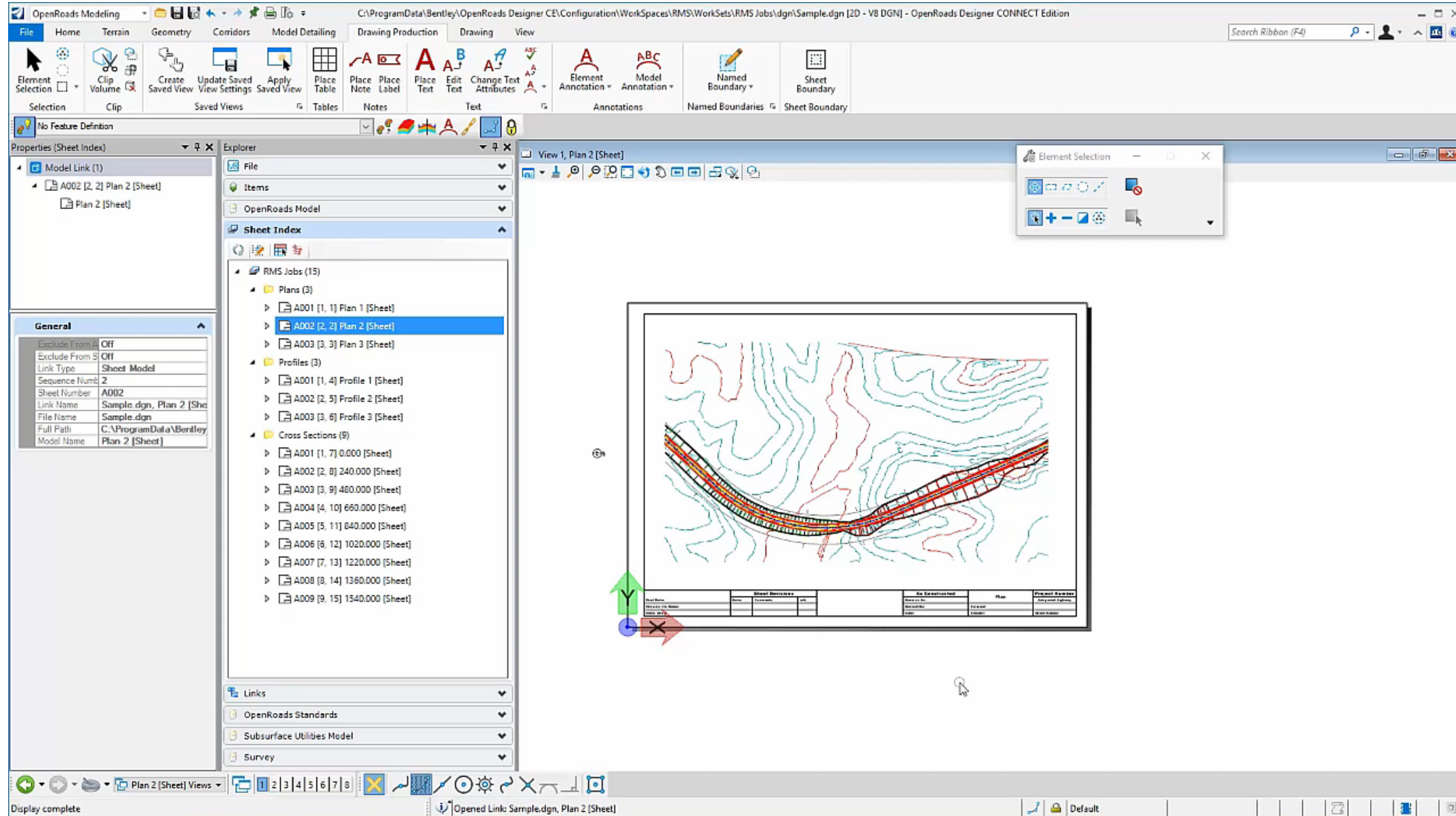
OK Cancel

Explorer

File
Items
OpenRoads Model
Sheet Index

RMS Jobs (15)
Plans (3)
A001 [1, 1] Plan 1 [Sheet]
A002 [2, 2] Plan 2 [Sheet]
A003 [3, 3] Plan 3 [Sheet]
Profiles (3)
A001 [1, 4] Profile 1 [Sheet]
A002 [2, 5] Profile 2 [Sheet]
A003 [3, 6] Profile 3 [Sheet]
Cross Sections (9)
A001 [1, 7] 0.000 [Sheet]
A002 [2, 8] 240.000 [Sheet]
A003 [3, 9] 480.000 [Sheet]
A004 [4, 10] 660.000 [Sheet]
A005 [5, 11] 840.000 [Sheet]
A006 [6, 12] 1020.000 [Sheet]
A007 [7, 13] 1220.000 [Sheet]
A008 [8, 14] 1360.000 [Sheet]
A009 [9, 15] 1540.000 [Sheet]

Sheet Index



The OpenRoads Designer Workspace

- Detailed training on Bentley LEARN
- OpenRoads Designer Workspace Setup Learning Path
- <http://learn.bentley.com>

The screenshot shows the Bentley LEARN interface for the 'OpenRoads Designer Workspace Setup Learning Path'. The page has a green header with 'Home', 'Find Training', and 'My Learning Paths' links. Below the header, the title 'OpenRoads Designer Workspace Setup Learning Path' is displayed, followed by a brief description: 'These videos will guide you through setting up an OpenRoads Designer Workspace including migrating data from existing V8i workspaces.' There are links to 'Add to My Learning Path' and 'Personalize'. A 'Courses' section provides information about the courses in the path, including a note to click on 'Find Training' to view offerings and select language, type, and timeframe. On the left, a filter sidebar allows selection by 'Language' (English), 'Type' (On-Demand), 'Release Detail' (Base Release), and 'Course Level' (Advanced), with a 'RESET FILTER' button. The main content area lists six on-demand courses, each with a title, a progress indicator (three bars), a description, and a 'Find Training (1)' link. The courses are: 1. Understanding Feature Definitions, 2. Preparing the Folder Structure, 3. Preparing Files for Feature Migration, 4. Feature Migration, 5. Annotation, and 6. Drawing Production Sheet Seeds.

Home Find Training My Learning Paths

Home » Find Training » View Learning Path

OpenRoads Designer Workspace Setup Learning Path

These videos will guide you through setting up an OpenRoads Designer Workspace including migrating data from existing V8i workspaces.

[Add to My Learning Path](#) [Personalize](#)

Courses

Information about courses in this learning path is provided below. Click on Find Training to view all of the available offerings and their descriptions. Select a language, type of training, and/or product generation on the left to narrow your results. If you are interested in a live training class, submit a service request, including the timeframe: either next month, or in the next 3 months.

Language

English

Type

On-Demand

Release Detail

Base Release

Course Level

Advanced

[RESET FILTER](#)

On-Demand [X]

OpenRoads Designer Workspace Setup: Step 1 - Understanding Feature Definitions ■■■

Discover the new types of Feature Definitions in OpenRoads Designer CONNECT Edition.

[Find Training \(1\)](#)

OpenRoads Designer Workspace Setup: Step 2 - Preparing the Folder Structure ■■■

Learn how the Workspace folder structure is set up and how it can be customized for a network environment.

[Find Training \(1\)](#)

OpenRoads Designer Workspace Setup: Step 3 - Preparing Files for Feature Migration ■■■

Learn how to bring forward SELECTseries 4 linetypes, levels, element templates, graphical filters and design standards into an OpenRoads Designer Workspace.

[Find Training \(1\)](#)

OpenRoads Designer Workspace Setup: Step 4 - Feature Migration ■■■

Learn how to upgrade SELECTseries 4 Features and Element Templates to an OpenRoads Designer Workspace.

[Find Training \(1\)](#)

OpenRoads Designer Workspace Setup: Step 5 - Annotation ■■■

All Annotation for OpenRoads Designer is handled via MicroStation Text Favorites and OpenRoads Designer Annotation Groups. This training demonstrates the requirements and provides detailed setup instr... [More>](#)

[Find Training \(1\)](#)

OpenRoads Designer Workspace Setup: Step 6 - Drawing Production Sheet Seeds ■■■

Learn how to create the seed DGN libraries to use for drawing production - plan, profile, and cross section dgn files.

[Find Training \(1\)](#)



Questions?

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Advancing Infrastructure

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OpenRoads Designer CONNECT Edition LEARNING

- *Introduction to OpenRoads Designer*
- *QuickStart for Survey*
- *QuickStart for Terrain Display*
- *Creating Terrain from Lidar Data*
- *QuickStart for OpenRoads Designer Geometry*
- *Beyond Centreline Geometry*
- **QuickStart for OpenRoads Designer Corridor Modeling**
- **Creating and Manipulating the Corridor**
- **Template Triggers and Switches**
- **Using Civil Cells in OpenRoads Designer**
- **Site Modeling and Non-Corridor Modeling**
- **Corridor Modelling Quantities**
- **Using and Defining Superelevation**
- *QuickStart for OpenRoads Designer Drawing Production*
- *QuickStart using gINT Civil Tools*
- *QuickStart - Evaluating Subsurface Utilities in OpenRoads Designer*
- *QuickStart - Laying out a Drainage Network in OpenRoads Designer*
- *Hydraulic Analysis and Design in OpenRoads Designer*

learn.bentley.com