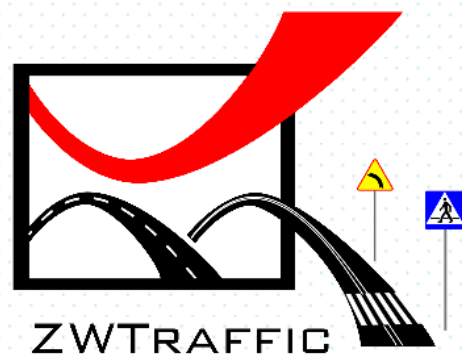


ZWTraffic 2017 **ZWCAD Addon brought to you by** UISZANSA



Usługi Informatyczne SZANSA
Izabela Cholewa

Compatibility

Our extensions are compatible with

ZWCAD+ 2014 Pro / ZWCAD+ 2015 Pro / ZWCAD Classic / ZWCAD 2017 PRO

For example:

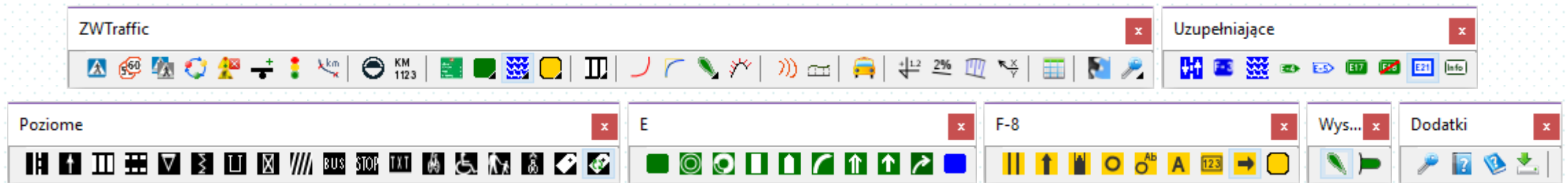
ZWTraffic 2017




ZWTraffic

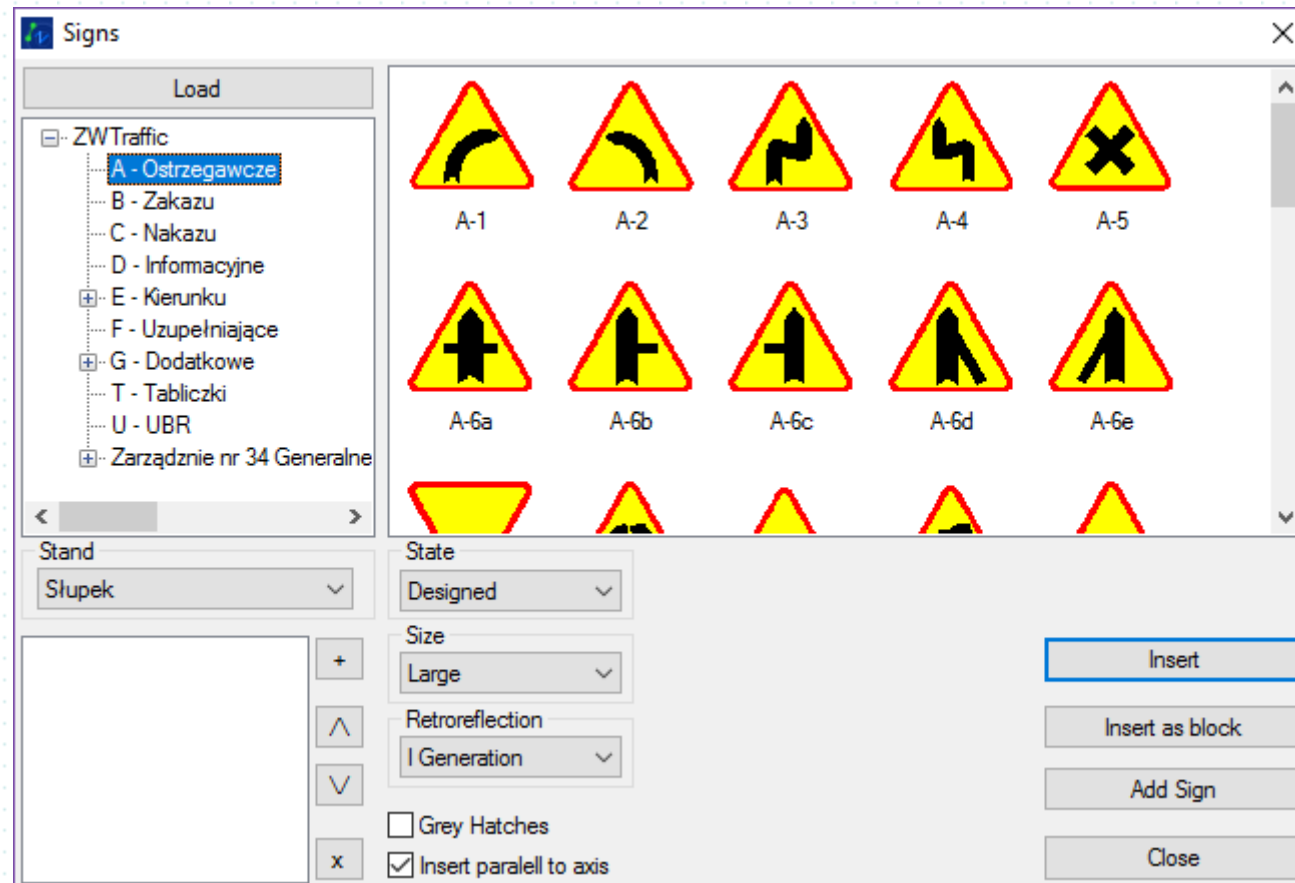
This extension is useful when designing signs and road markings in the following areas:

- Inserting vertical road signs (ZWTraffic has a database of typical polish road signs). It's also possible to update the database with other signs ZWTraffic also has a module that serves the purpose of creating guide and informational signs.
- Creating horizontal signs
- Simulation of vehicle movement
- Designing islands according to set parameters.
- Designing car park stands



Signs library

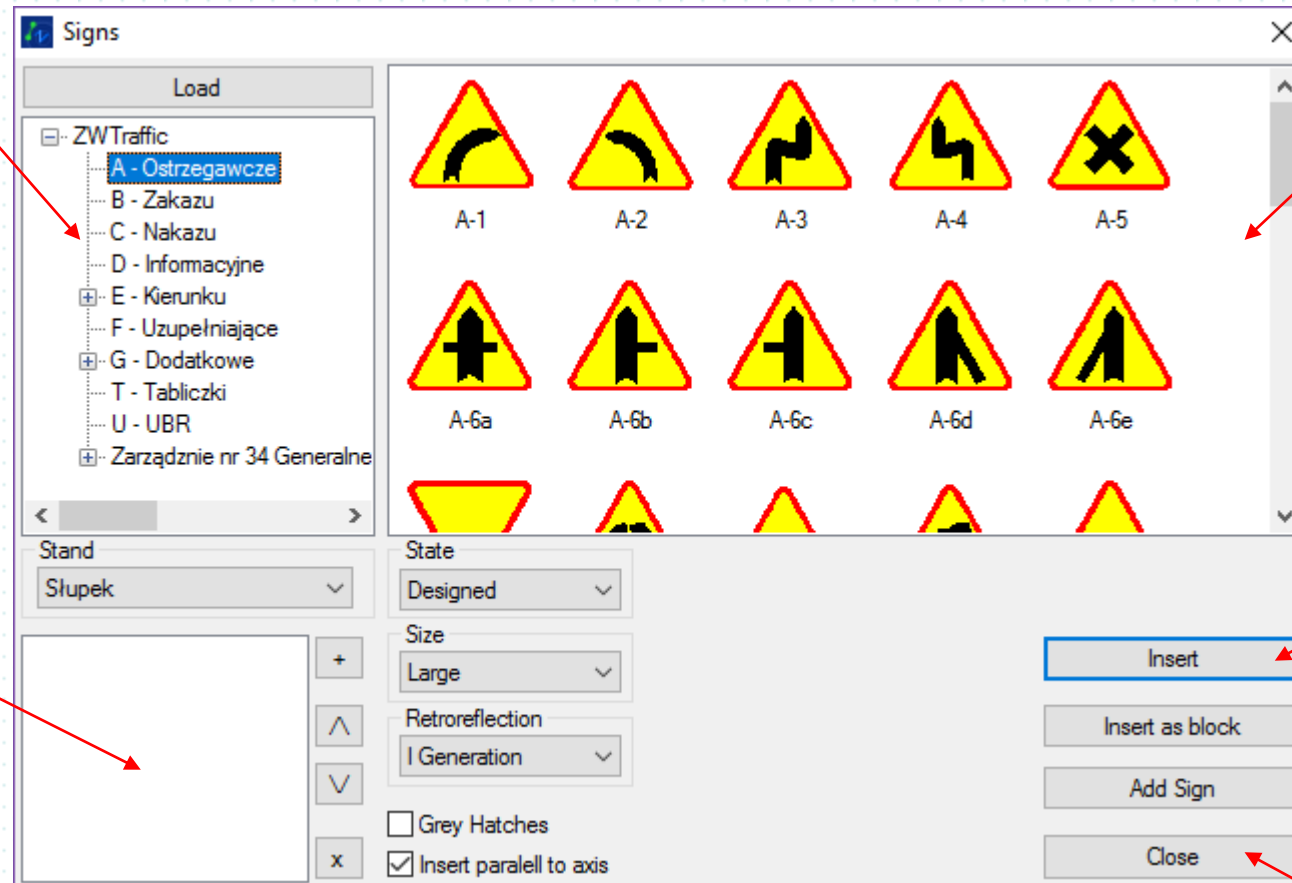
- To run the function which inserts vertical road signs we have to click on this icon: 
- The function opens this dialog box with a number of signs:



Signs library

The list of available catalogues

List of signs in the selected catalogue



List of selected signs to insert

insert selected sign/s

Close the window

Signs library

Stand
Stake

The list of available stands

- Arm
- Construction
- EmptyStake
- Sign
- Stake
- Stake1
- Stake2Signs
- StakeSmallSign

+
^
v
x

List of selected signs to insert

State
Designed

List which allows the change of state of signs

- Designed
- Existing
- Temporary
- Remove

Size
Large

Size of signs

- Huge
- Large
- Medium
- Small
- Mini

Irradiation
I Generation

Retroreflection

- I Generation
- II Generation
- III Generation

View of the dialog box:

Stand: Stupek

State: Designed

Size: Large

Retroreflection: I Generation

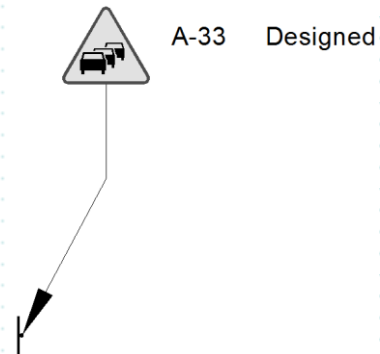
Grey Hatches

Insert paralell to axis

Signs library

Grey Hatches

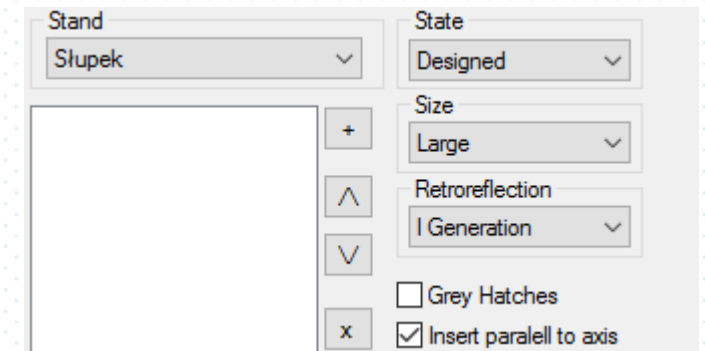
Selecting "Grey Hatches" allows you to insert the symbol in grey.



Insert parallel to axis

"Insert parallel to the axis" is responsible for inserting the designated sign parallel to two points that determine the axis of the road.

View in dialog box:

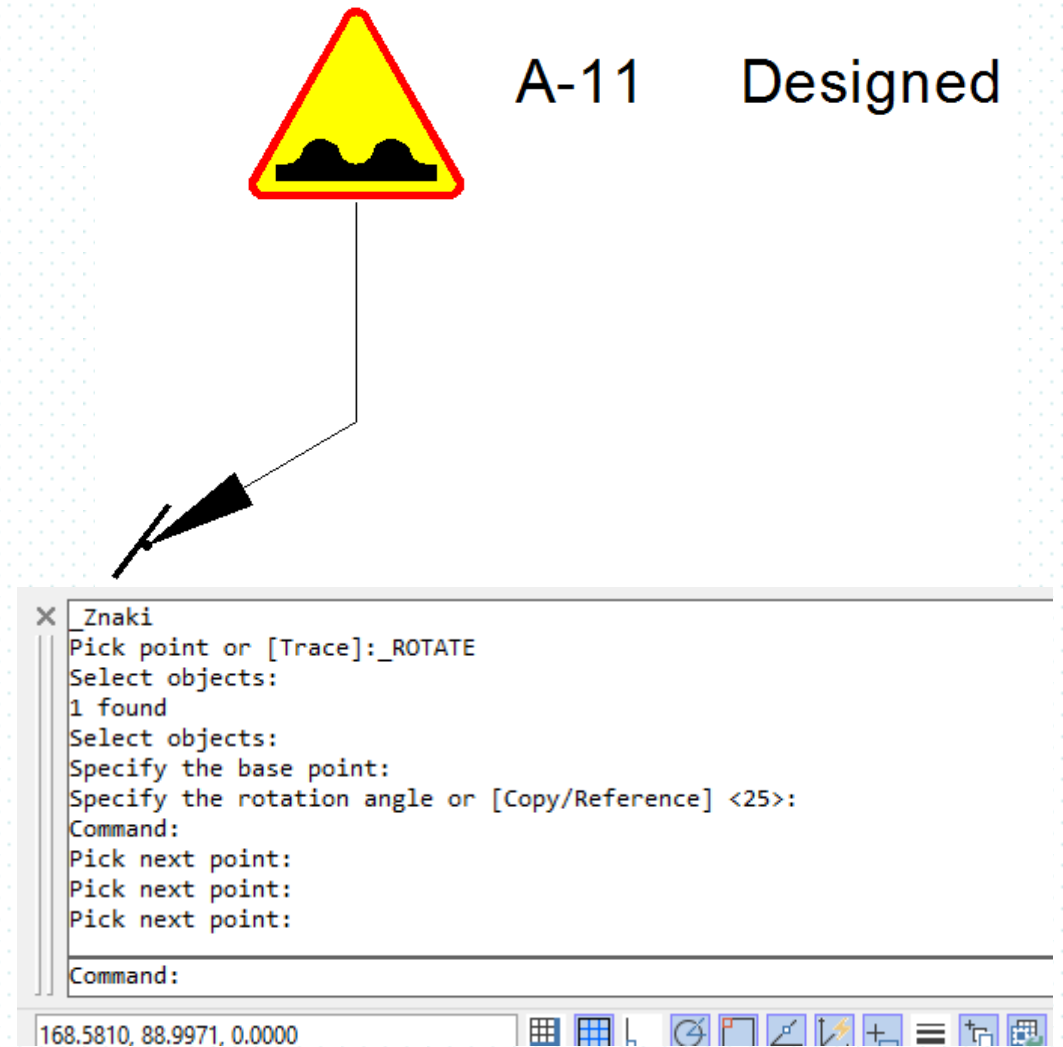


Signs library

□ Insert a sign:

This function allows you to insert the table of signs on the indicated stand.

After selecting the parameters in the dialog box, select the base point and the rotation, then select points for the descriptive line.



Signs library

□ Insert as block

This function lets you insert the same table of signs as a block.

After determining the signs table in the library of signs, indicate the insertion point and the height of the table.

Default height of signs is 1.

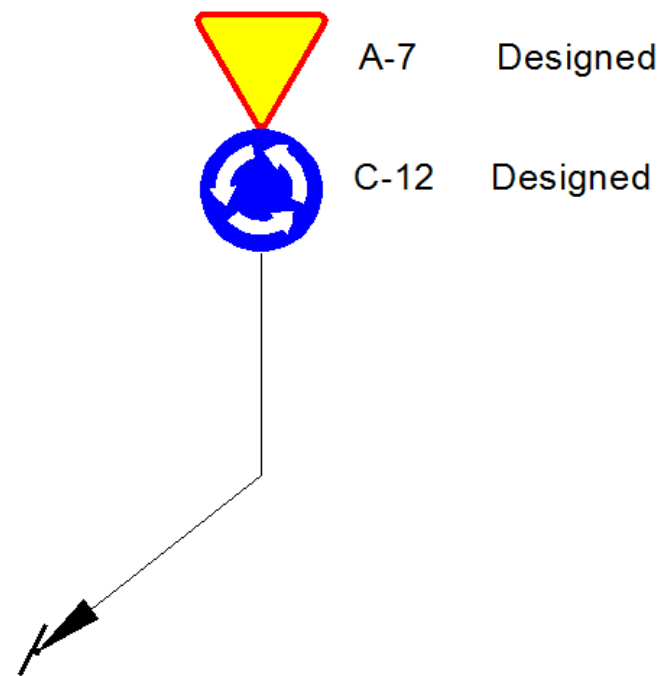
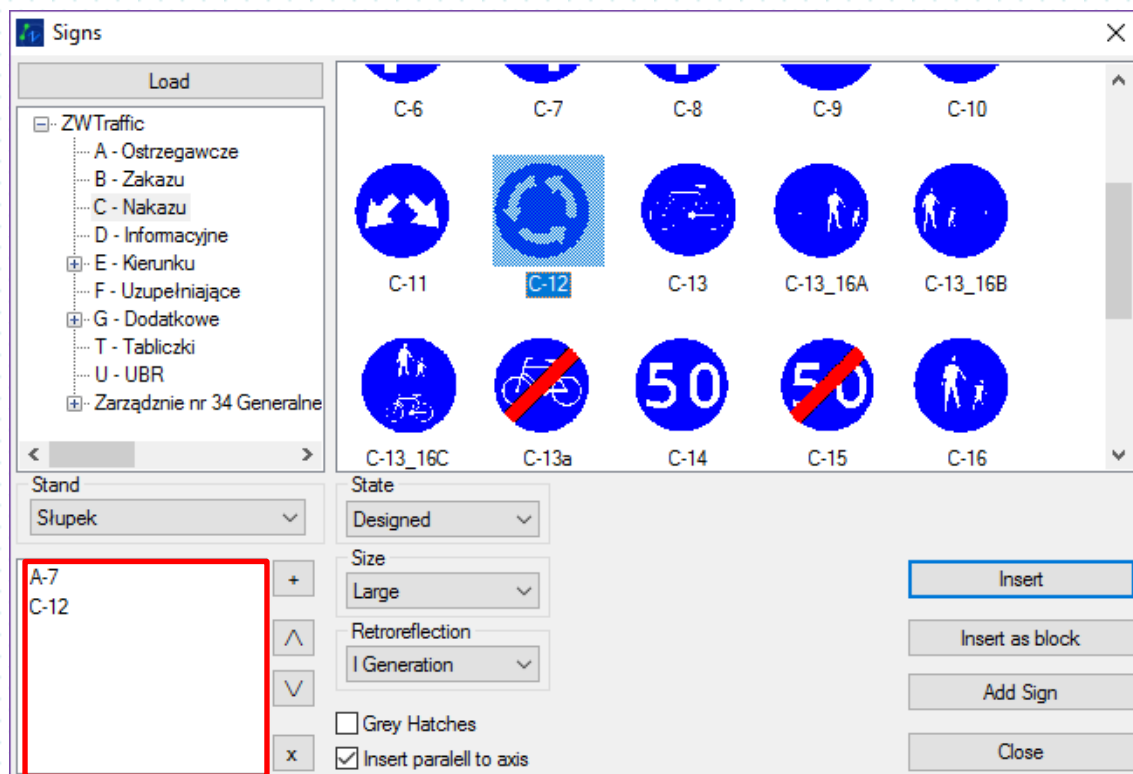
The height can be determined by specifying two points in the drawing or enter a value in the command bar.



Signs library

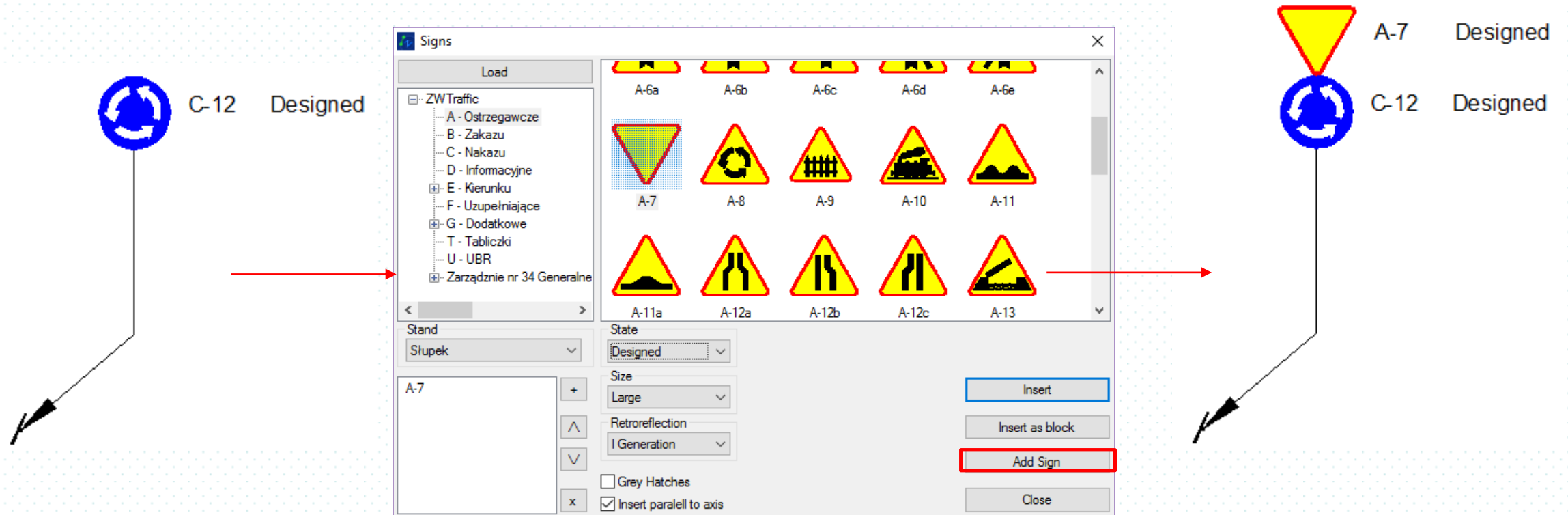
You can also insert several signs on a single sign post.

Select a sign by double-clicking on the symbol in the library and it shall be added to the dialogue Box. Once users choices are inserted into the drawing a similar result to the picture on the right will be present:



Signs library

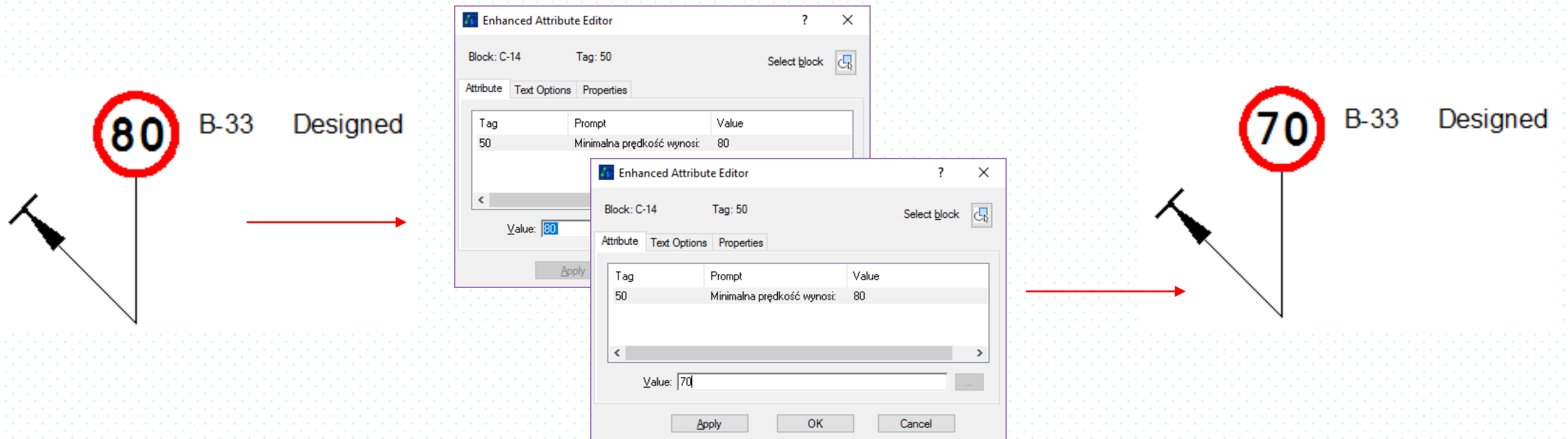
You can add any board to the sign to an existing sign, which will be automatically inserted to it.



Vertical signs

□ Edit the value

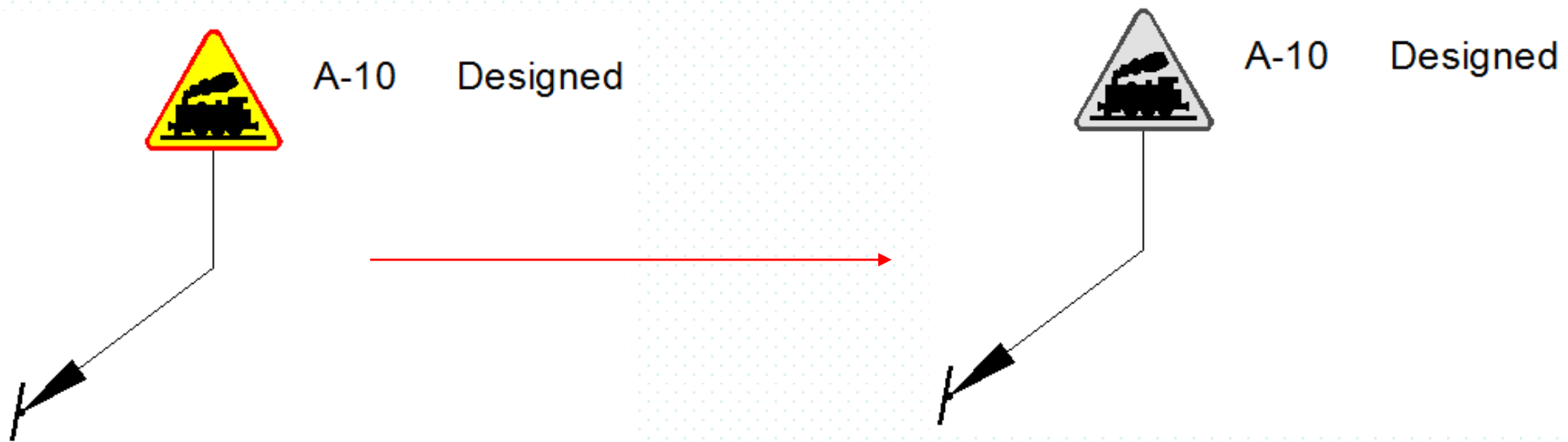
The ability to edit the values in blocks with attributes.



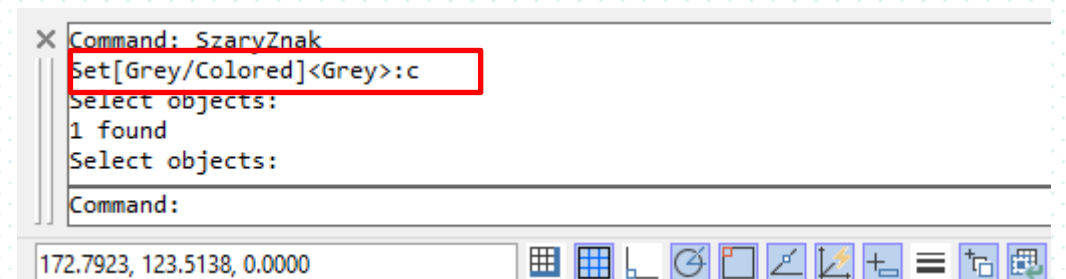
Vertical signs

□ Change to grey

Edits color board of sign according to the parameters entered: grey or color.



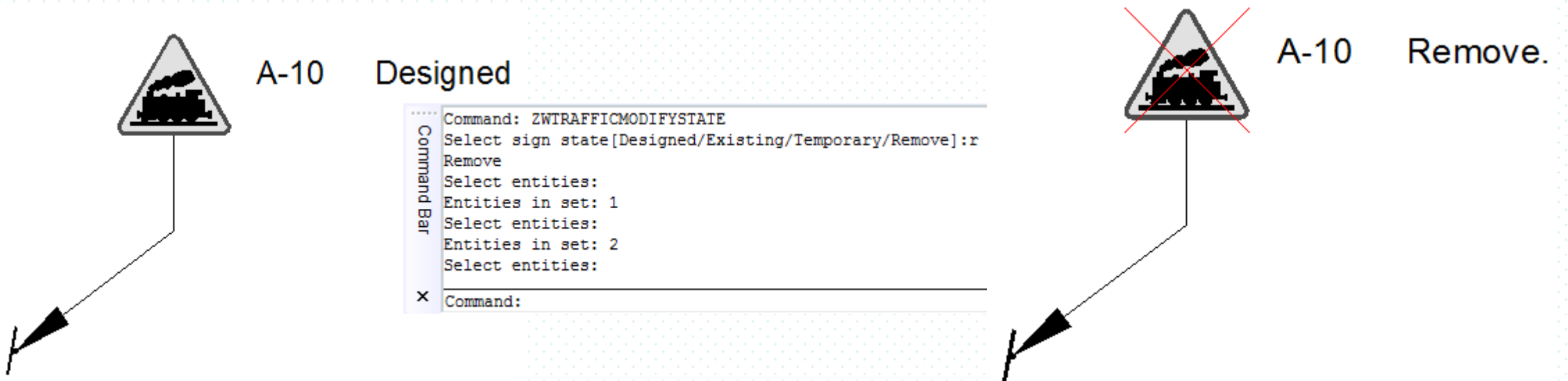
In the command bar, enter the shortcut: G or C.



Vertical signs

□ Modify state of sign

This function allows you to edit the existing state of a sign in the drawing.

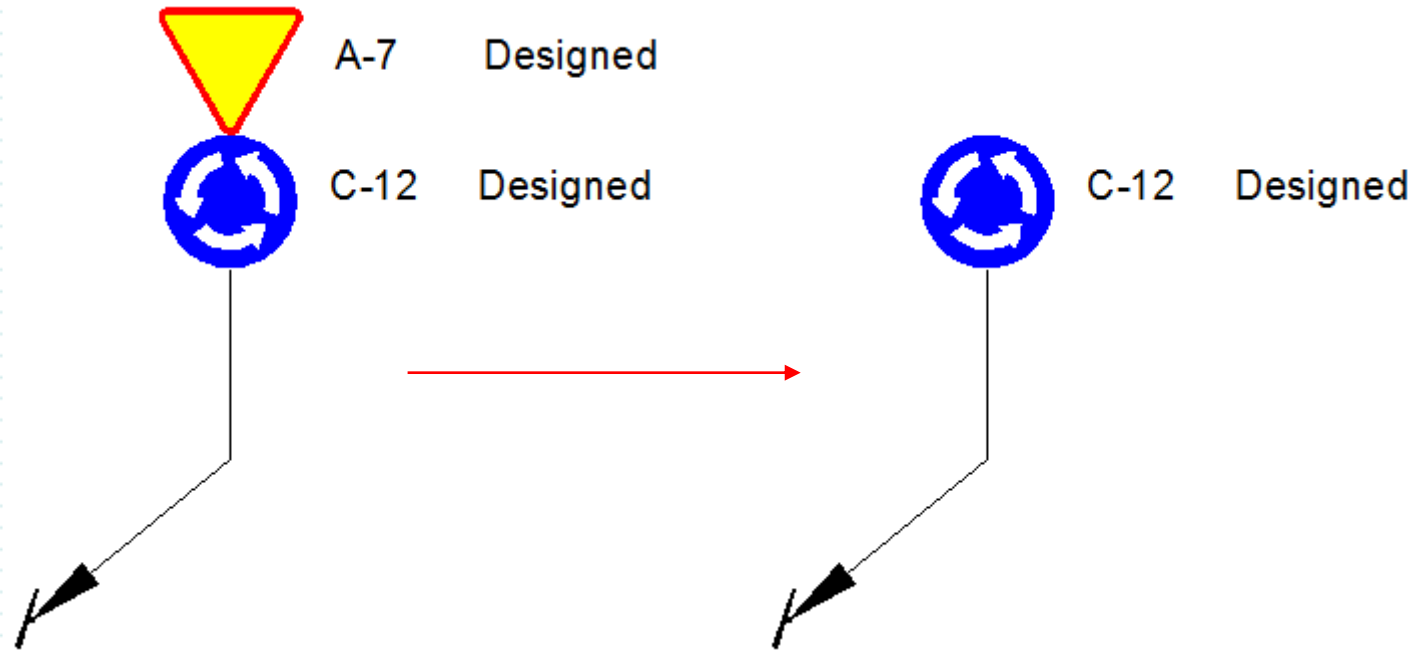


In the command bar type the shortcut selected state, select a board of the sign and its description.

Vertical signs

□ Remove sign 🚧

This function allows you to remove an additional sign, if there is one present.



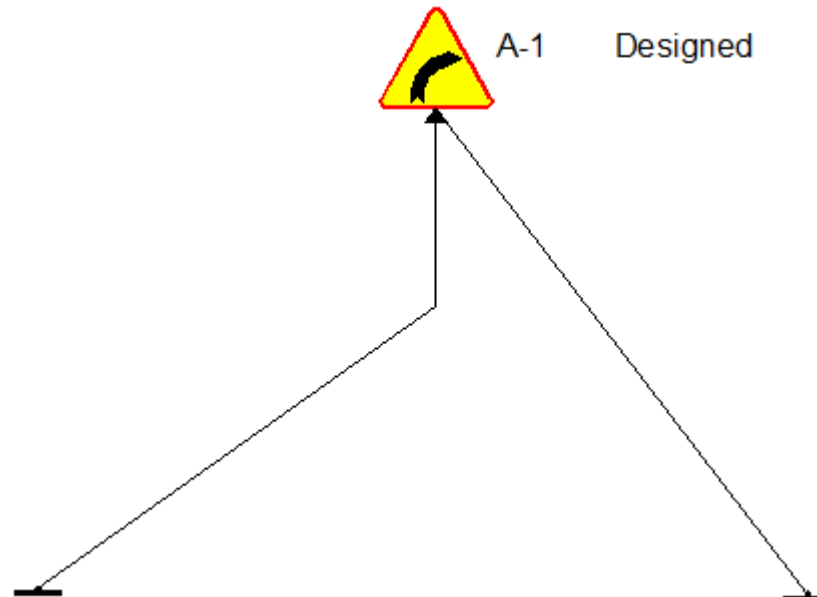
Vertical signs

□ Adding an additional signpost to an existing sign

This function allows you to remove an additional sign, if there is one present.

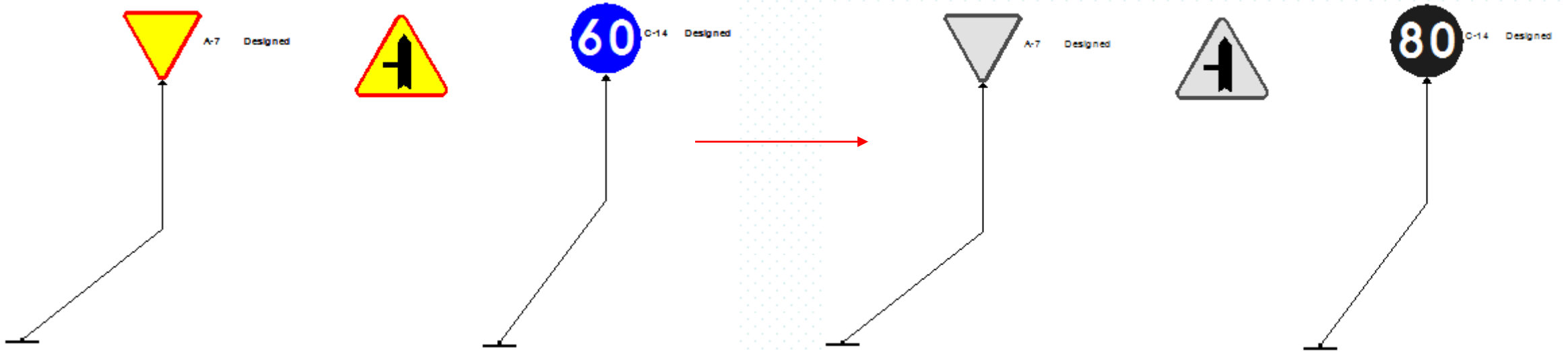
Adding an additional signpost to an existing sign

Once the function is active, it is necessary to choose the sign and a direction of the additional signpost. An example:



Exercise 1

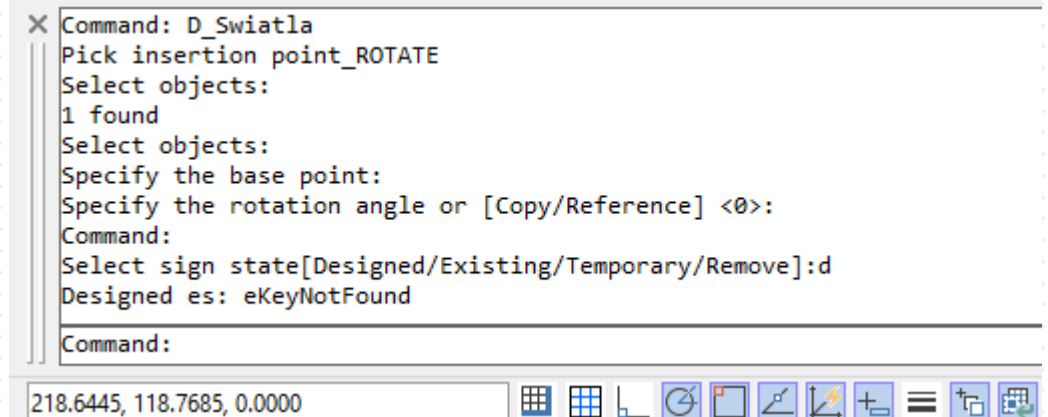
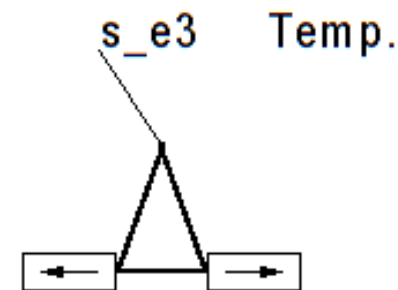
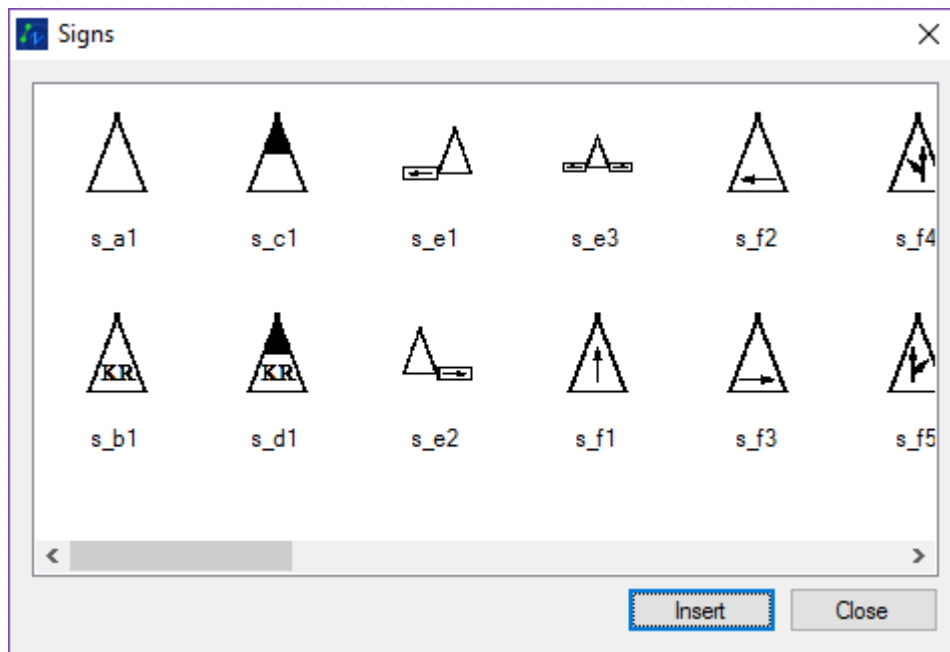
- Insert a sign with stand in to the drawing.
- Insert sign as a block.
- Insert sign with the value and change the value on that sign.
- Change all signs for grey and then for a colour.



Traffic lights

This function allows you to insert traffic light to the drawing.

Select the symbols of traffic lights in the dialog box and then specify a point parallel to the axis, the insertion point and another point of line description.

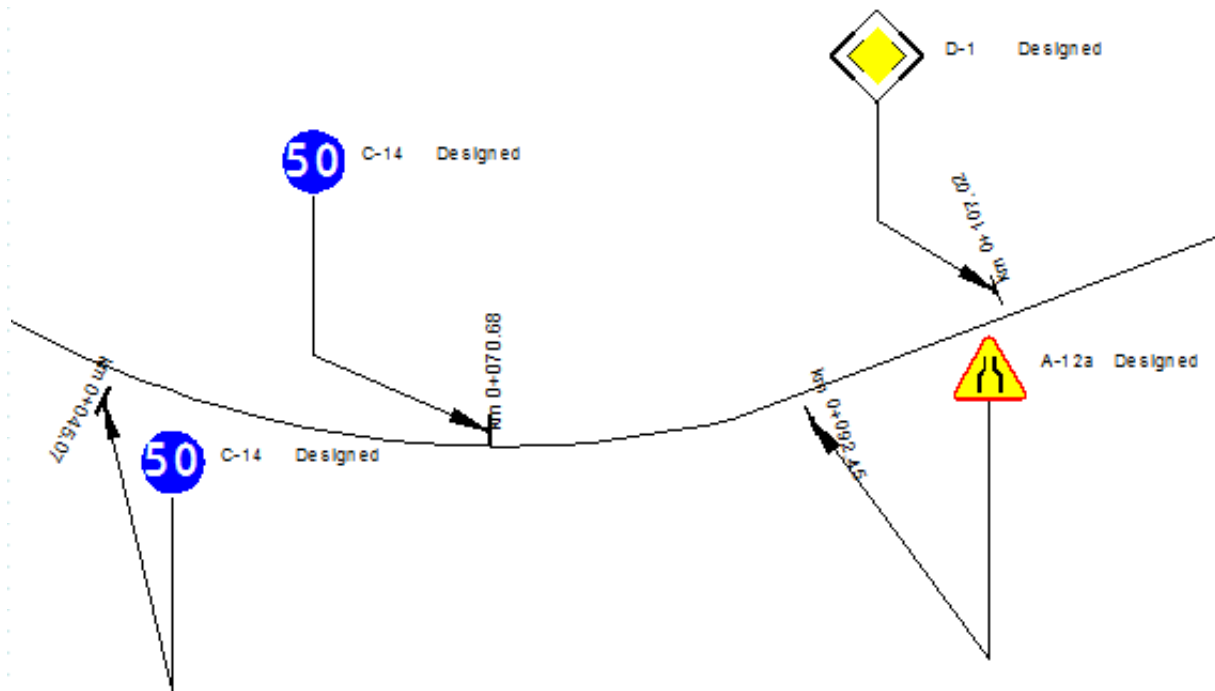


Kilometrage

It allows you to insert the kilometrage at which there are individual signs.

Run the command, select road axis and select road signs.

In the command bar write the starting number of the kilometrage and select Yes or No about direction line.

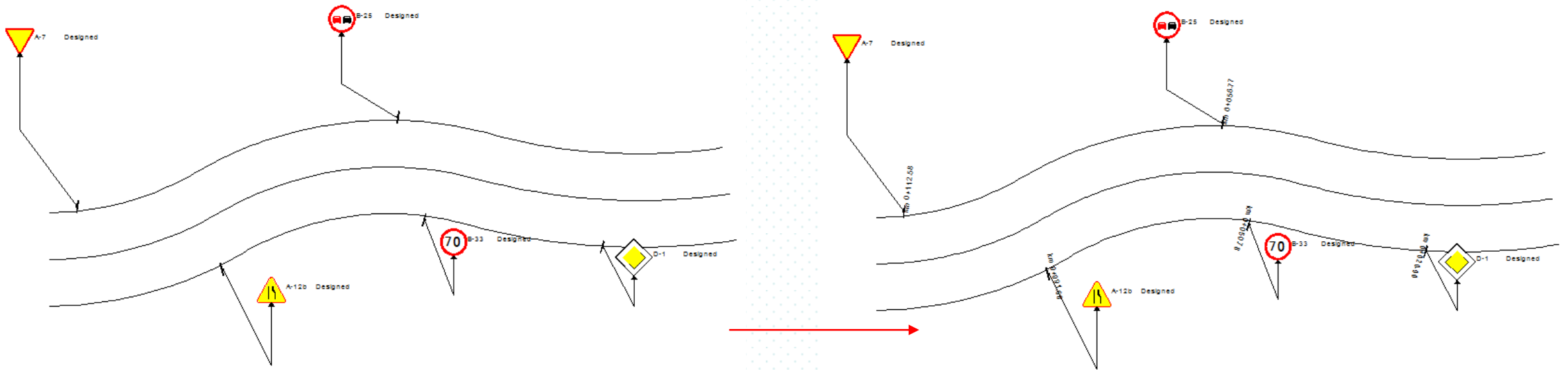


```
Command: D_Kilometraz
Select road axis
Select objects:
Please write begining kilometrage0
Is line direction consistent with road axis[Yes/No]<Yes>:
Command:
_D_Kilometraz
Select road axis
Select objects:
1 found
Select objects:
1 found, 2 total
Select objects:
1 found, 3 total
Select objects:
1 found, 4 total
Select objects:
Please write begining kilometrage0
Is line direction consistent with road axis[Yes/No]<Yes>:
Command: |
```

320.2956, 59.5525, 0.0000

Exercise 2

- Create a polyline in the drawing.
- Insert a few signs with stands along the axis.
- Use kilometrage.

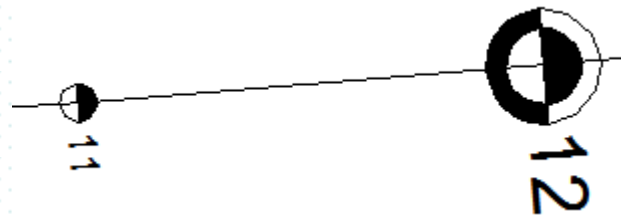


Distance markings by dist

The function Road Kilometrage allows to enter certain signs every 100m, at the beginning and at the end of a road.

Once the function is turned on, the user is asked to enter the starting kilometrage and to determine whether the direction of the road is in accordance to the axis.

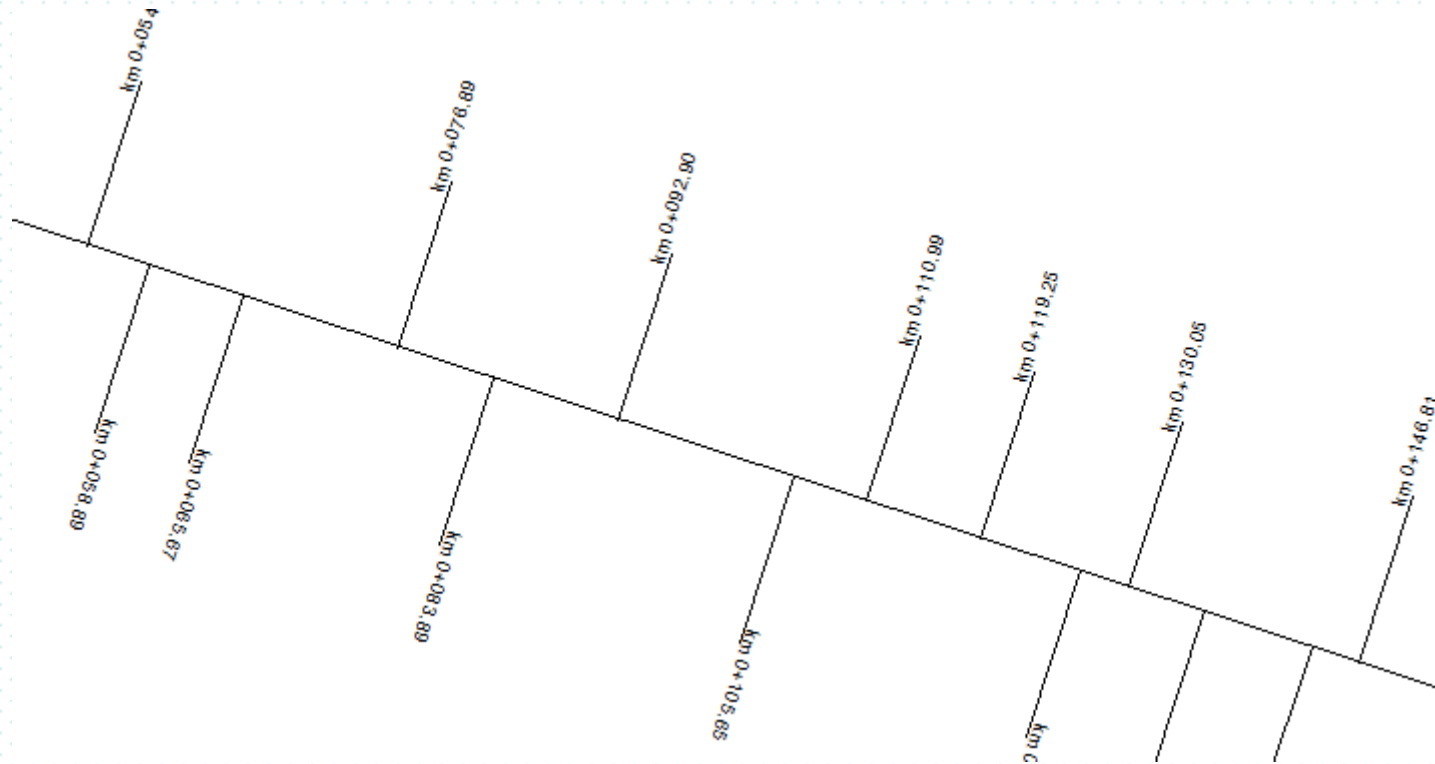
Lastly, the beginning and the end of the kilometrage has to be specified on the previously selected axis.



Distance markings by points

The kilometrage by point allows to create a kilometrage between certain points.

The program will ask you to choose the axis and to select the insertion points in order to show the desired result.



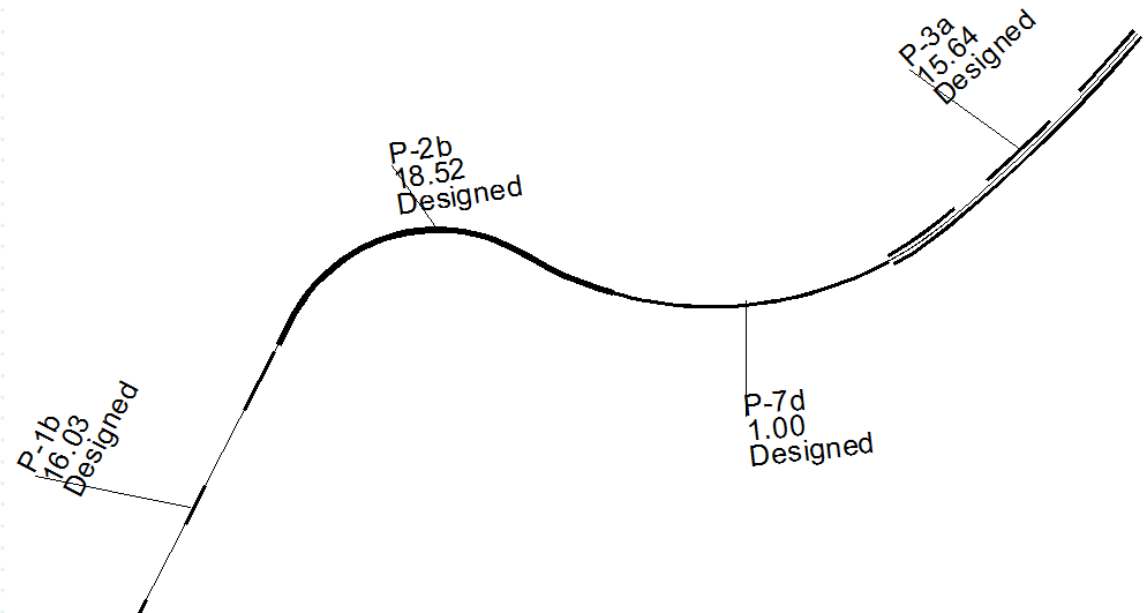
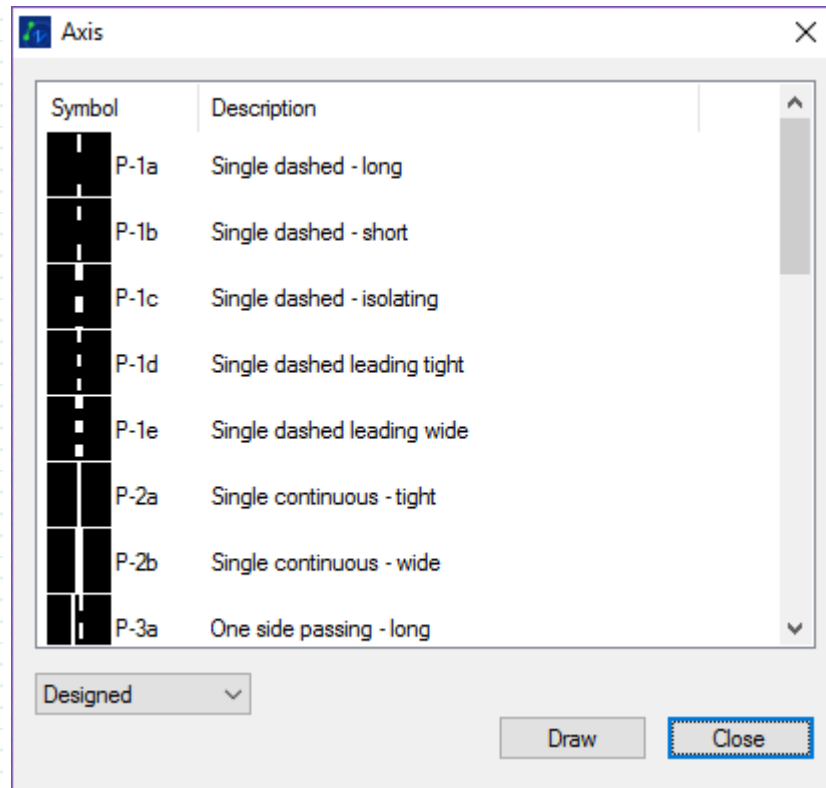
Exercise 3

- Create a new polyline in the drawing.
- Use the road kilometrage and kilometrage by points.

Horizontal signs

□ Axis

Axis should be drawn on an existing line in the drawing.



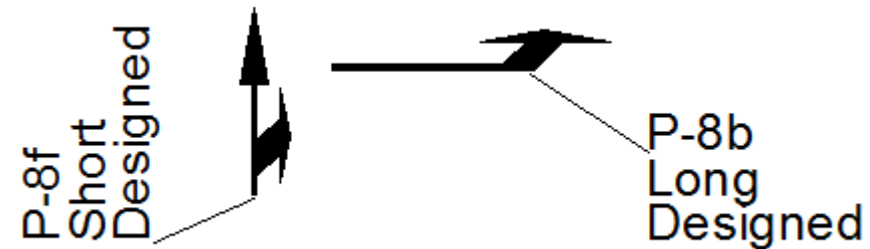
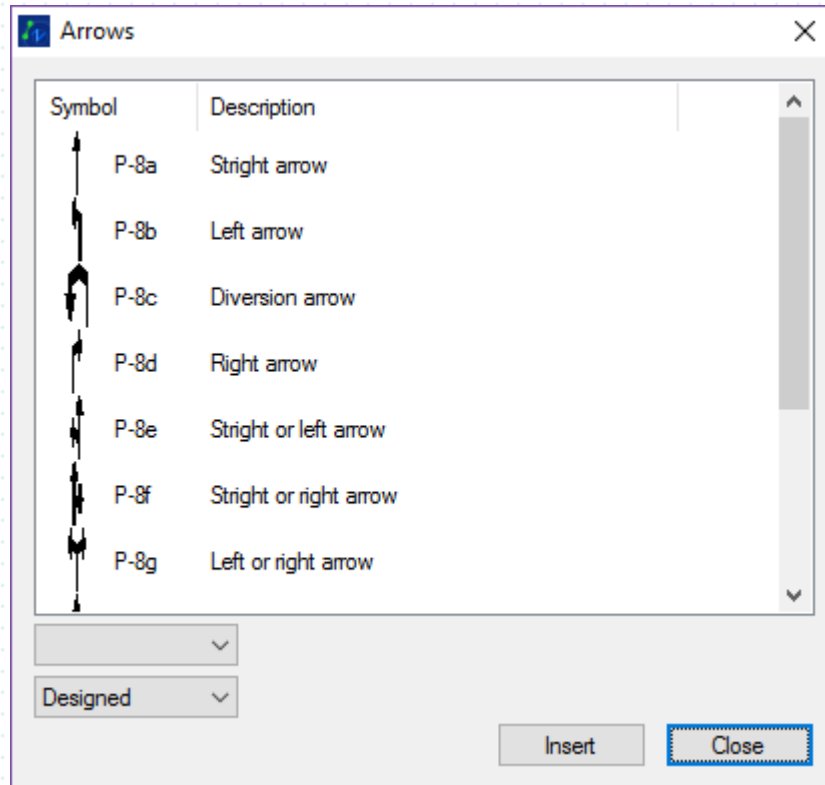
You have to select two points on the line/polyline and select the description point.

The state of sign you can choose in the dialog box.

Horizontal signs

□ Arrows

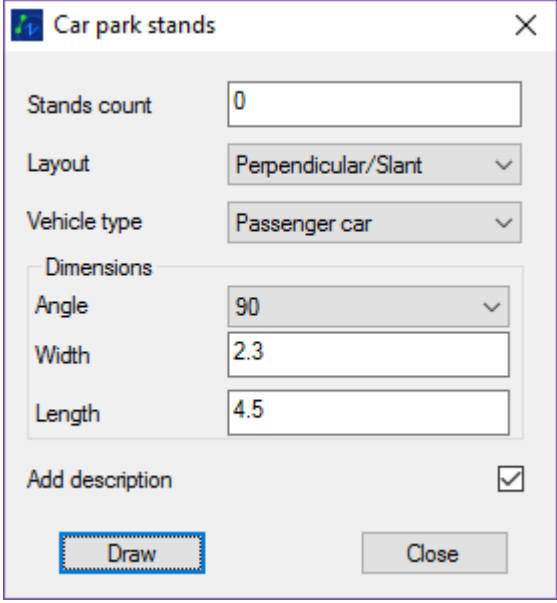
This function allows you to insert arrows from the library to the drawing. You have to specify the parameters in the dialog box and insert the prompts.



Horizontal signs

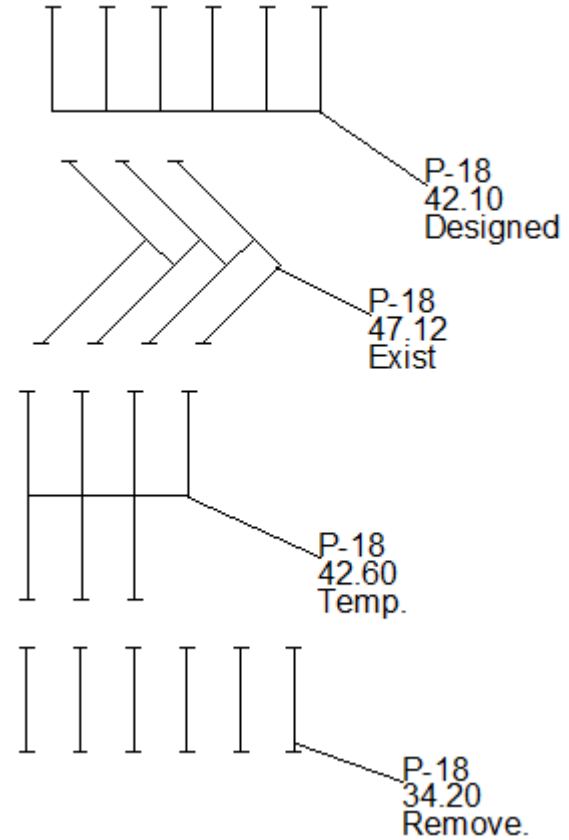
□ Parking places

Parking space can be defined by two points in the drawing by the amount that is written in the dialog box.



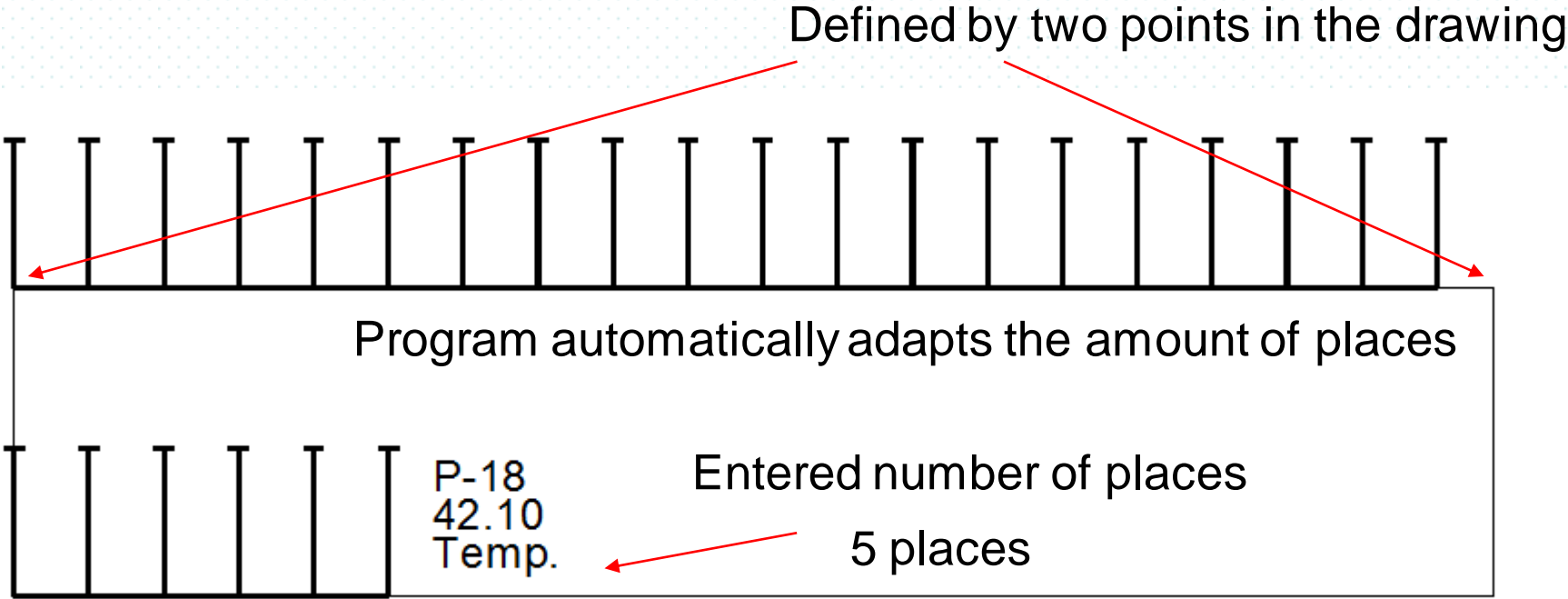
The dialog box is titled "Car park stands" and contains the following settings:

- Stands count: 0
- Layout: Perpendicular/Slant
- Vehicle type: Passenger car
- Dimensions:
 - Angle: 90
 - Width: 2.3
 - Length: 4.5
- Add description:
- Buttons: Draw, Close



Horizontal signs

- Parking places



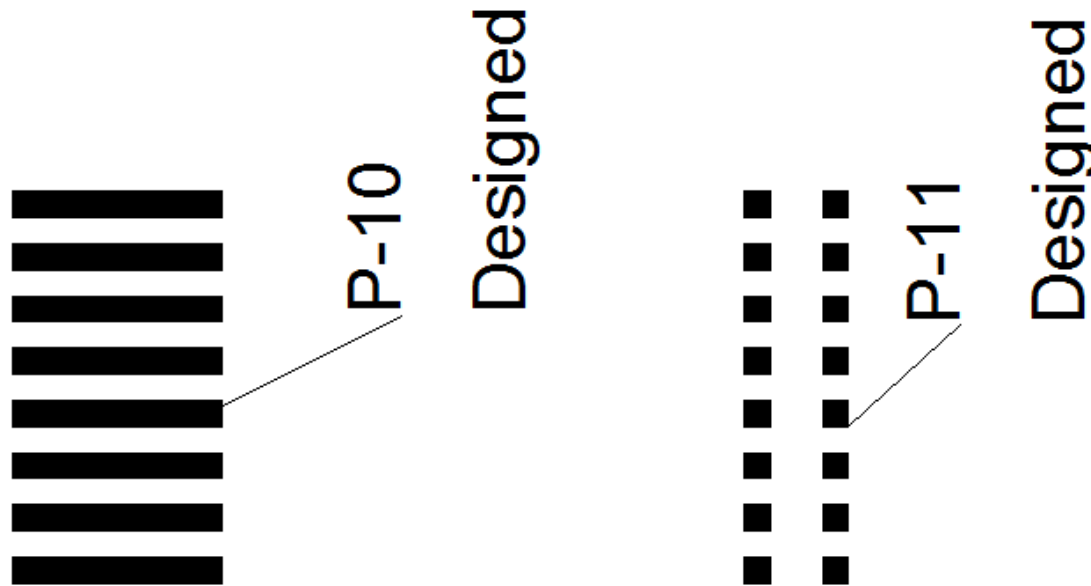
You can turn off insert the description in dialog box.

Add description

Horizontal signs

□ Pedestrian crossing / Passage for cyclists

To insert a pedestrian crossing specify points parallel to the axis of the road, axis points of crossing and specify the width and the state.



Excluded sufrace

The command P21 hatches selected area (outside of the traffic), so that its hatching angle is correct to the direction of the vehicles path.

The following hatching is made out of a collection of parallel lines which are slanted in accordance to the direction of vehicles path.

Excluded areas (P21) are used to:

Show the exact path of certain vehicles

- To extend the distance of the path from certain obstacles
- To "Surround" islands on roads or to substitute them.

There are 2 kinds of P-21 signs:

- P-21a (narrow) – width of the line = 0,24m and the distance of =0,39m – when the speed limit is lower or equal to 70km/h
- P-21b (wide) – width of the line = 0,60m and the distance of -0,98m – if the speed limit is higher than 70km/h

Excluded surface

Run the command, pick the type and the area and then in the command bar chose the Direction.
Select the drive direction and press Enter.

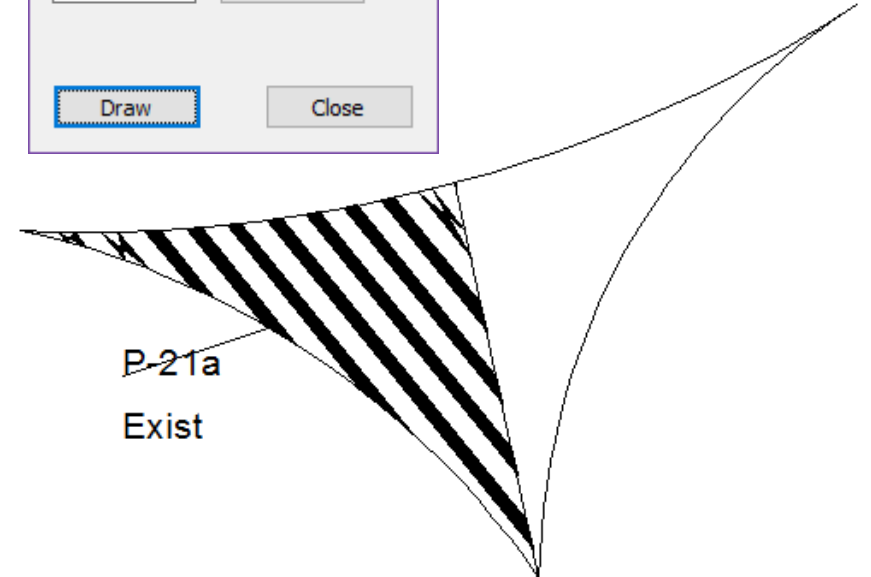
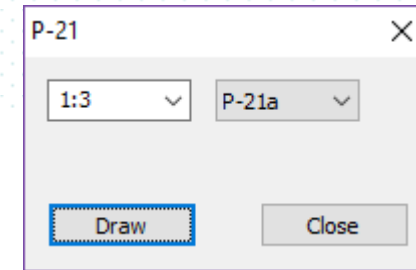
Area – selecting a certain area in which the hatch will be created.

Direction – it asks for the direction of the road (the angle of the line is dependent on the direction of the road)

Begin – Specifying the starting point of a hatch (useful when connecting hatches)

AX – Allows the user to draw on excluded from traffic surfaces on horizontal arcs

Continue – Draws a hatch on an excluded surface



```
Select parameters: [ARea/Direction/Begin/AX/Continue]<ARea>:d  
Pick drive direction:  
Select direction[Reference]:  
Select parameters: [ARea/Direction/Begin/AX/Continue]<Continue>:  
Select sign state[Designed/Existing/Temporary/Remove]:e  
Pick first point of description line:
```

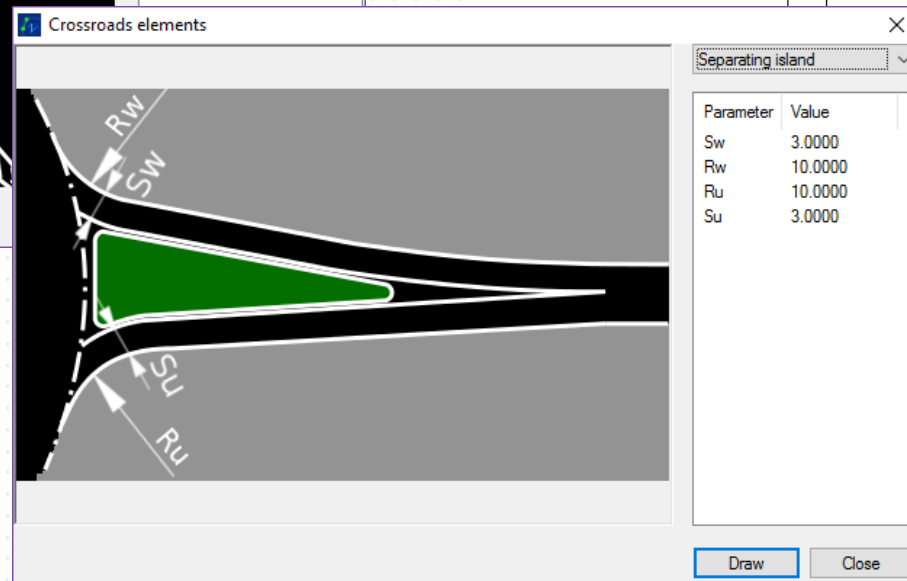
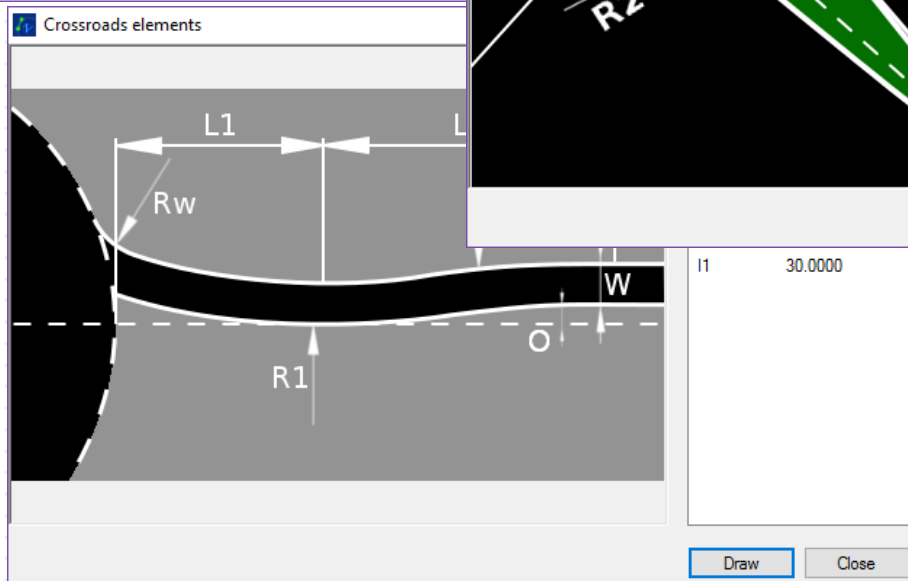
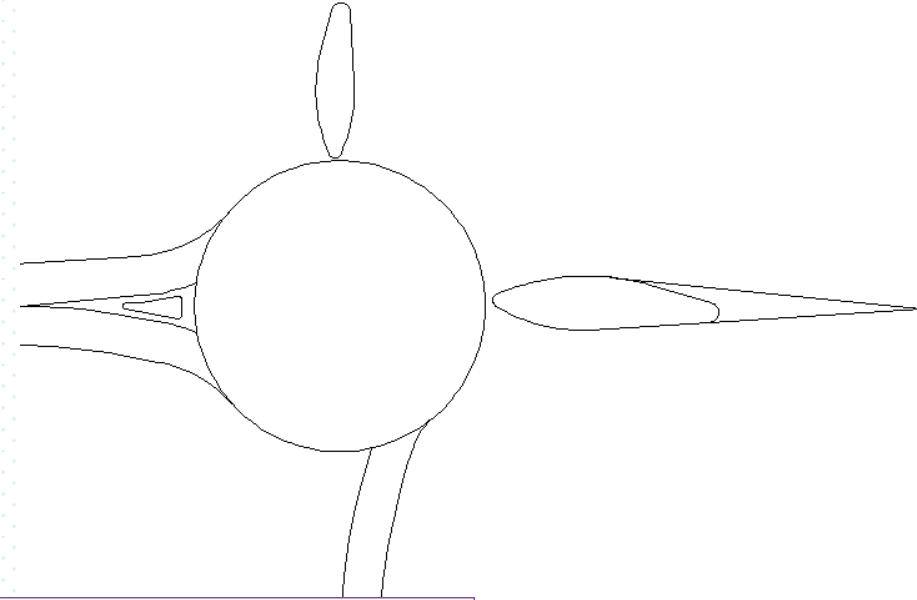
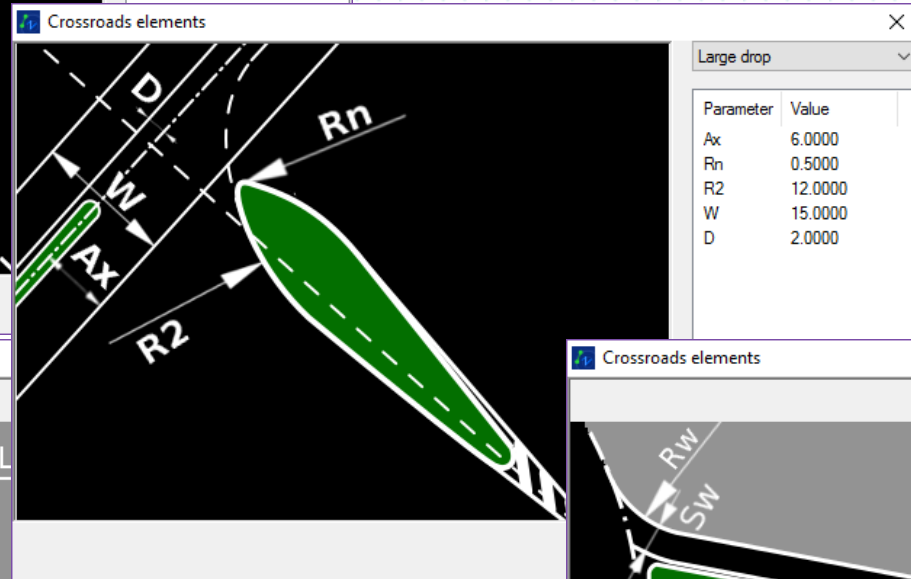
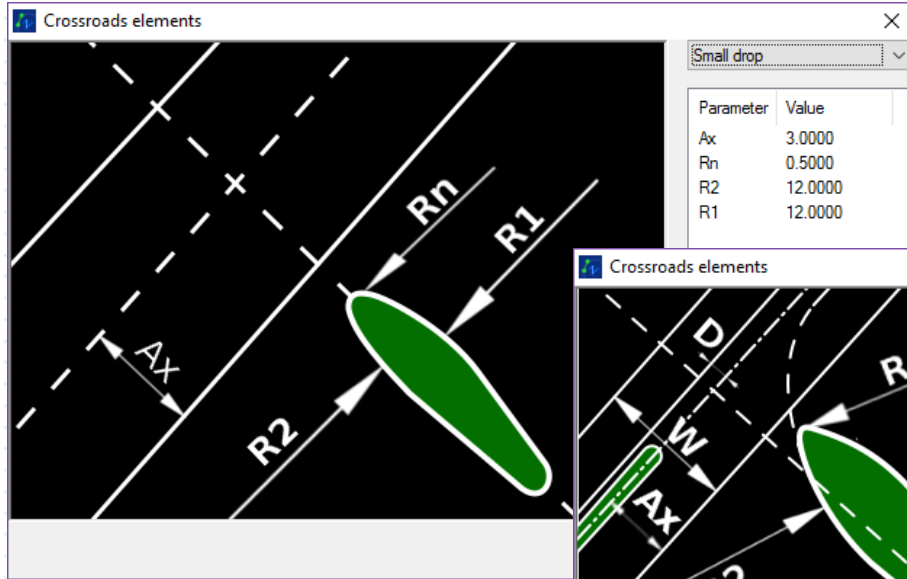
Command:

-89.0866, 1032.6985, 0.0000





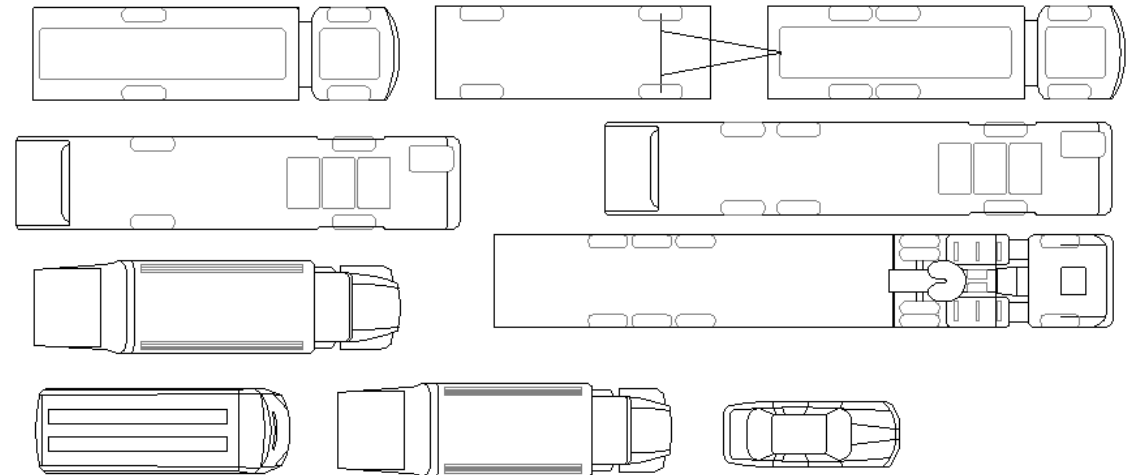
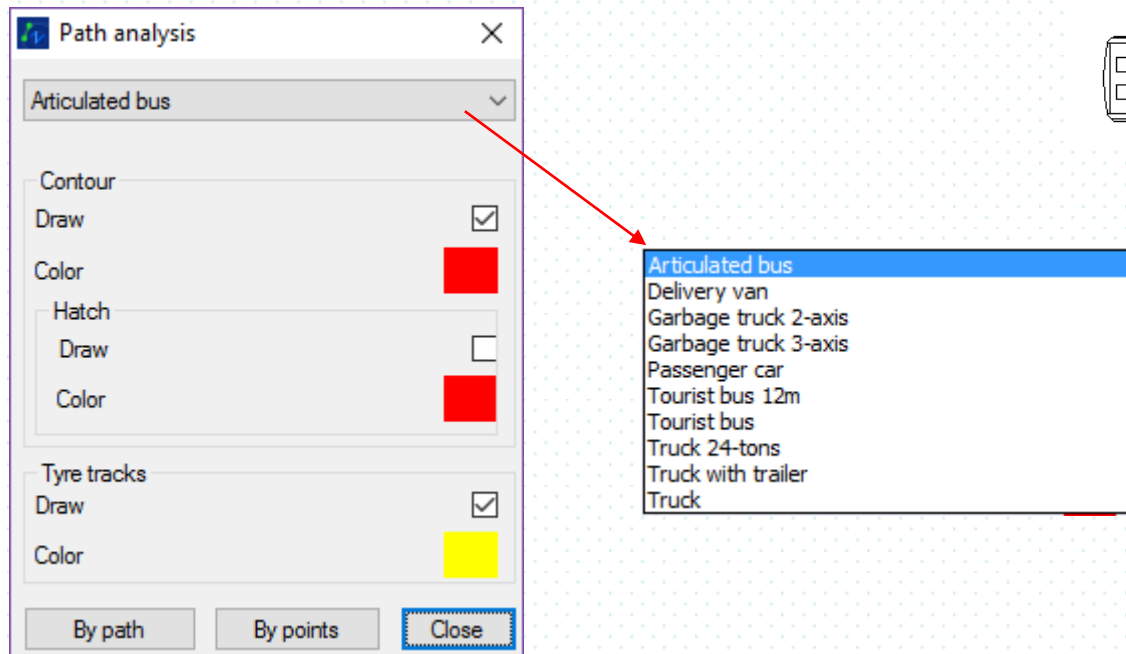
Crossroads elements



Trajectory

□ Path analysis 🚌

Command to check the path of a vehicle.
Select a vehicle from the vehicles library:



We can change the color of contour,
hatch and wheel traces.

We can also turn off their visibility.

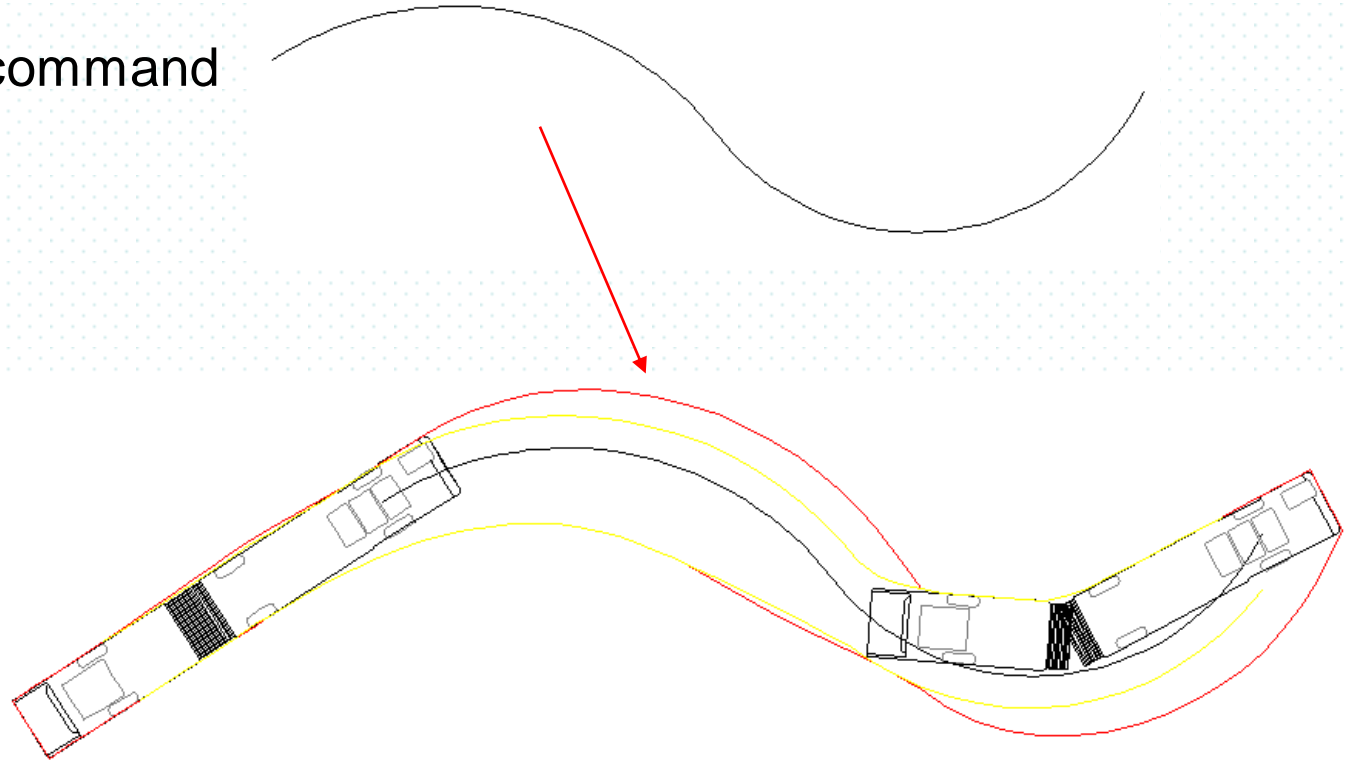
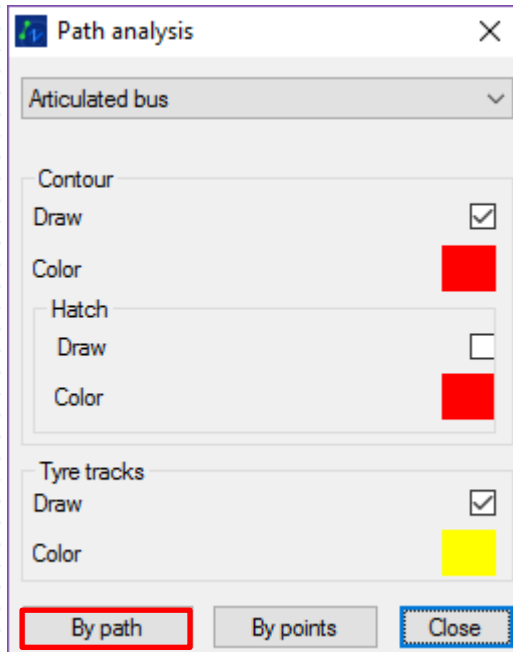
There are two methods:

- By path
- By points

Trajectory

□ By path

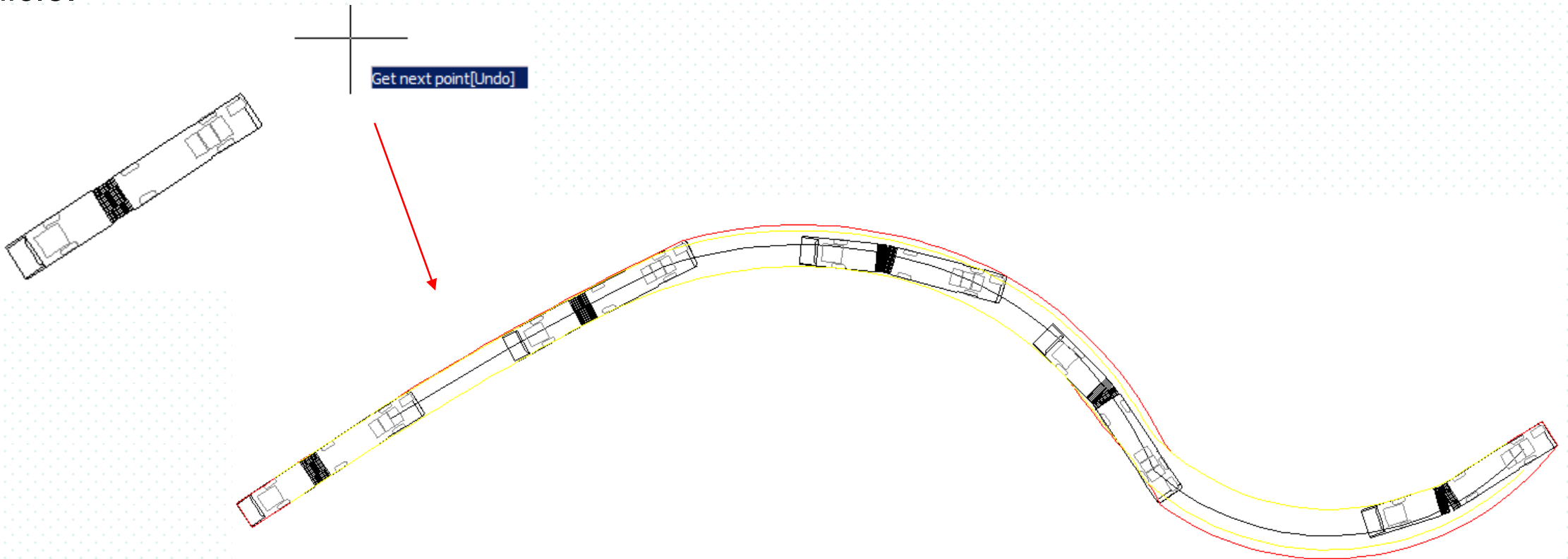
Create a path crossing -> Run the command
-> Select vehicle -> Select the path



Trajectory

□ By points

Please indicate the insertion point, then the direction and the next points of the path of the vehicle.



Designing of signs

By the ZWTraffic you can create your own board of sign.



You can use the special features.

Then save the DWG file and add the board of signs to your library of signs in ZWTraffic.



Designing of signs

Table – Green or Blue

When you run the command you have to pick first and the second corner of table.
Then in command bar will appear: [Big/Large/Medium/Small].

Roundabout

Second function is responsible for the outline of the roundabout.

Roundabout Filling

Pick center of the roundabout and direction of last departure from the roundabout.

Main Road

Select width and pick first and second point of road symbol.

Arc

For the arc you need to select existing axis in the drawing.



Designing of signs

Highway

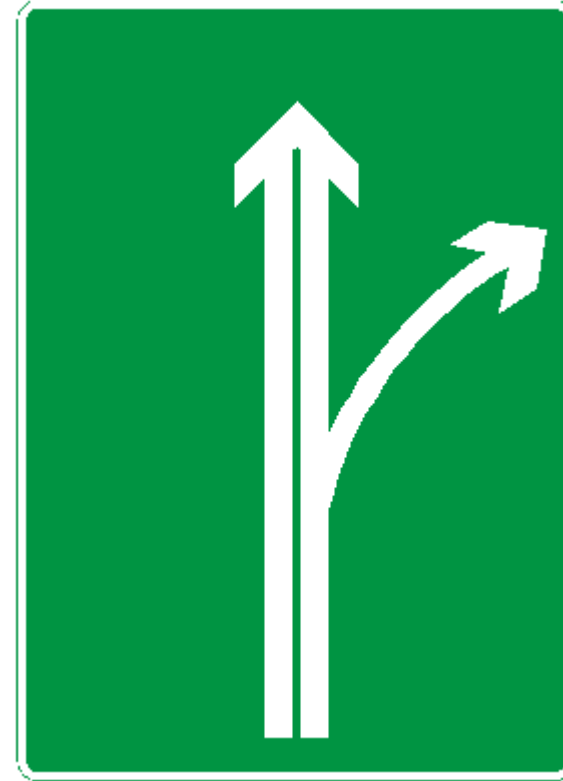
Pick first and the second point of road.

Highway line

Pick first and the second point of road.

Highway exit

Select the insertion point.



Designing of signs

Rules of designing a sign:

- Each sign has to be defined in separately
- Signs are drawn in a 1:1 scale in millimeters.
- Centre of the bottom line should be in the point 0,0,0.

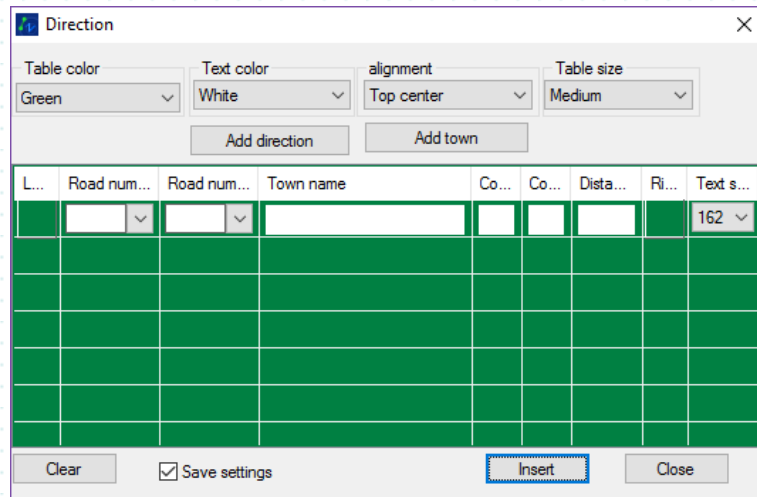


Signpost tables

Direction signs:

One of the most developed module is module which helps to create road signs. It lets you create many different road signs: E-1, E-2, E-4, E-5, E-13, E-14, E-15, E-16, E-17a, E-18a, E-21 and informational road signs can be added as well.

These are the windows which help in developing road signs:



The screenshot shows a software window titled "Direction" with a close button (X) in the top right corner. The window contains several configuration options:

- Table color: Green (dropdown)
- Text color: White (dropdown)
- alignment: Top center (dropdown)
- Table size: Medium (dropdown)

Below these options are two buttons: "Add direction" and "Add town".

The main area of the window is a table with the following columns: L..., Road num..., Road num..., Town name, Co..., Co..., Dista..., Ri..., and Text s... The table has a green background and contains one row of data with a dropdown menu showing "162" in the "Text s..." column.

At the bottom of the window are four buttons: "Clear", "Save settings" (with a checked checkbox), "Insert", and "Close".



Direction marking

Colour of text

Alignment

Size of table

Colour of table

Text size

Left Arrow

Distance

Country

Name of town

The screenshot shows a dialog box titled "Direction" with a close button (X) in the top right corner. The dialog is divided into several sections:

- Settings Section:** Contains four dropdown menus: "Table color" (set to Green), "Text color" (set to White), "alignment" (set to Top center), and "Table size" (set to Medium). Below these are two buttons: "Add direction" and "Add town".
- Table Section:** A table with 8 columns and 5 rows. The columns are labeled: "L...", "Road num...", "Road num...", "Town name", "Co...", "Co...", "Dista...", "Fi...", and "Text s...". The first row contains: a left-pointing arrow, a red color swatch, a yellow color swatch, the text "Warszawa", two empty cells, the number "126", and a dropdown menu showing "162". The rest of the table is empty.
- Footer Section:** Contains four buttons: "Clear", a checked checkbox labeled "Save settings", "Insert", and "Close".

Red arrows point from external text labels to specific elements in the dialog box:

- "Colour of text" points to the "Text color" dropdown.
- "Alignment" points to the "alignment" dropdown.
- "Size of table" points to the "Table size" dropdown.
- "Colour of table" points to the "Table color" dropdown.
- "Text size" points to the "Text s..." column header.
- "Distance" points to the "Dista..." column header.
- "Country" points to the "Co..." column header.
- "Name of town" points to the "Town name" column header.
- "Left Arrow" points to the left-pointing arrow in the first row of the table.

Additional functionality

□ Elevation mark

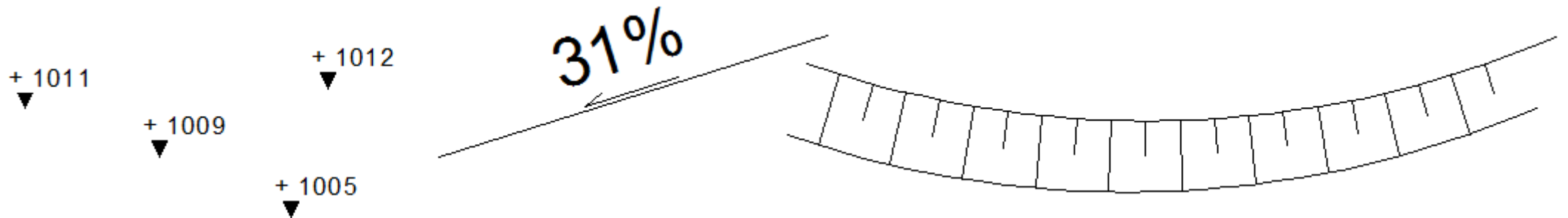
You can insert the elevation mark automatically to the appropriate level in relation to drawing. You can choose the type from several templates.

□ Slopes

It is possible to draw the line once the decline is determined (in percentage or relatively).

□ Scarp

It can mark slopes, giving them an upper and a lower edge. You can also determine the length of lines and their grouping.



Reports

- Using the program, you can create a list of blocks.

The screenshot shows the 'Attribute Extraction' application window. The 'Select Properties' dialog box is open, displaying a list of blocks and their properties. The dialog includes instructions: 'Select Propertise (Page 3 of 5) Please Select the Titles in Rows for Output Click the rightmouse on the list items.You can view other options.Besides,you can specify other displsy name,the name will be displayed in the heading of the output file.' There are two checkboxes: 'Exclude blocks without attributes(W)' (unchecked) and 'Exclude general block properties(P)' (checked). The 'Block' list shows various items with their indices and names. The 'Properties for checked b...' list shows various traits like Name, Symbol, Powierzchnia, etc. Below the dialog, a table displays the extracted data with columns A through F.

| | A | B | C | D | E | F |
|----|--------|---------------------|----------------------|---------------|----------|--------------|
| 1 | Amount | Name | Symbol | Przeznaczenie | Wielkość | Odblaskowość |
| 2 | 1 | S_Znaki_OpisPionowe | A-12b | tymczasowy | W | I Generacja |
| 3 | 1 | S_Znaki_OpisPionowe | A-14 | tymczasowy | W | I Generacja |
| 4 | 1 | S_Znaki_OpisPionowe | A-16 | ist | W | I Generacja |
| 5 | 1 | S_Znaki_OpisPionowe | B-33 | likwidowany | W | I Generacja |
| 6 | 1 | S_Znaki_OpisPionowe | B-36 | ist | W | I Generacja |
| 7 | 1 | S_Znaki_OpisPionowe | C-11 | ist | W | I Generacja |
| 8 | 1 | S_Znaki_OpisPionowe | D-15 | proj | W | I Generacja |
| 9 | 1 | S_Znaki_OpisPionowe | D-18 | proj | W | I Generacja |
| 10 | 1 | S_Znaki_OpisPionowe | E-13 | proj | W | I Generacja |
| 11 | 1 | S_Znaki_OpisPionowe | E-17a | | | I Generacja |
| 12 | 1 | S_Znaki_OpisPionowe | E-18a | | | I Generacja |
| 13 | 1 | S_Znaki_OpisPionowe | E-4 | | | I Generacja |
| 14 | 1 | S_Znaki_OpisPionowe | E-4 | | u | I Generacja |
| 15 | 1 | S_Znaki_OpisPionowe | E-5 | | R | I Generacja |
| 16 | 1 | S_Znaki_OpisPionowe | F10 | ist | W | I Generacja |
| 17 | 1 | S_Znaki_OpisPionowe | Nie dotyczy chodnika | ist | W | I Generacja |
| 18 | | | | | | |

Settings

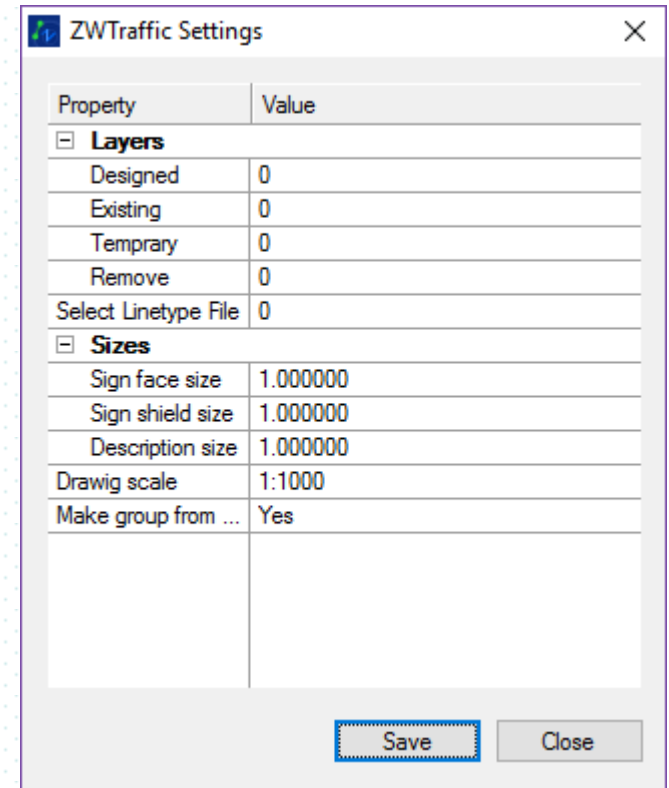
You can select the layers on which the signs will be placed on.
You can select one of existing layers, or you can enter a new layer name, which will be created and defined automatically.

Sign size.

On vertical signs you can define the size of the inserted faces of a sign.
Another option is the ability to define the size of the face of the sign, mounting of the sign and a description of the sign to be inserted.

To easily manage sign mounting, sign face, description lines and description blocks can be grouped up. This setting is on by default, therefore groups will be created.

You can also set a default scale of a project. It's useful to set sign sizes.
Available scales are 1:1000 or 1:500.



Settings

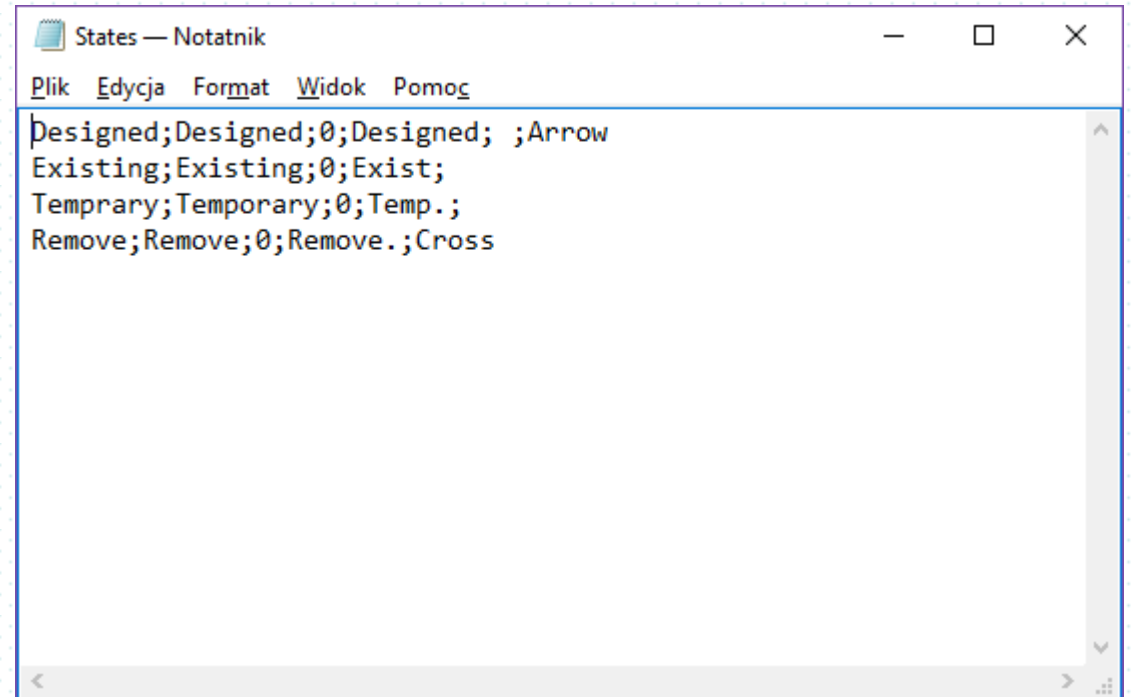
The user can modify the states of signs: designed, existing, removable or temporary.

The settings are saved in a text file.

Its default path is:

C:\Szansa\ZWTraffic\2017\Configuration

A States.ini file can be found there and the user can modify or complete the states of signs.



```
States — Notatnik
Plik Edycja Format Widok Pomoc
Designed;Designed;0;Designed; ;Arrow
Existing;Existing;0;Exist;
Temporary;Temporary;0;Temp.;
Remove;Remove;0;Remove.;Cross
```

Thank you for your attention!

My e-mail, if you have questions 😊

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