



OHDOT_DirtCalc.mvba

Description:

This application used to measure areas and end widths on completed cross sections to assist the user to generate cross section seeding and earthwork quantities. This application is intended to be used on smaller projects where the OpenRoads Design is not used to generate a 3D Model for the project.

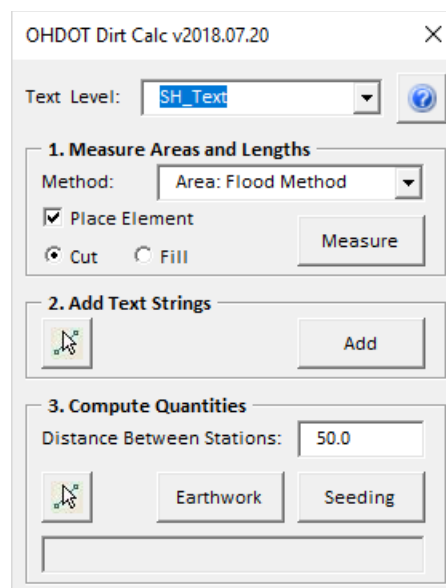
Note: The application is unable to recognize cross section graphics generated from an OpenRoads Terrain model or the proposed 3D model.

Accessing the Application:

The application is loaded in MicroStation Connect Edition or OpenRoads Designer Connect Edition by selecting the **Dirt Calc** icon from the Ohio DOT Workflow.

Application Operation:

When the application is started, a dialog like the example below is opened.



The dialog is separated into three primary sections. Each is described on the following pages.

Measure Areas and Lengths

Four methods are available to measure areas and lengths as described below

Area: Flood Method

Use this method to measure an area by flooding a closed region drawn in MicroStation. Select the Measure button, and then issue a data point inside the desired region. If the **Place Element** option is toggled on, a shape will be drawn on the level XS_P_Earthwork_Shapes. Once the area has been



selected, a text string will float on the cursor with the value for the area. Place the text at the desired location. The shape and the text are placed as color 1 (blue) if the **Fill** option is selected or color 3 (red) if the **Cut** option is selected.

Area: Measure Shape

This option is used to measure the area of shape elements previously placed in the file. Select the **Measure** button, and then identify the previously drawn shape that you wish to measure. Once the area has been selected, a text string will float on the cursor with the value for the area. Place the text at the desired location. The **Place Element** option is not available when the **Measure Shape** method is used.

Length: By Data Points

Use this method to measure a length by issuing a succession of data points. A right-mouse click (reset) will terminate the measurement and a text string representing the specified length will float on the cursor. Place the text at the desired location in the file.

Length: Measure Element

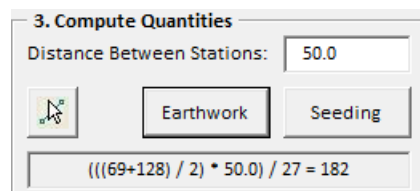
Use this method to measure a length by selecting a previously drawn element. After selecting the desired element, a text string representing the specified length will float on the cursor. Place the text at the desired location in the file.

Add Text Strings

The **Add Text Strings** portion of the dialog is used to select text elements and add them together. This is useful for adding the text previously placed using the **Measure** options, and placing the text in the appropriate column in the cross-section sheets. When Add button is selected, the total is floating on the cursor and ready to be placed at the appropriate location in the active model.

Compute Quantities

This option is used to add end area, or end width, quantities together to generate the earthwork and seeding quantities. Use the **Select** button to select the text strings that will be used to calculate the quantity. When with the **Earthwork** or **Seeding** button is selected, the computation for the quantity is performed using the currently selected text elements and the **Distance Between Stations** value. The resulting text is floating on the cursor, ready for insertion in the active model at the specified location. The computation is displayed in the bottom of the dialog for information purposes only. An example is shown below.



Updates:

Version 2018.07.20



Initial release for MicroStation and OpenRoads Designer Connect Edition

Contacts

For any questions, suggestions, or problems with this document please contact the ODOT Office of CADD and Mapping Services by use of the following form on the ODOT website:

https://odot.formstack.com/forms/cadd_servicerequest
