

Survey Codes in Magnet Office

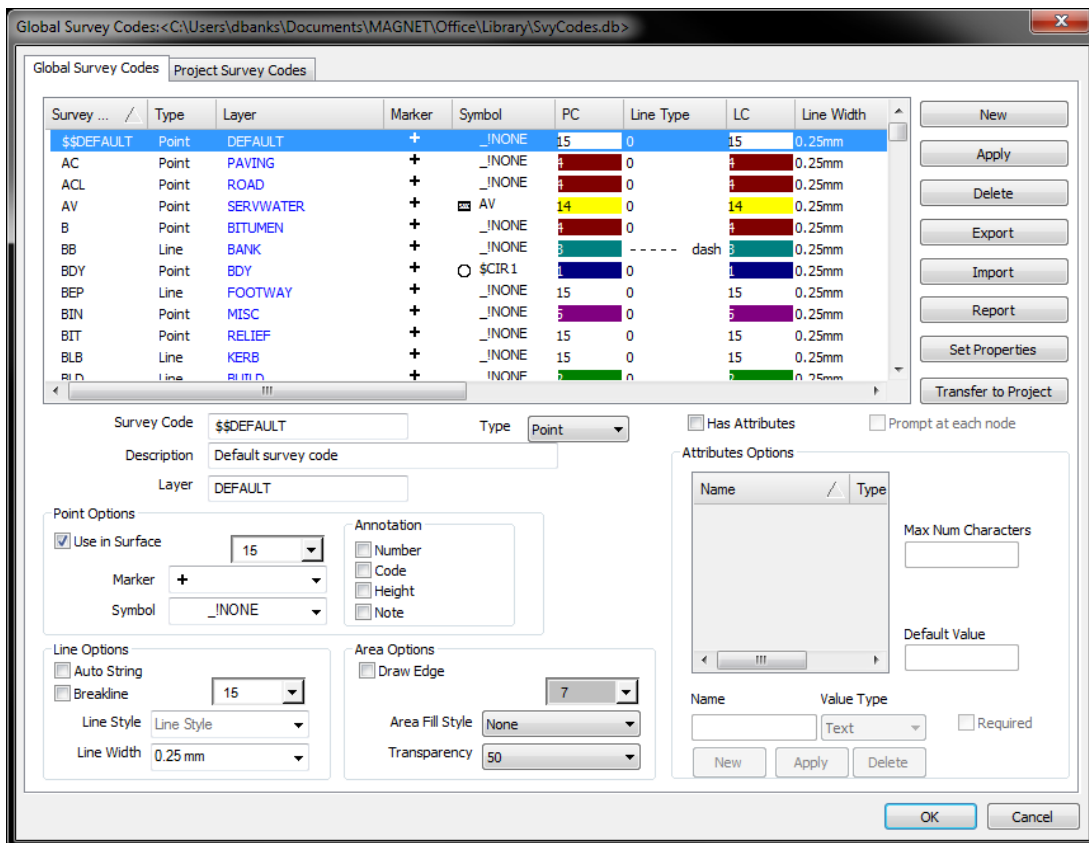
A survey code is a group of characters assigned to observations taken by the surveyor in the field and are used to allocate a descriptive remark to each point. This option allows the user to assign specific attributes to their survey codes upon reduction into Magnet Office. The information is accessed during the data reduction and results in points being assigned a layer with attributes like symbols, line type, colour and annotation.

The correct use of survey codes enables significant time saving in data reduction and plan preparation. The survey codes used in the field are used in conjunction with the Magnet Office SURVEY CODES Library in the following ways:

- As an identification of a point
- As a control to determine if a point should be included in the DTM (Surface Model) or whether a line should be a breakline or not
- As a control to assign a point into a designated layer

Global Survey Codes

The global survey codes editor allows you to edit survey codes, which may be used in any project, created in the MAGNET Office. The editor contains the list of the global survey codes, along with their properties and attributes. Clicking on the column header will sort survey codes by this column.



Fields and buttons of the editor are described in the tables below.

Field	Description
Survey Code	Displays the name of the survey code.
Type	Defines the type of the survey code.
Description	Defines the short description of the survey code.
Layer	Defines the layer for the survey code.
Point Options	
Use in Surface	Defines whether the points with the selected survey code may be used for DTM creation.
Point Colour	Defines the point colour for points with the selected survey code.
Marker	Defines the point marker for points with the selected survey code.
Symbol	Defines the point symbol for points with the selected survey code.
Annotation	Defines the point annotation settings for points with the selected survey code.
Line Options	
Auto String	When ticked, points with this code will be automatically connected with a line. It is useful for points on line features, such as fence lines, banks, and curbs.
Breakline	When ticked, lines strung from points with this code will be set as breaklines. It is useful for points on the surface of the survey, which are joined by lines that indicate a break in the surface grade. This can be applied to banks, curbs, drains, streams, and walls.

Line Colour	Defines the colour for lines strung from points with this code.
Line Style	Defines the line style for lines strung from points with this code.
Line Width	Defines the line thickness for lines strung from points with this code.

Area Options

Draw Edge	Defines, whether to draw the border line around the polygons, based on points with this code.
Area Fill Colour	Defines the filling colours for the polygons, based on points with this code.
Area Fill Style	Defines the filling style for the polygons, based on points with this code.
Transparency	Defines the filling transparency for the polygons, based on points with this code.
Has Attributes	When ticked, additional custom attributes will be assigned to points with this code.
Prompt at each node	When ticked, assigning of custom attributes will be prompted at each node.

Attributes Options (For use with Magnet Field Code Library)

Max Num Characters	Defines the maximum length of the custom attribute's value.
Default Value	Defines the default value of the custom attribute.
Name	Defines the name of the custom attribute.
Value Type	Defines the type of the custom attribute's value.

Required	Defines whether the custom attribute will be required.
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Buttons of the project survey codes editor

Button	Description
New	Click it to create a new survey code.
Apply	Click it to save the changes.
Delete	Click it to delete the selected survey code.
Export	Click it to save survey codes to an external MAGNET Field (*.xml), TopSURV code (*.xml) or GTS-700 Code (*.kod) file.
Import	Click it to load survey codes from an external MAGNET Field (*.xml), TopSURV code (*.xml) or CivilCAD Survey Code (*.lcd, *.bed, *.out) file.
Report	Click it to generate the survey code report.
Set Properties	Click it to set the properties of the selected code as the default for new entity creation.
Transfer to Project	Click it to save the selected code in the project survey codes.

Project Survey Codes

The project survey codes editor allows the user to edit the survey codes used in the current project only. The editor contains the list of the survey codes in the project, with their properties and attributes. Once edited, these can be added to the global library for future use.

The edit fields are the same as those listed in the global codes list, the Buttons are slightly different and are listed below.

Button	Description
Apply	Click it to save the changes.
Report	Click it to generate the survey code report.
Set Properties	Click it to set the properties of the selected code as the default for new entity creation.
Transfer to Global	Click it to save the selected code in the survey codes library.

Exercise - Adding a Code to the Library

1. Start by opening the Survey Codes Library, from the **Library** menu select **Global Codes**
2. Click **New**, this adds a new code to the list replicating the current settings
3. Edit the information for the new code by filling out all necessary information on the lower area of this screen. Fill out as shown below. Finish by clicking apply and OK to store the new code or changes made.

4. Now select the new code from the code drop down box on the properties toolbar. The layer is created and the layer properties are set by the selection of the code. Add point and line data to demonstrate.



Codes to use from Collage

As the polyline data coming out from Magnet Collage as a CSV, the codes will need to be setup as shown below. We will be using a common layer name for these layers, and also using the auto string feature.

Survey Code	LEB	Type	Line
Description	LEFT EDGE OF BITUMEN		
Layer	ROAD STRINGS		
Point Options		Annotation	
<input checked="" type="checkbox"/> Use in Surface	11	<input type="checkbox"/> Number	
Marker	+	<input type="checkbox"/> Code	
Symbol	_NONE	<input type="checkbox"/> Height	
		<input type="checkbox"/> Note	
Line Options		Area Options	
<input checked="" type="checkbox"/> Auto String		<input type="checkbox"/> Draw Edge	7
<input checked="" type="checkbox"/> Breakline	11	Area Fill Style	None
Line Style	— solid	Transparency	50
Line Width	0.25 mm		

Other Codes can be used as follows, with alternate description and colour settings:

LES, LEB, LEL, CL, REL, REB, RES, etc.