



OHDOT_ExistingStormSewer.mvba

Description:

This application is used to draw drainage pipes between two OpenRoads Survey points. Pipes can be drawn individually using the Manual Input Mode, or in bulk using the CSV Input Mode. The application requires a 3D model.

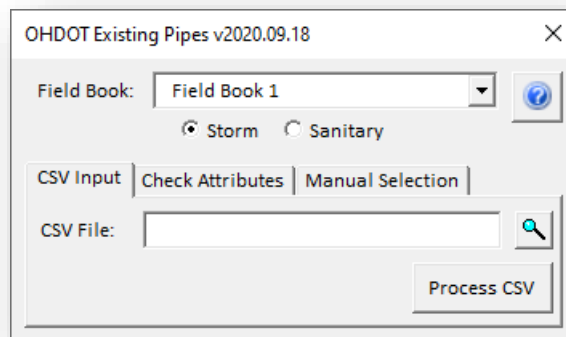
For more information on drainage surveys, see ODOT's [OpenRoads Survey](#) training guide.

Loading the Application:

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

Application Operation:

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



Field Book

This drop-down list contains a listing of all the Survey Field Books found in the current MicroStation Model. Select the Field Book from the list that contains the Survey points for the drainage pipes. Note that you can only work with one Field Book at a time. Whether in **Manual Input** mode, or **CSV Input** mode, all the points that you wish to use must be in the selected Field Book.

Storm/Sanitary

These options are used to select whether the pipes are drawn using the storm sewer levels or sanitary sewer levels in MicroStation.



CSV Input

This mode is used to read a CSV file containing existing pipe information and draw storm sewer and sanitary sewer pipes and culverts into the survey field book design file. The lines that are drawn for the pipes are drawn in 3D at the correct elevations, however these lines are just “flat” lines using the ODOT line style for drainage pipes.

Choose the **Process File** option to initiate processing.

ODOT provides a template Excel file used to collect the pipe information. The template Excel files is located in the OHDOT CADD Standards.

..\OHDOT\Standards\Survey Files\OHDOT_ExistingStormSewers.xlsx

Note that the data must be exported from the Excel file to a CSV file for processing. Custom Excel files can also be used as long as the required information is saved to a CSV file using the format documented below. The format of the CSV file is defined as follows:

First Point Name, Depth or Elevation, Size, Material, Second Point Name, Depth or Elevation

The first five lines of an example CSV file is shown below:

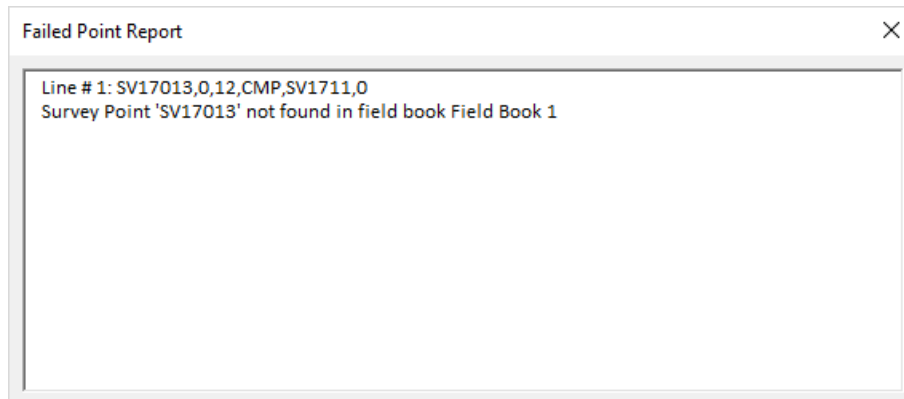
	A	B	C	D	E	F
1	First Point Name	Depth or Elevation	Size	Material	Second Point Name	Depth or Elevation
2	DR118	0	15	RCP	DR100	3.25
3	DR100	491.5	12	RCP	DR102	492.1
4	DR102	2.5	12	RCP	DR104	2.75
5	DR102	2.9	12	RCP	DR112	2.5

The order of the fields is fixed and cannot be modified. Each field is described below:

Field	Description
First Point Name	The point name for the drainage structure, PIO, or FDO point
Depth or Elevation	The measured depth to the pipe invert, or the actual elevation of the pipe invert. Notes: <ul style="list-style-type: none"> If the value is greater than 200 it is assumed to be an elevation Values less than 200 are subtracted from the First Point elevation when the CSV file is processed Use a value of 0 for PIO and FDO points
Size	The pipe size, in inches <ul style="list-style-type: none"> Use numbers only, do not append a double quote character to designate inches Elliptical pipes are entered in rise by span format without any spaces or other characters. Example: 14x23
Material	The pipe material. Use only the abbreviations defined in the ODOT Excel file
Second Point Name	The point name for the other end of the pipe, a structure, PIO, or FDO point
Depth or Elevation	The measured depth to the pipe invert, or the actual elevation of the pipe invert. Notes: <ul style="list-style-type: none"> If the value is greater than 200 it is assumed to be an elevation Values less than 200 are subtracted from the First Point elevation when the CSV file is processed Use a value of 0 for PIO and FDO points

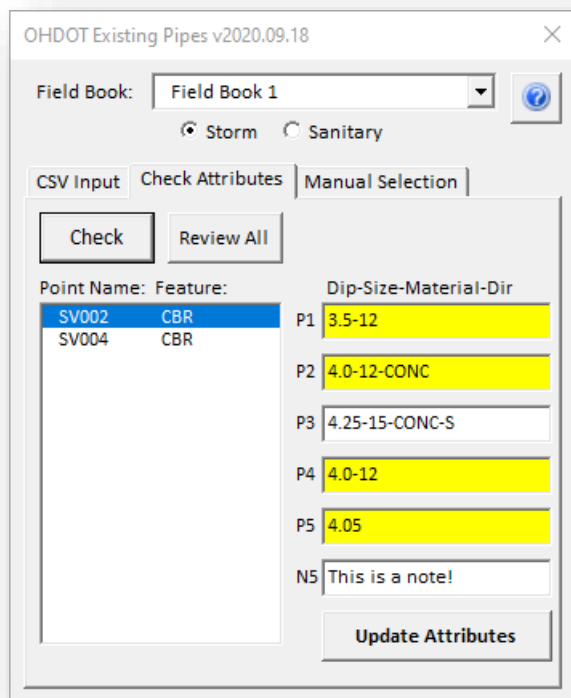


As the CSV file is processed, the selected field book is searched for survey points matching the point names defined in the CSV file. If a point in the CSV file is not found in the selected field book, it is reported in a separate dialog as shown in the example below.



Check Attributes

When the **Check Attributes** tab is selected, the dialog appears as shown below.



The **Check** button is used to run a check on the attribute data for the drainage points found in the selected **Field Book**. As each point is processed, the application verifies the format of the attribute data. Any points that do not meet the dip-size-material-direction formation are listed in the dialog.

The **P1, P2, P3, P4, P5,** and **N5** fields are used to correct the attribute format. Attribute fields that are incorrect are highlighted in yellow as shown at left.

Select **Update Attributes** to update the attribute data for the selected point.



The **Review All** button is used to generate a list of all the drainage points found in the selected Field Book.

Point Name:	Feature:	Dip-Size-Material-Dir
SV001	CBR	P1 4.0-12-CONC-N
SV002	CBR	P2 3.5-6-CPP-S
SV003	CBR	P3 4.0-12-CMP-E
SV004	CBR	P4 4.0-12X18-CONC-W
SV130	CBS	P5 4.0-12-CONC-SE
SV131	PIO	
SV132	PIO	
SV133	PIO	
SV134	PIO	
SV135	PIO	
SV136	FDO	
SV150	CBR	
SV151	CI	
SV152	MI	

Update Attributes

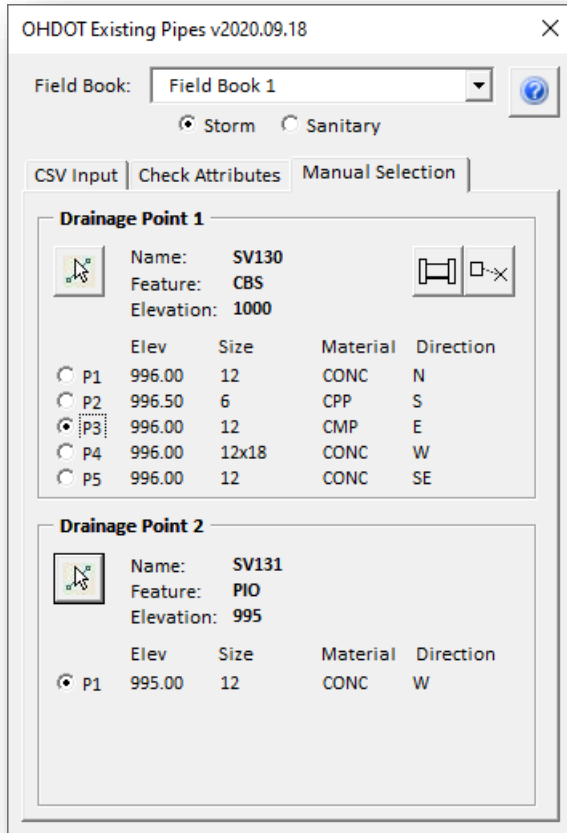
Select a point to review the attribute information.

This function is useful to add attribute information to points from field notes, if desired.



Manual Input

Manual Input mode is used to enter the information for pipes and culverts, one at a time. This mode is useful for projects with only a few pipes when a CSV file will not be used.



The **Drainage Point 1** and **Drainage Point 2** fields are used to select the points that will be used to draw a pipe or culvert. The selected points must be contained in the selected **Field Book**. If the selected point has attributes for the pipes defined (P1, 2, P3, etc.) the attribute values are displayed as shown in the example at left.



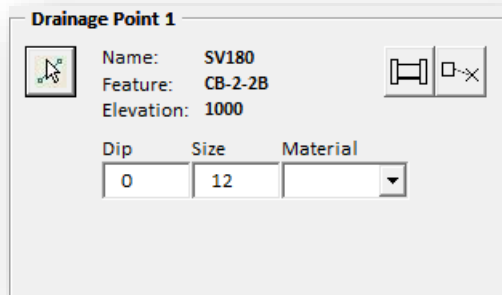
Select this icon to draw the pipe between the selected drainage points. The pipe is drawn using the **Size** and **Material** values of the pipe selected in the **Drainage Point 1** pipe list.



Select the icon to draw a pipe from **Drainage Point 1** to a data point location. The end of the pipe is placed at the same elevation as point 1.

Note: The **Size** and **Material** is always annotated using the selected pipe for **Drainage Structure 1**. The application does not support labeling pipes that change size or material from one end to the other.

If the selected point does not contain pipe attributes, the **Dip**, **Size**, and **Material** fields are displayed as shown below. The **Dip** value is subtracted from the **Elevation** when the pipe element is placed. Dip values greater than 200 are used as the elevation for the pipe.





Updates:

Version 2020.09.18

- Added Check Attributes tab
- Revised Manual Selection option to read pipe attributes (P1, P2, P3, etc...)
- Added support for legacy drainage field codes

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
