



# OHDOT\_Signs.mvba

## Description:

The ODOT\_Signs.mvba application is a MicroStation Visual Basic for Applications (mvba) program used to place sign cells that represent standard ODOT road signs. The signs are identified using the naming convention from the ODOT Sign Designs and Markings Manual (SDMM).

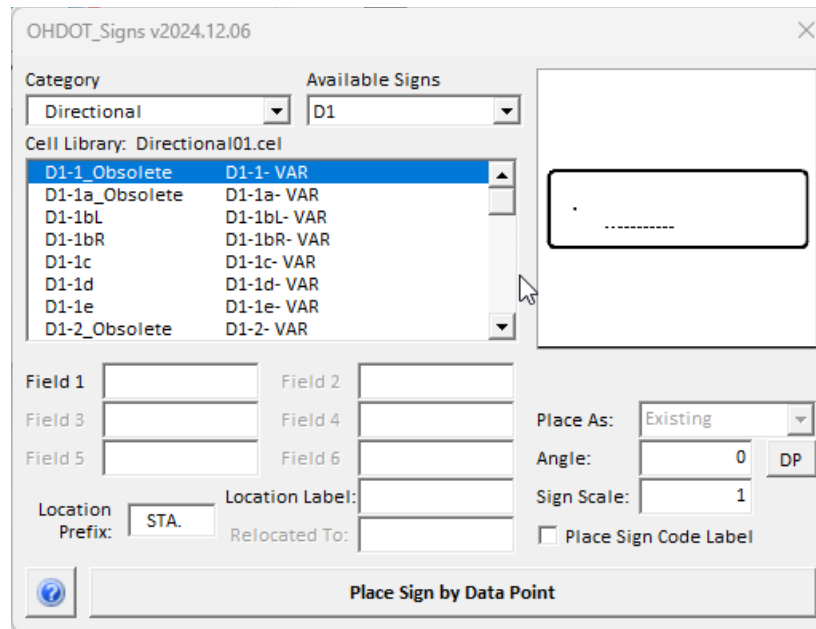
Most Guide signs need to be designed separately due to the variability in message or legend content. For most guide signs, there is no standard sign and as such these signs are not supported by this application.

## Loading the Application:

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

## Application Operation:

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



The sign cells are contained in numerous cell libraries provided by ODOT. These cell libraries have been developed to include the signs from the ODOT Office of Roadway Engineering **Sign Designs and Markings Manual**.

The configuration variable OHDOT\_SIGNS must be defined to identify the path where the ODOT sign cell libraries are stored. The variable has been defined as follows for the OHDOT CADD Standards for MicroStation and OpenRoads Designer Connect Edition:

OHDOT\_SIGNS = \$(\_USTN\_WORKSPACESTANDARDS)cell/signs/

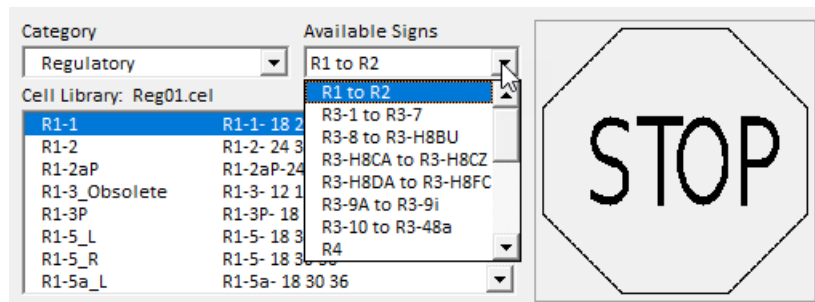


The sign cells were created to be legible on a plan sheet drawing and are not true scale representations of the actual signs. Signs can be placed as existing, proposed, removed, or relocated. The signs cells are placed on the following levels:

Sign Type	Level Name
Existing Signs	SN_X_Public
Proposed Signs	SN_P_Public
Removed Signs	SN_X_Public
Relocated Signs	SN_X_Public

The ODOT Signs have been split into several categories. Select the desired **Category** to access the various signs associated with the category. The list of available signs for the selected category is shown in the **Available Signs** list.

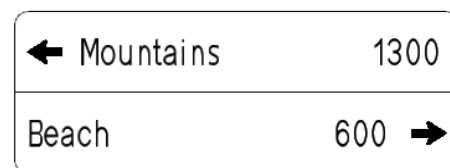
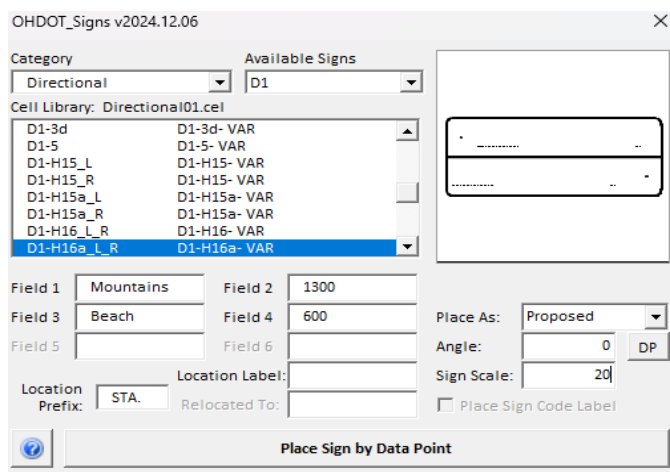
Each range of cells listed in the **Available Signs** pull down menu represents a separate cell library. After selecting a sign, the list of cells contained in the selected cell library is displayed as shown below. The currently selected sign cell is displayed to the right of the dialog.



The lower right portion of the dialog contains various parameters for the sign cell placement. Each is described below.

### Data Fields

Many sign cells include data fields for the text content of the sign. The dialog key-in fields correspond to the data fields in the selected sign cell, oriented from left to right, top to bottom. Each field is un-ghosted as necessary for the selected sign. The dialog fields are cleared when a new sign is selected from the list. An example is shown below.

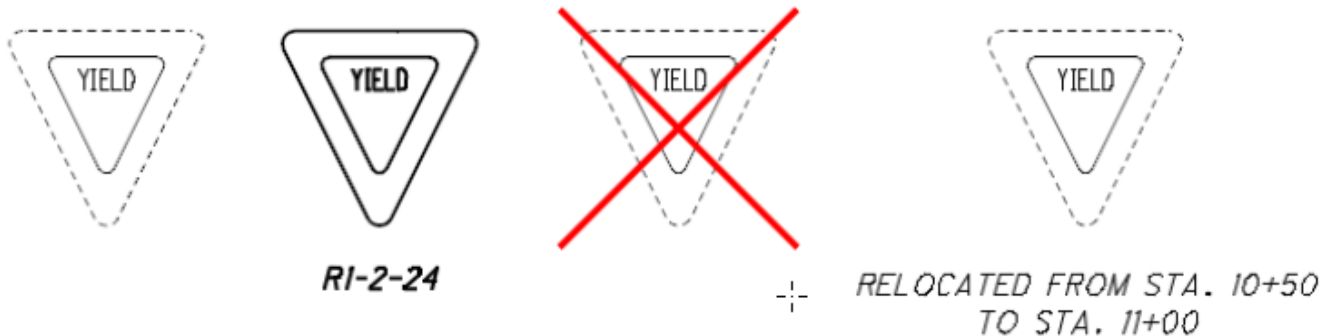


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## Place As:

The **Place As** menu is used to select whether signs are placed as **Existing**, **Proposed**, **Removed**, or **Relocated**.



When the **Relocated** option is selected, the **Station Label** portion of the dialog changes to allow you to key-in the **Relocated From Station** and **Relocated To Station** values.

## Angle

The **Angle** key-in field is used to specify the rotation angle for the sign cell placement. The angle for sign placement is measured counter-clockwise from the vertical axis of the sign.

The **DP** button can be used to graphically set the sign placement angle by identifying two data points in the MicroStation file representing the sign angle.

## Sign Scale

The **Sign Scale** key-in field is used to set the scale factor for sign placement. This value is set to be the current Model Annotation Scale by default.

## Place Sign Code Label

The **Place Sign Code Label** toggle button is used to specify whether the sign name will be placed with the cell.

The sign code includes the size of the sign. Some signs are available in only one size, while others are available in a variety of sizes. Signs with a fixed size will automatically place the correct sign size as a part of the sign name. For signs with variable sizes, depending on the sign selected, the application will prompt you to select the sign size from a preset list, or to key-in the sign size.

The sign description has been set up to control whether the sign is available in a set size, a preset list of variable sizes, or a user defined variable size. An example of each is shown on the following page.

The sign name is always placed for proposed signs. **The Place Sign Code** toggle is only available when placing existing or removed signs.

## Station Label

The station for a sign can also be placed in the design file by use of the **Station Label** key-in field. Key in the station value and place the sign. The station is placed below the sign code label

## Relocated to Station

When the **Relocated** option is selected, the **Location Label** portion of the dialog changes to allow you to key-in the **Relocated From Location** and **Relocated To** values as shown in the partial dialog clip below:



Field 3	Field 4	Place As:	Relocated
Field 5	Field 6	Angle:	0 DP
Location Prefix:	Relocated From Location:	Sign Scale:	1
STA.	Relocated To:	<input type="checkbox"/> Place Sign Code Label	
Place Sign by Data Point			

### Variable Sized Signs

Variable sized signs include the text “VAR” in the cell description as shown in the example below:

Cell Library: Directional01.cel	
D1-1_Obsolete	D1-1- VAR
D1-1a_Obsolete	D1-1a- VAR
D1-1bL	D1-1bL- VAR
D1-1bR	D1-1bR- VAR
D1-1c	D1-1c- VAR
D1-1d	D1-1d- VAR
D1-1e	D1-1e- VAR
D1-2_Obsolete	D1-2- VAR

When the cell is placed, the user is prompted to enter the size for the sign as shown below:

Size X

Enter Size

OK

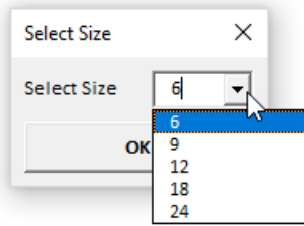
When the sign is placed, the size is included with the sign name.

### Sign Sizes

For a variable sized sign that is available in a predefined list of sizes, the cell description will contain a list of available sizes. For example, the Recreational sign RS-068 has the following description: RS-068-6 9 12 18 24.

Category	Available Signs	
Recreational & Cultural I	All RS Signs	
Cell Library: Rec01.cel		
RS-067	RS-067- 6 9 12 18 24	
RS-068	RS-068- 6 9 12 18 24	
RS-070	RS-070- 6 9 12 18 24	
RS-071	RS-071- 6 9 12 18 24	
RS-073	RS-073- 6 9 12 18 24	
RS-077	RS-077- 6 9 12 18 24	
RS-078	RS-078- 6 9 12 18 24	
RS-079	RS-079- 6 9 12 18 24	

The first part of the description, **RS-068-**, is the sign name. The available sizes are separated by spaces. When a sign with this type of description is placed, the application will prompt the user to select the desired sign size during sign placement as shown below.

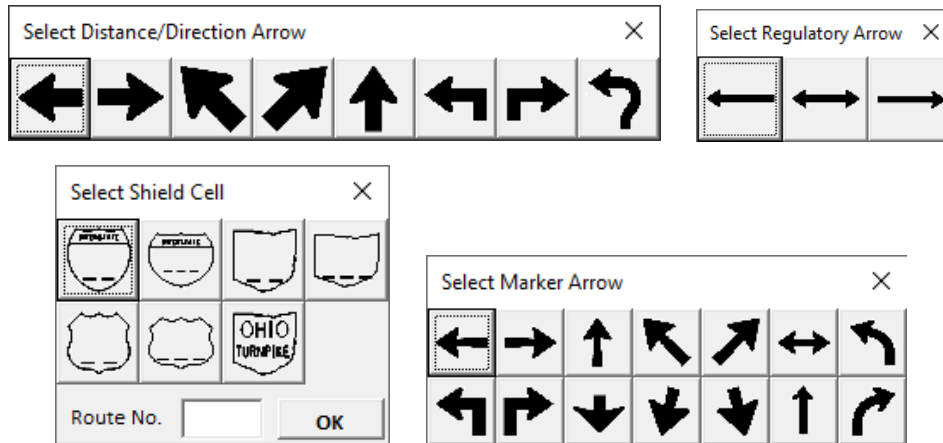


The drop-down list of available sign sizes is generated from the cell description. After selecting the desired sign size, the application will place the sign name using the selected size.

Signs with only one size listed are available only in that specific size. The user is not prompted to select a size in this case.

### Arrows and Shields

After the sign cell has been placed in the design file, if the selected sign requires an arrow or a shield, you will be prompted to select the arrow or shield by one of the four dialogs shown below:

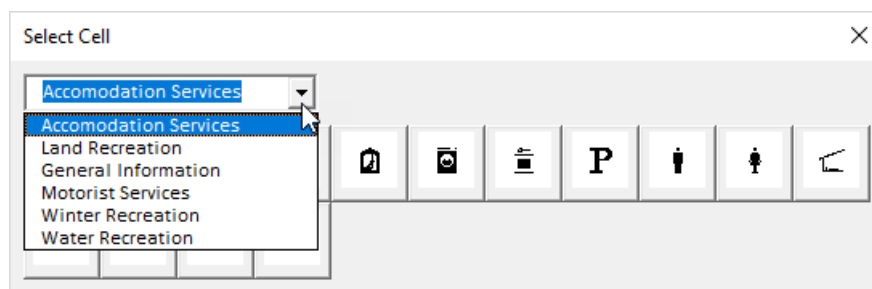


To select the desired arrow, click the icon in the dialog. The arrow will be placed on the cell and the dialog will close. If another arrow is required by the sign, you will be prompted to select another arrow.

To place a shield, select the shield, key-in the route number, and then select the **OK** button. The shield cell will be placed on the sign.

### Recreational and Cultural Interest Symbols

The following symbols are available when placing signs that require informational services:



An example of a sign using symbols from the Land Recreation category is shown below:



*D9-18-96*

## Updates:

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Version 2018.07.20

Initial release for MicroStation and OpenRoads Designer Connect Edition

Version 2024.01.08

- Updated to work better with V2 workspace.
- Minor GUI improvements

Version 2024.05.17

- Added “to R14” to Available Signs for the Regulatory Category

Version 2024.09.03

- Fixed issue where text placed using the OHDOT\_balloon app gets changed to 0.125 after sign code is placed. Sign code is now 0.14 to match the CADD standard.

Version 2024.12.06

- Added location prefix textbox, which is defaulted to STA. This was added for users wanted to list SLM instead of station.

## Contacts

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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](https://odot.formstack.com/forms/cadd_servicerequest)

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