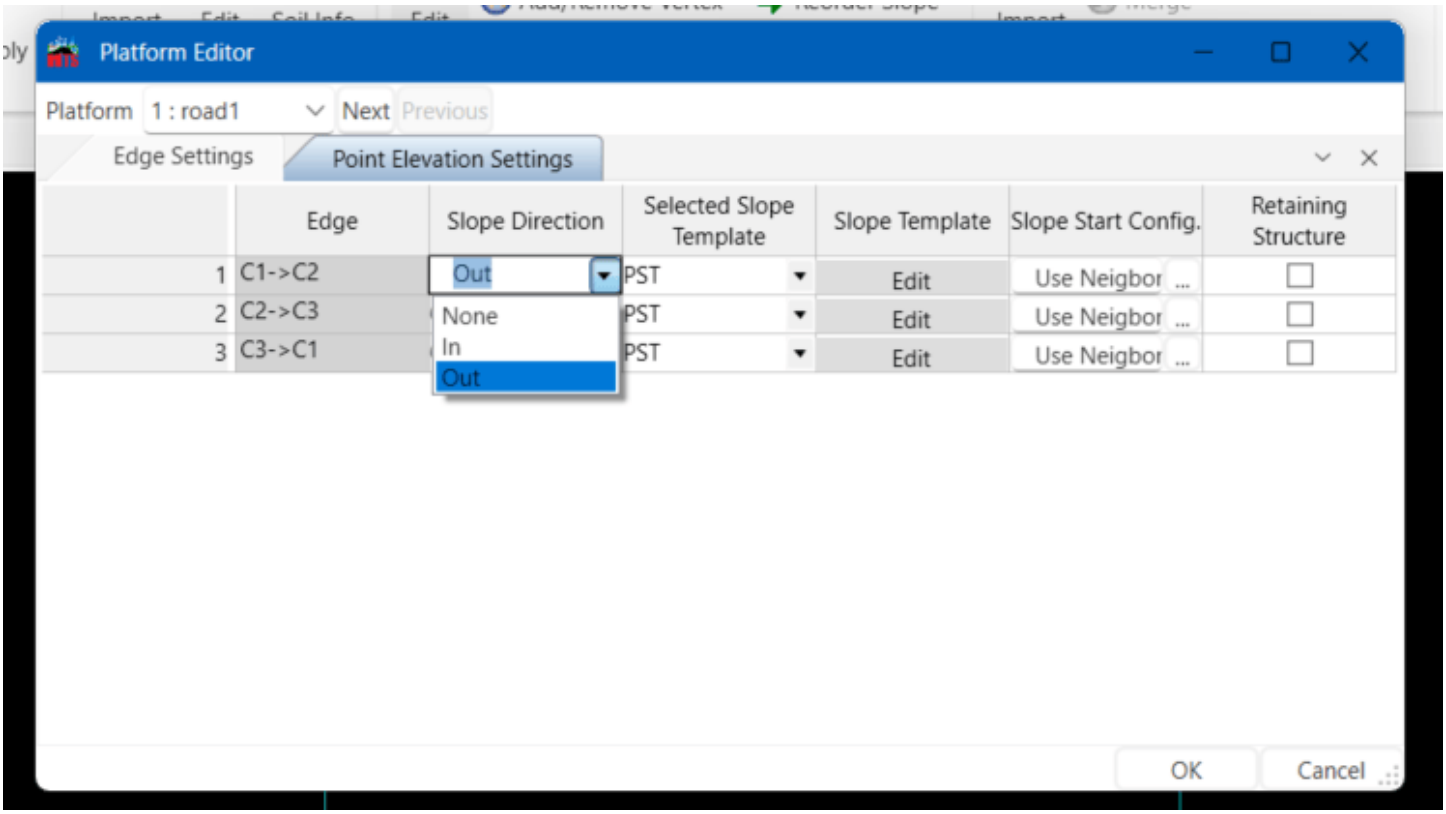
Slope Modeling Techniques in MiTS

Earthwork · https://mes100.com/docs/slope-modeling-techniques-in-mits/

Question 1: How to set the slope direction for platforms?

In MiTS, newly imported or created platforms are initially set with a default slope direction of “Out”. Users have the flexibility to redefine the slope direction for each platform edge, choosing between “Out”, “In” and “None”.

For step-by-step instructions on this feature, users may follow the Guide on Slope “In” and “Out”.

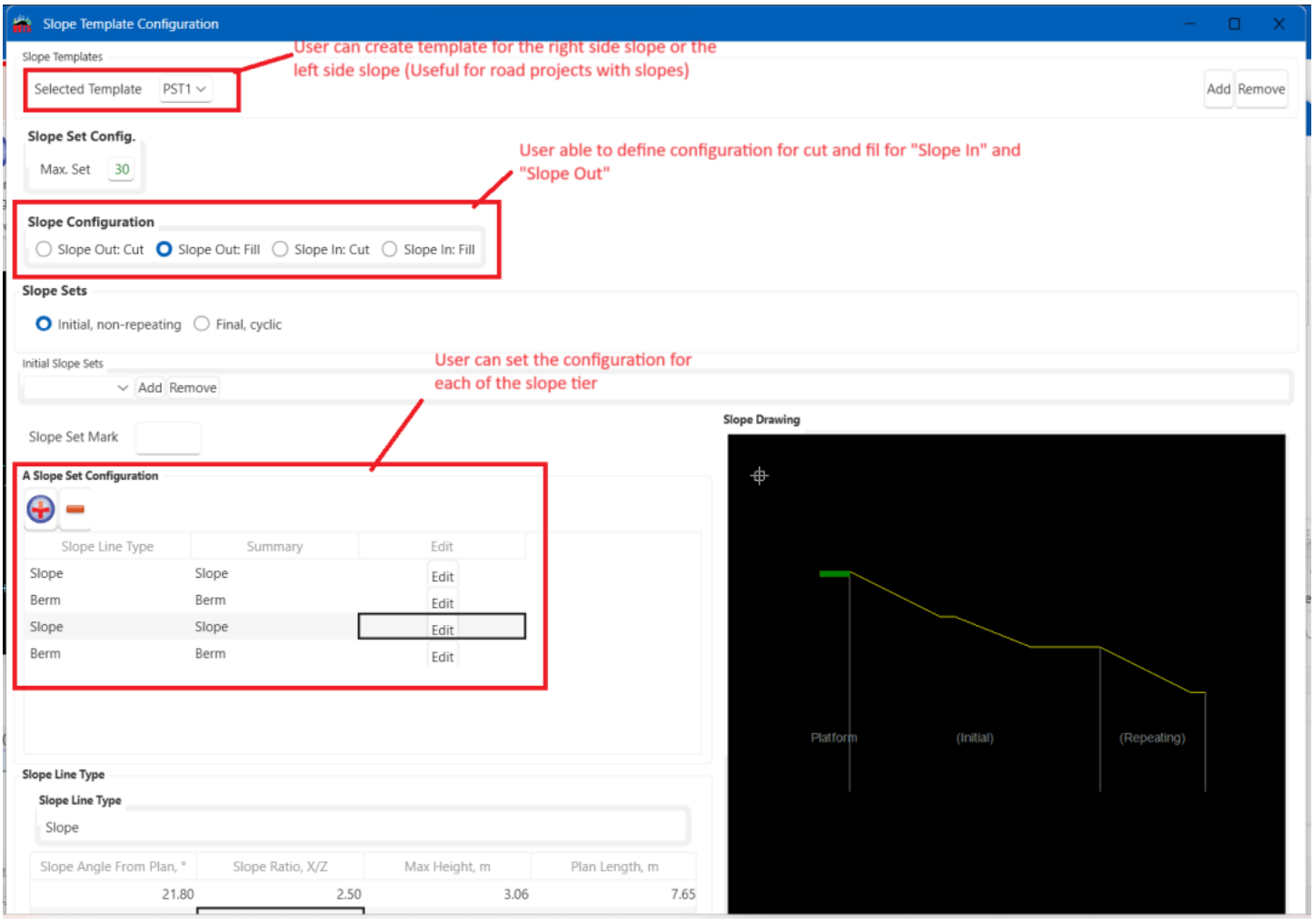


Question 2: How can we customize the slope dimension for a project?

Our new **Slope Template Configuration** feature allows users to easily customize both the “In” and “Out” slope dimensions independently.

This feature offers the flexibility to set different ratios, maximum heights and plan lengths for each slope tier, various cut and fill scenarios, or the right and left slopes of road design. This allows precise customization of the slope designs to meet diverse project requirements.

For more guidance on using this feature, please refer to our documentation on **How to Modify Slope Dimension**.



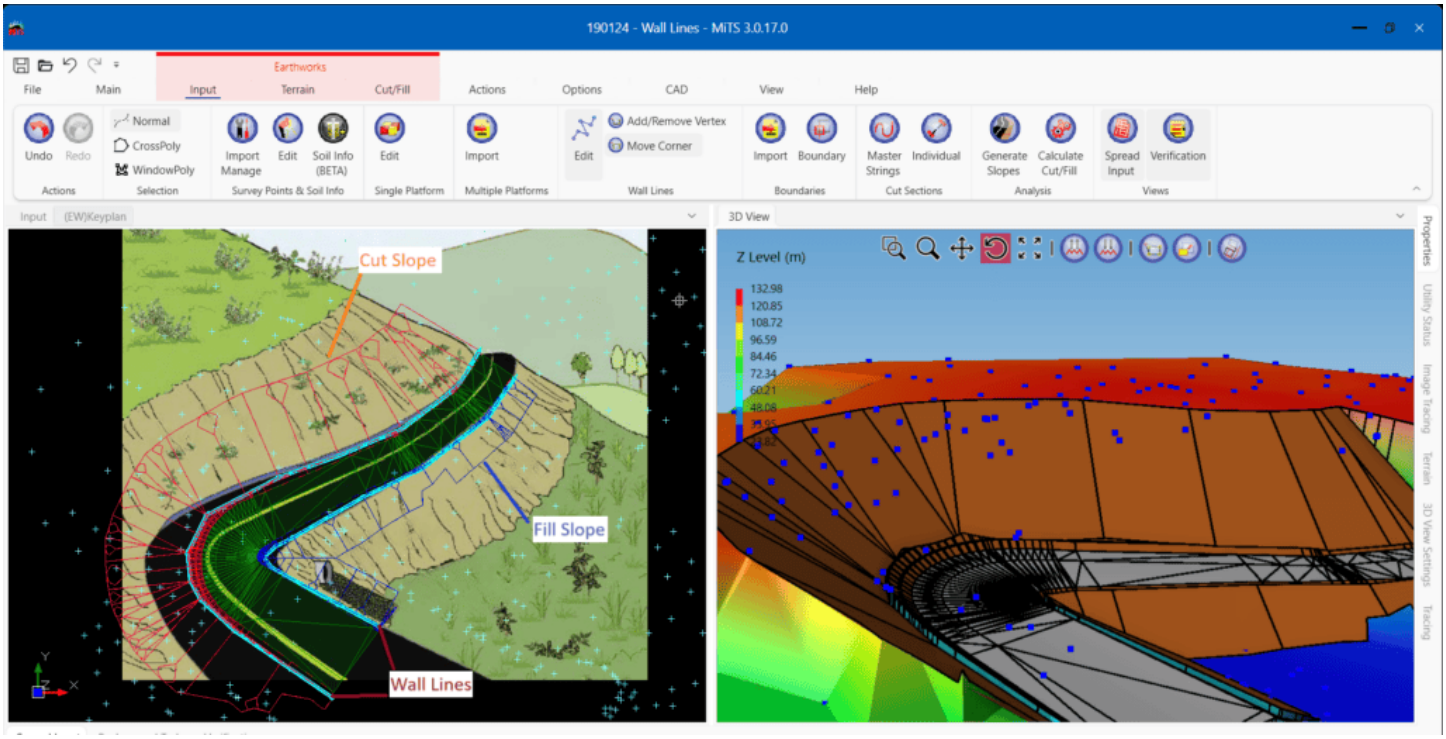
Question 3: How to have slopes start from the boundary line?

In the latest update (this feature is for MiTS 3), users are no longer obligated to create a platform with specific shapes or designated size areas when designing a slope.

A specialized platform has been introduced, simplifying the process by only requiring users to define a single line with directions (Left or Right and Up or Down) for slope generation in their designs. Moreover, users have the flexibility to set different slope dimensions for each line, adhering to the wall slope template configurations.

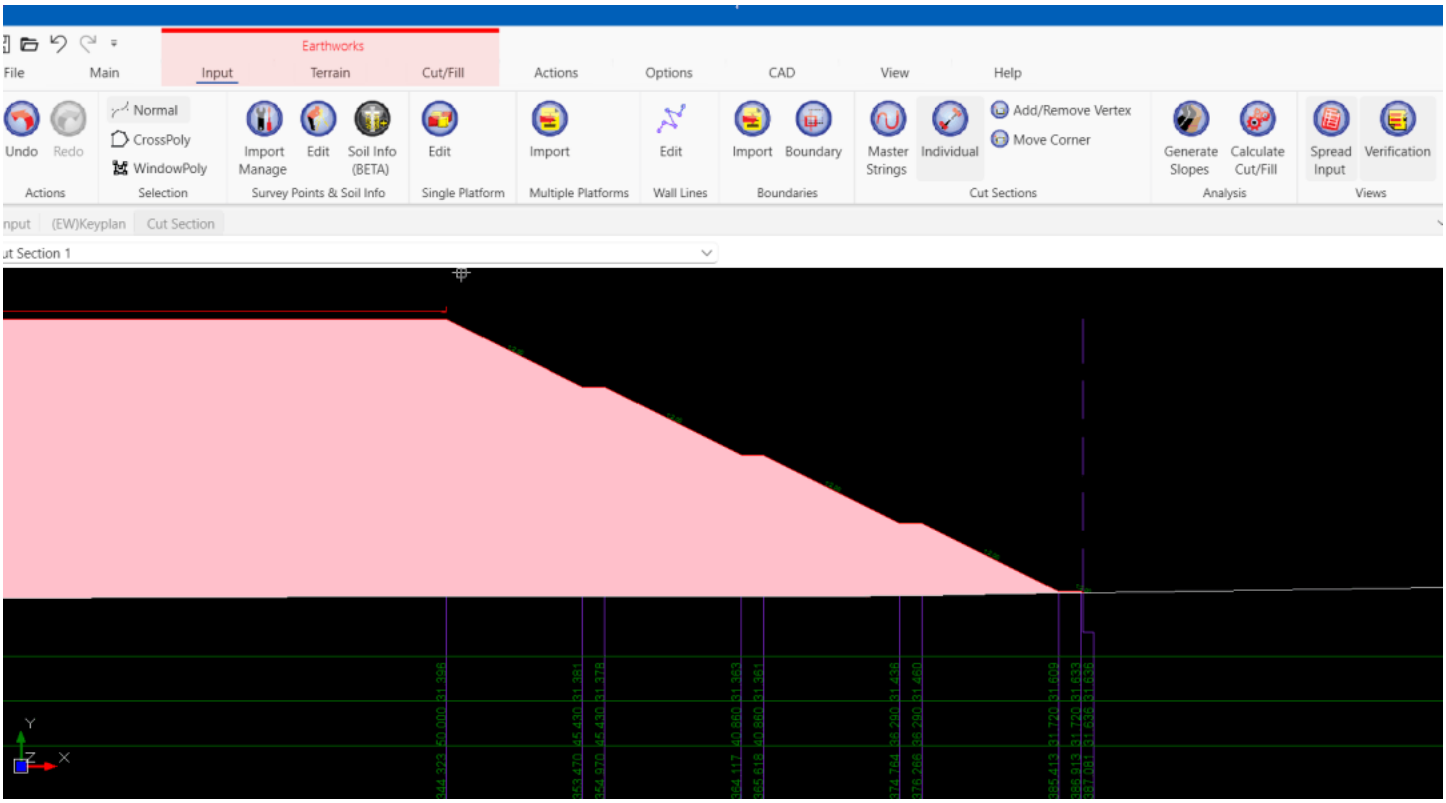
This enhancement empowers users to generate slopes directly from the boundary line, eliminating the previous need for intricate modeling techniques. Additionally, the feature serves as a boundary, preventing nearby platforms from generating slopes when in contact with the wall line.

Further understanding of the feature and how it can be used in your project can be referred to in our documentation on **Wall Lines**.

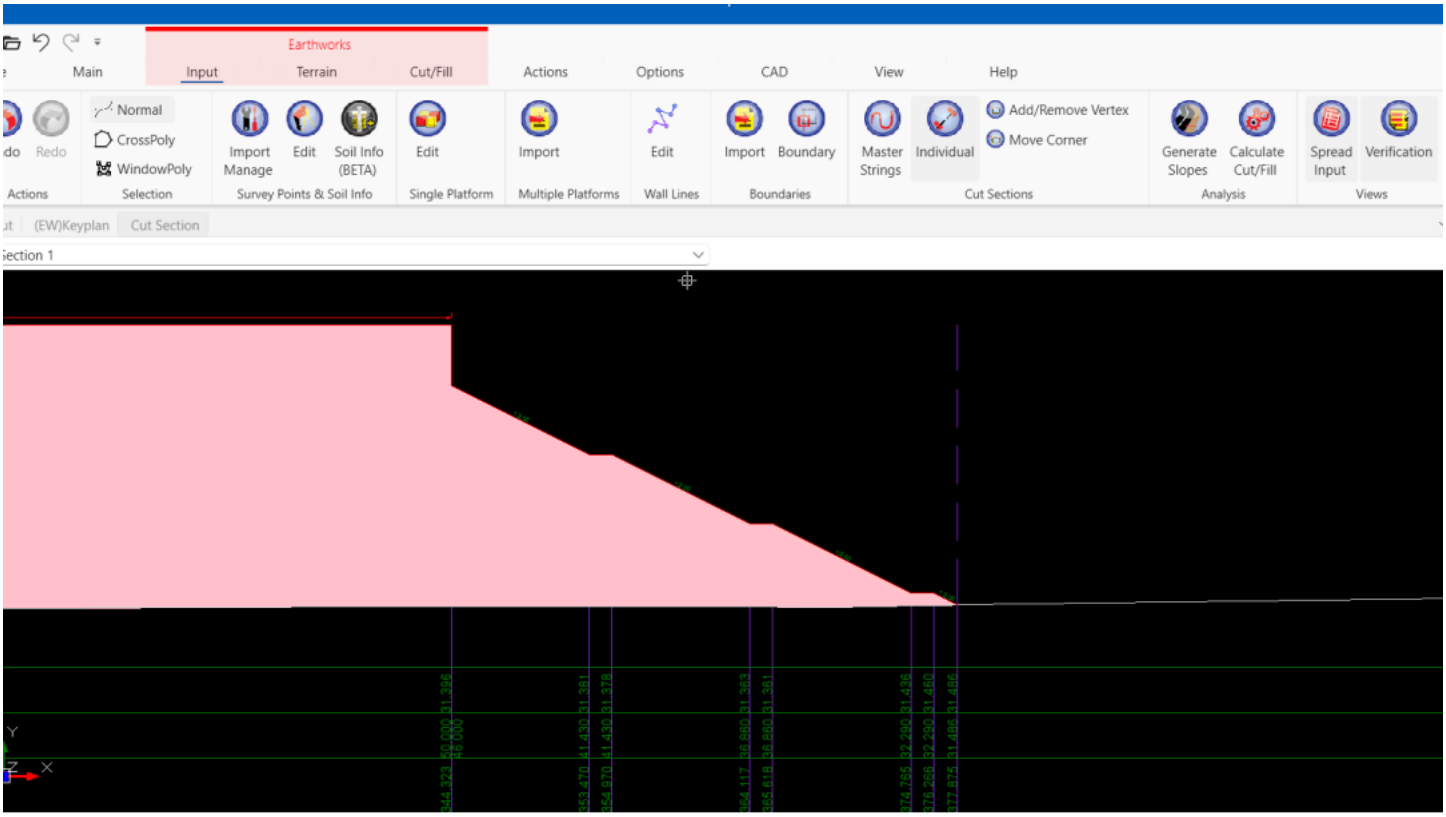


Question 4: How can we design a slope to start at a certain height

In MiTS, customization of the slope starting level can be done per platform edge basis to provide users with more design flexibility as per the image below. Users may refer to the following blog post to learn step-by-step on **How to Start Slope at A Certain Level**.



Default behavior of slope generation, starting from the platform edge of 50m

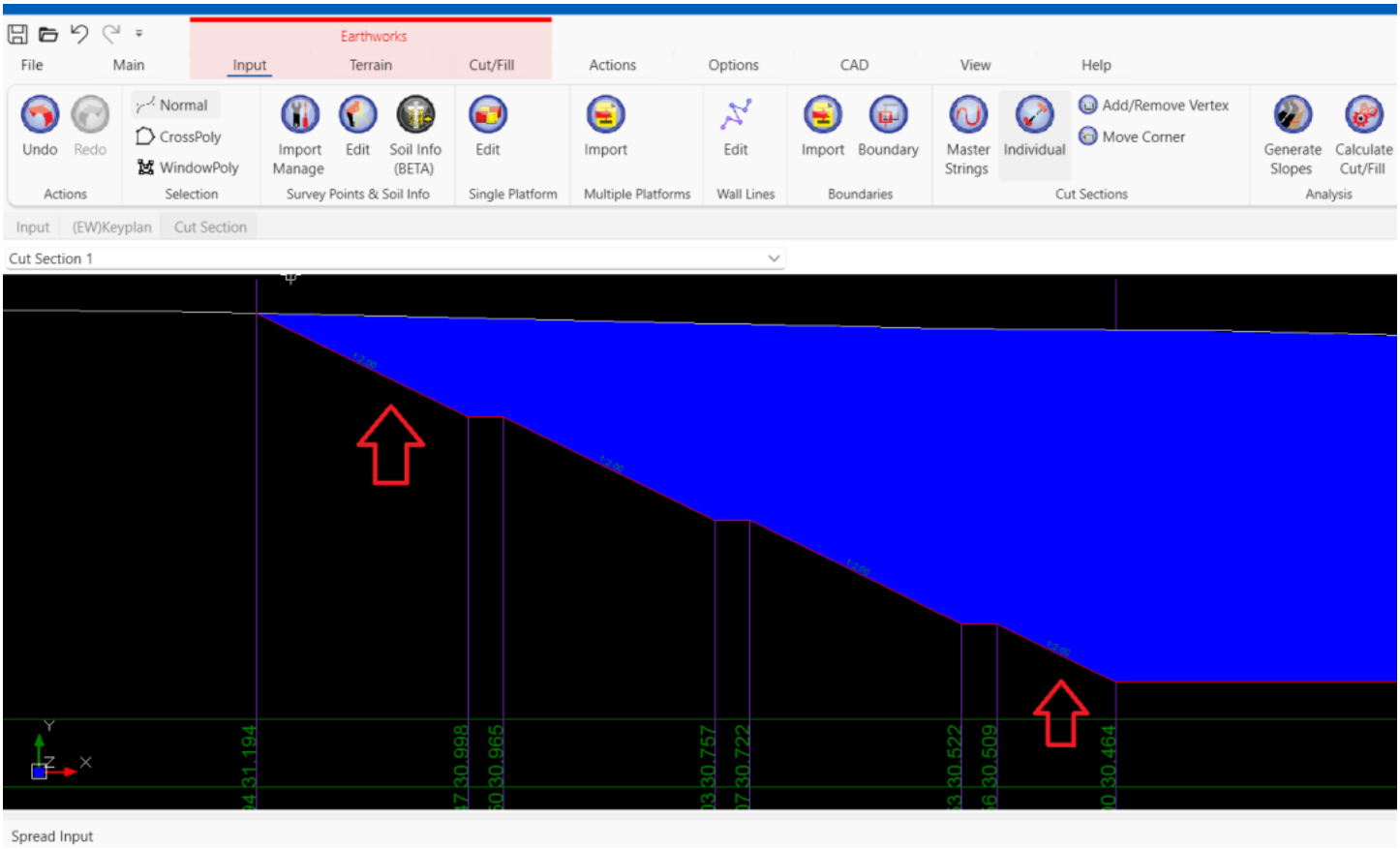


Slope starting at a level of 4m below, at 46m

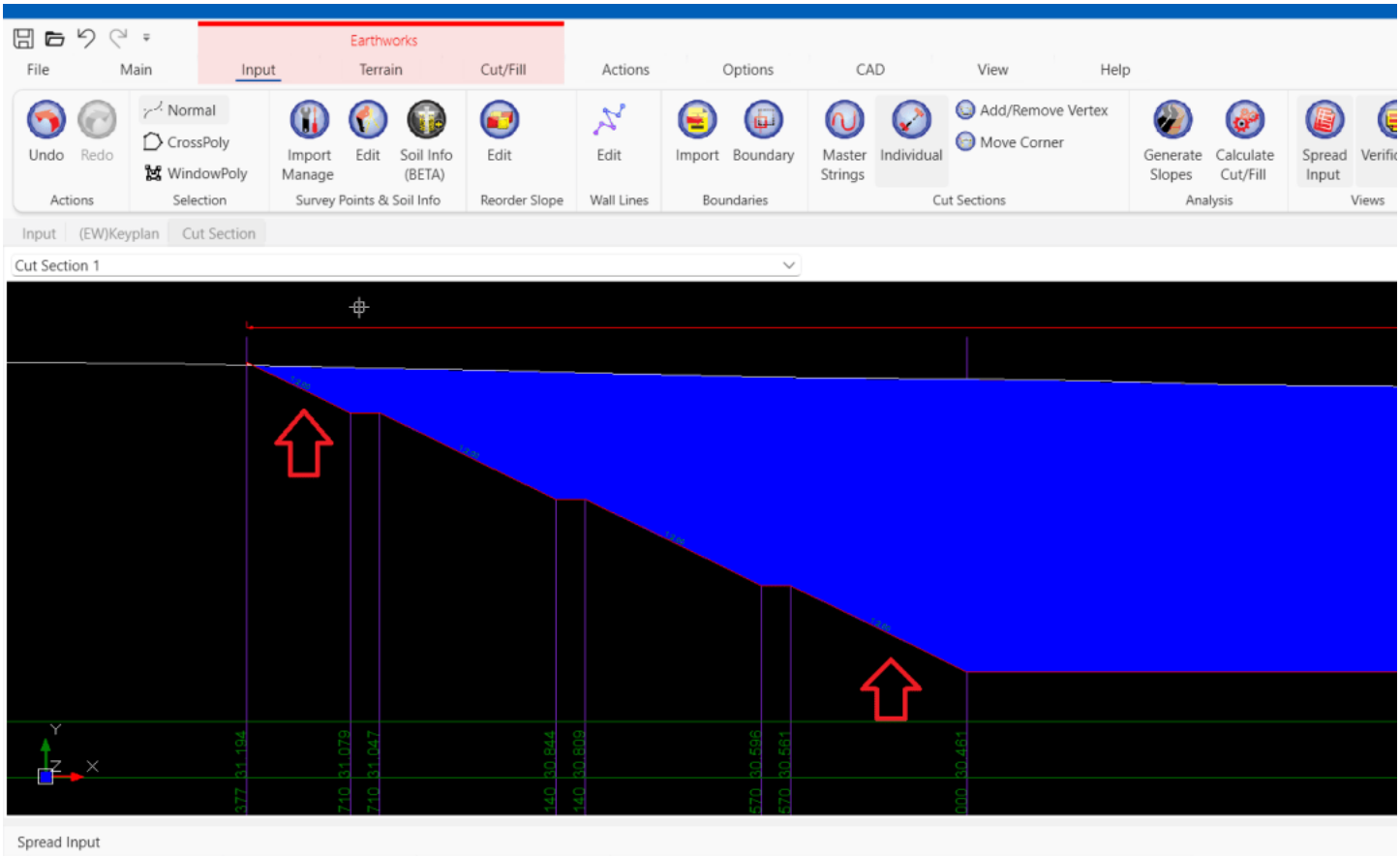
Question 5: How to reorder the slope so that the full berm is located at the bottom part?

In MiTS, slopes start at the platform edge and stop when they reach another platform, the ground, or a boundary line that acts as a stopper.

If a platform is set to slope in, there is a possibility for a partial berm to be located at the bottom part as it reaches the platform level defined. To change this, user can easily reorder the slope using the **Reorder Slope function** in the software. This will ensure the partial berm is located at the top part and the full berm at the bottom part, as shown in the image below.



Before Reorder Slope

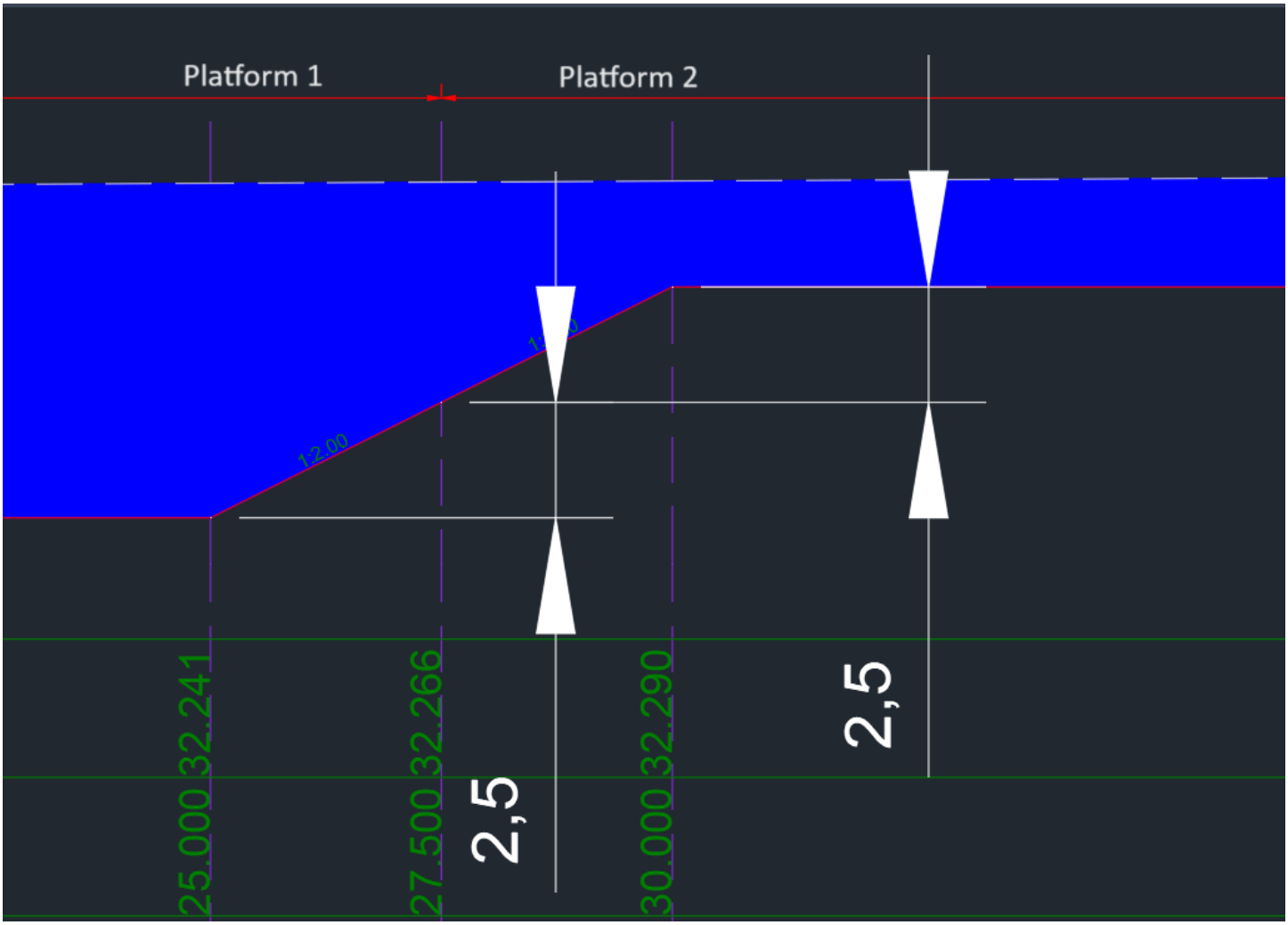


After Reorder Slope

Question 6: How to design centralized between slope and conjoined platforms?

In Earthwork designs, users may need to design two connected platforms with the slopes between them continuously connected as in the image below.

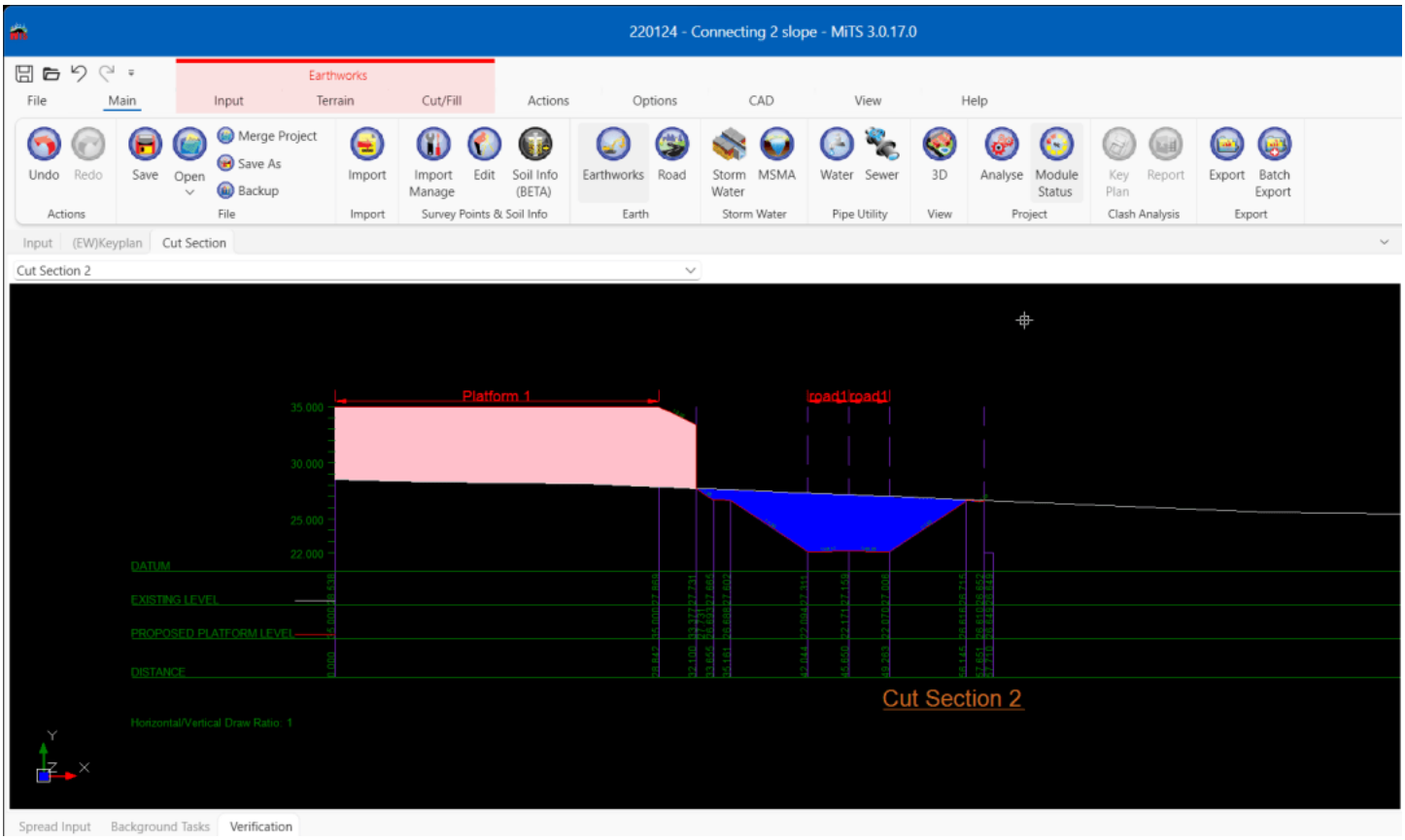
Sharing a centralized slope can be achieved by following the modeling technique documented in **How to Model Sharing Slope Between Conjoined Platforms**.

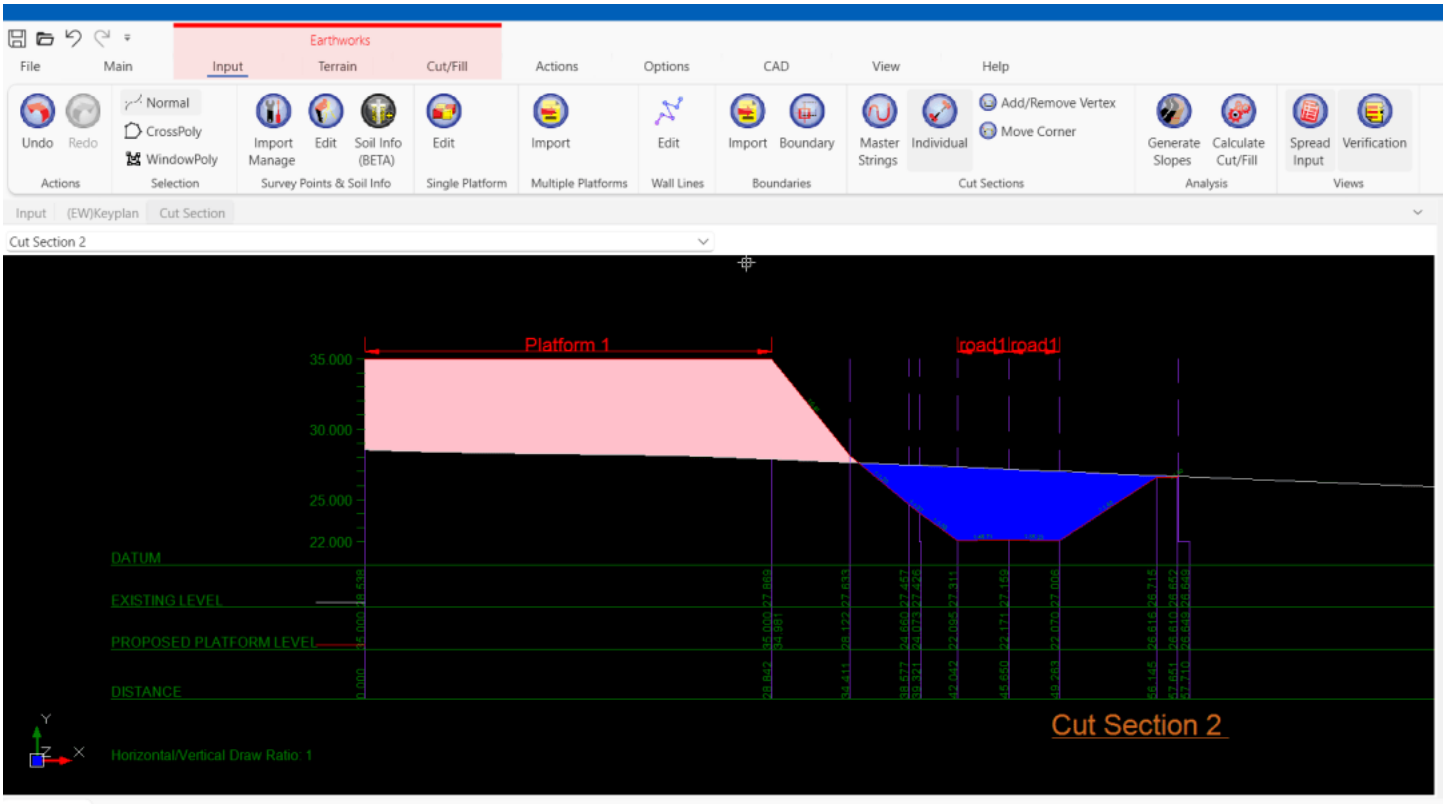


Question 7: How to connect the slope between two distant platforms? (Without considering the slope ratio)

Slope generation in the software occurs on a platform-specific basis and stops automatically when the slope aligns with the ground level. However, this behavior may result in challenges for the software to seamlessly connect slopes between two distant platforms, as depicted in the image below.

To address the issue in your design, you can consult our article titled '**Connecting Slopes Between Two Platforms**' which provides guidance on utilizing features such as *Creating Infill*, *Breaking into Triangles*, or *Inputting Points Elevation for Platforms*.

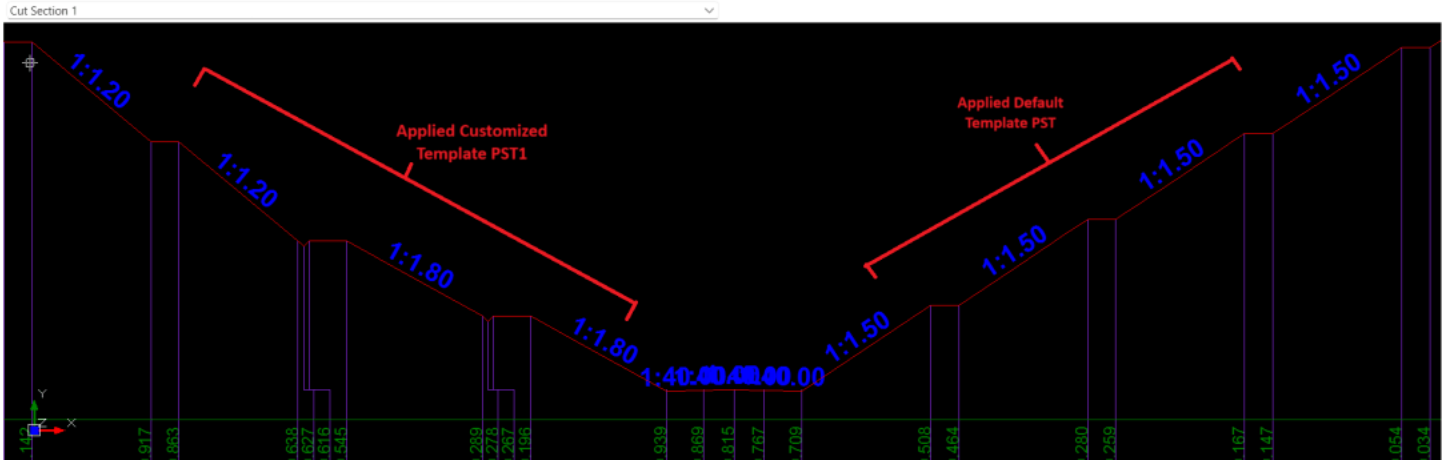

220124 - Connecting 2 slope - MiTS 3.0.17.0
Earthworks
File
Main
Input
Terrain
Cut/Fill
Actions
Options
CAD
View
Help
Undo
Redo
Save
Open
Merge Project
Save As
Backup
Import
Import Manage
Edit
Soil Info (BETA)
Earthworks
Road
Storm Water
MSMA
Water
Sewer
3D
Analyse
Module Status
Key Plan
Report
Export
Batch Export
Actions
File
Import
Survey Points & Soil Info
Earth
Storm Water
Pipe Utility
View
Project
Clash Analysis
Export
Input
(EW)Keyplan
Cut Section
Cut Section 2
Platform 1
road1
road1
35.000
30.000
25.000
22.000
DATUM
EXISTING LEVEL
PROPOSED PLATFORM LEVEL
DISTANCE
Horizontal/Vertical Draw Ratio: 1
Cut Section 2
Spread Input
Background Tasks
Verification


Earthworks
File
Main
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Terrain
Cut/Fill
Actions
Options
CAD
View
Help
Undo
Redo
Normal
CrossPoly
WindowPoly
Import Manage
Edit
Soil Info (BETA)
Edit
Import
Edit
Import
Boundary
Master Strings
Individual
Add/Remove Vertex
Move Corner
Generate Slopes
Calculate Cut/Fill
Spread Input
Verification
Actions
Selection
Survey Points & Soil Info
Single Platform
Multiple Platforms
Wall Lines
Boundaries
Cut Sections
Analysis
Views
Input
(EW)Keyplan
Cut Section
Cut Section 2
Platform 1
road1
road1
35.000
30.000
25.000
22.000
DATUM
EXISTING LEVEL
PROPOSED PLATFORM LEVEL
DISTANCE
Horizontal/Vertical Draw Ratio: 1
Cut Section 2

Question 8: How to have different slope configurations for different slope tiers

Users can now customize the slope designs for each tier using MiTS 3's latest features: ***Platform Slope Templated (PST)*** and ***Wall Slope Templates (WST)***. These tools offer precise control and optimization for diverse project requirements.

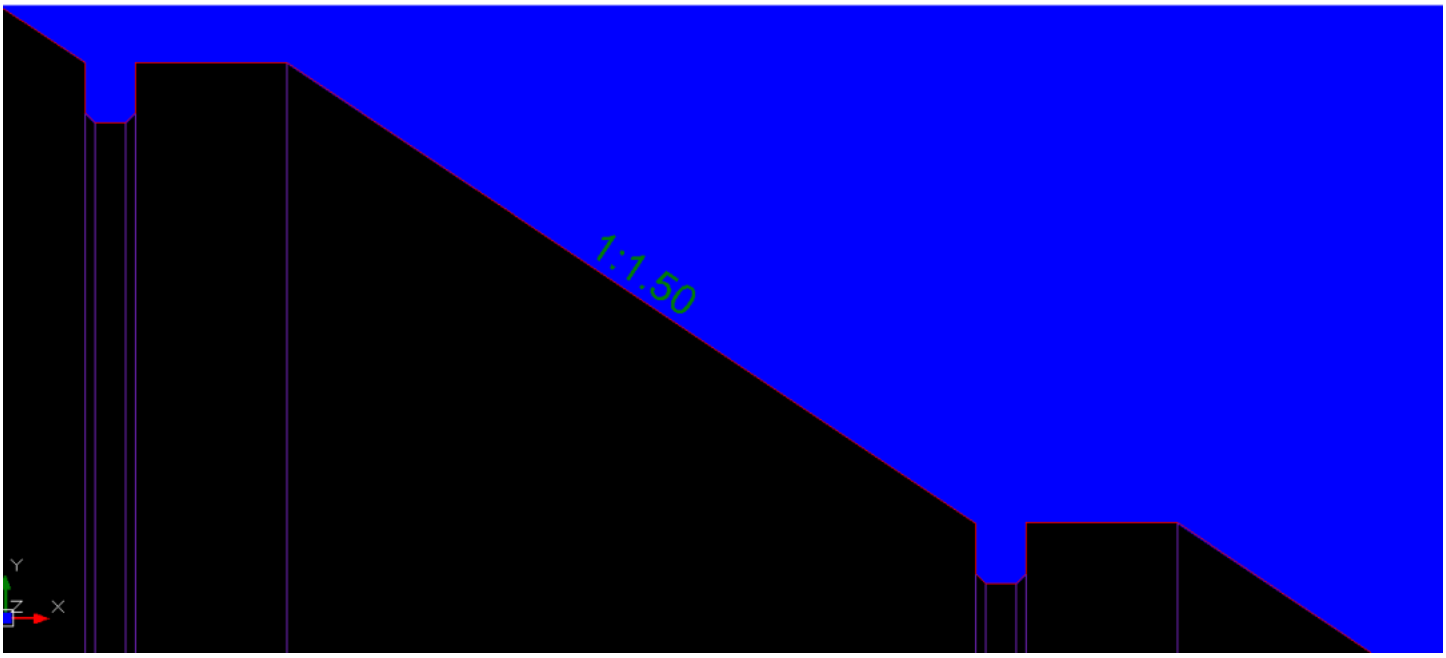
Learn more about utilizing these features in our article, '**How to Customize Slope Configurations for Different Tiers**' on our website.

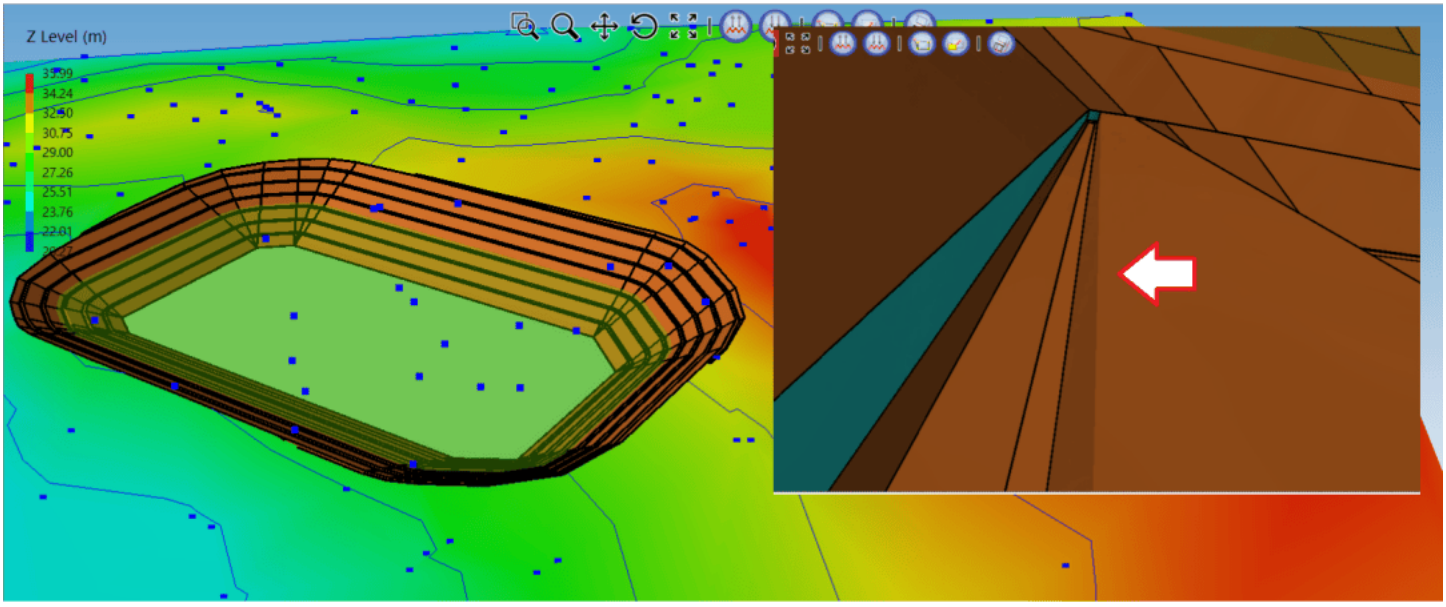


Question 9: How can we customize the berm drains in MiTS?

With the latest feature, ***Platform Slope Templates (PST)*** or ***Wall Slope Templates (WST)***, available in MiTS 3, users can have the berm drains customized with different types such as V-Drain, Box Drain, Trapezoid, and UDrain.

Explore more on how this feature can be adapted to your projects through our article '**Customizing Slope Dimension for Various Berm Drain Types**' on our website.





Related



Ngu Soon Hui

I'm the Benevolent Dictator for Life for MiTS Software cum Editor of this website. Read more here.

You can also contact me at soonhui@mes100.com