



NEW RELEASE - URBANO 9.2.3.0

New features and list of repaired bugs



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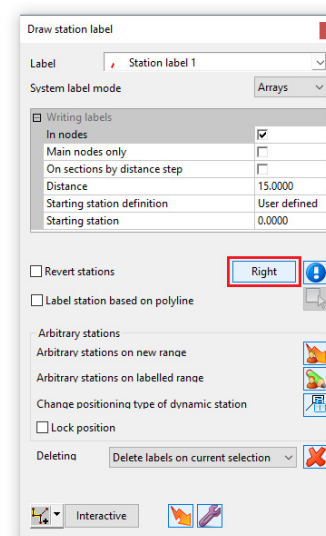
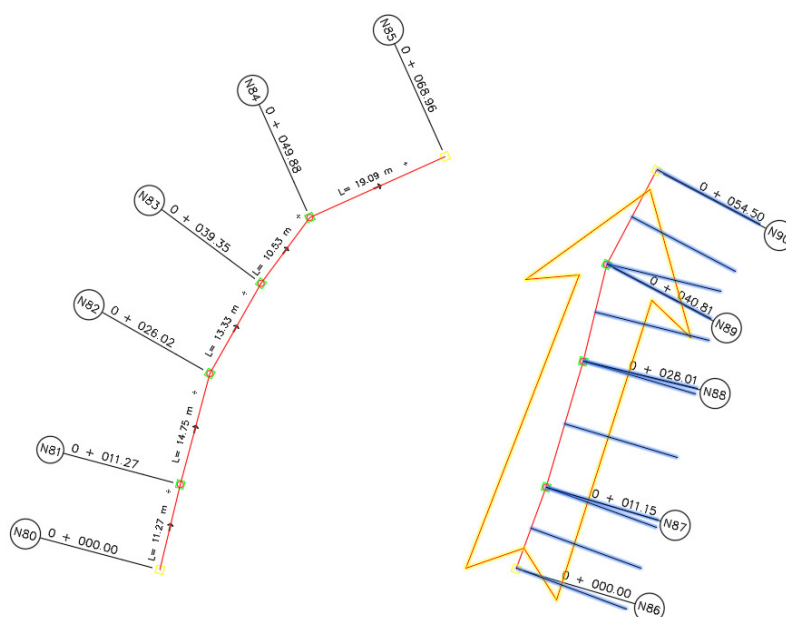
1 New features

1.1 General

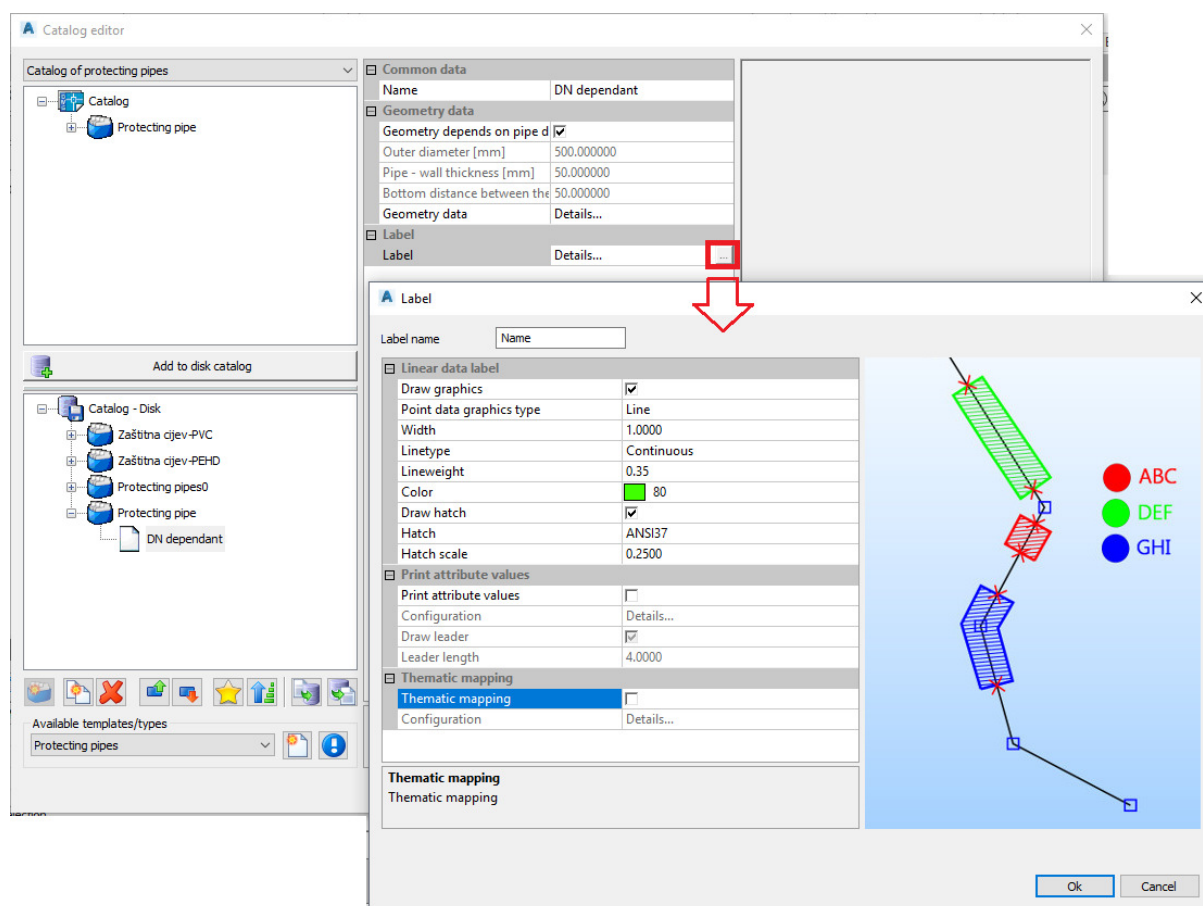
1. The most important thing to say for new Urbano version is the support for the latest version of Autodesk platform – AutoCAD / Civil3D / MAP3D 2019. Besides that, Urbano will no longer support 32-bit versions of Autodesk platform, while the oldest supported version is version 2015. From now on, Urbano 9.2, supports following versions:

- AutoCAD / Civil3D / MAP3D 2015 64-bit
- AutoCAD / Civil3D / MAP3D 2016 64-bit
- AutoCAD / Civil3D / MAP3D 2017 64-bit
- AutoCAD / Civil3D / MAP3D 2018 64-bit
- AutoCAD / Civil3D / MAP3D 2019 64-bit

2. Function **Invert editor** has been renamed to **Input and edit pipe invert**, since this function supports both invert definition and editing.
3. Rotation of **station labels** has been improved – the program will always place station labels in the direction of array, no matter which side you choose – the labels will always be rotated in a way to read them easily. Option **Right / Left** marked on the picture has been changed.



4. Station labels are supported in Urbano XML import/export functionality.
5. Graphic label in plan for protecting pipes has been added. To show the label in plan, do the following:
 - a. Create new protecting pipe in the Catalog of protecting pipes, to enable this new option.
 - b. Open pipe parameters – new parameter “Label” will be available.
 - c. Click the icon for label definition (...), the program will show the window with the label parameters. It is possible to define label color, hatch pattern and width:



The label is dynamic, which means that it will be updated every time when changes occur.

1.2 Hydra

1. Functions **Define curves** and **Define patterns** were merged into one function **Define curves and patterns**, since both functions opened the same function – **Catalog of curves/patterns**.
2. Error detection function is embedded in Hydra functions (Water demands and scenario analysis – Calculation; Pipe optimization; Check calculation data; Hydraulic calculation; Write INP file). This function has been expanded, so the program will now detect following errors as well:
 - **WATER TANK:**
 - a. “Invalid lower/upper levels were specified for a tank. Initial water level is lower than minimum water level!”
 - b. “Invalid lower/upper levels were specified for a tank. Initial water level is higher than maximum water level!”
 - **PUMP:**
 - a. “A pump has an invalid pump curve. A valid pump curve must have decreasing head with increasing flow.”
3. Refresh labels – After hydraulic calculation of water supply system in Hydra, the program will refresh labels when pressing **Save** button (saving results) instead of **Close** button (closing the dialog).
4. Number of decimal places for parameters in functions **Hydraulic node equipment** and **Network elements data** has been increased to 6 decimal places for data: **Roughness** and **Coefficient 'K'**.



1.3 Polygon

1. Function **Overlapping polygons** – When the user erases all graphical entities of the system (while this function is still open) and then picks on one of the overlapping polygons in the list, the program shows an error and closes unexpectedly. **Repaired.**
2. If there are more systems of polygons (that represent cadastral parcels), it can happen that two polygons (parcels) have the same name. Urbano doesn't allow it, but it doesn't report it either when recognizing the data from the drawing. No notification is shown, the program should show the message: Data could not be assigned for "x" polygons. Polygon name must be unique. **Repaired.**

2 Repaired bugs

2.1 Installation

1. When uninstalling Urbano, the routine removes **StARSGeneralU_2.msg** file from the folder **C:\Program Files (x86)\Common Files\StARS\LicenceManager_local**.
When you install Urbano again, the program will bring this file again. However, if you install new version first and then uninstall the old one, the routine removes this file regardless. This caused a problem in License Manager webpage – buttons were blank. **Repaired.**

2.2 System

1. **Draw network elements** – Option **Constant section length [m]** – In some cases, after using this function, the program wouldn't refresh styles and labels in plan. **Repaired.**
2. **Intersection analysis** – This function shows an error and the program closes unexpectedly when defined in the layout style that the intersection point is to be drawn as AutoCAD block.

This error occurred only on AutoCAD 2013. The reason was that the function for block insertion in AutoCAD 2013 worked differently than in newer versions – the program would open the block as the drawing first (in the background), and then it would insert it as block in said drawing.

3. **Theme mappings** – If you save a configuration of Theme map to Disk Repository, restart CAD and then try to delete it, it is not possible to do it. The program shows an error and closes unexpectedly. **Repaired.**
4. **Branches** – Problem refers to automatic creation of branches when importing from external source. Namely, when importing from external source, the program tries to automatically create minimum number of branches. There is an internal rule, that all sections within the branch must have the same direction. This causes the problem, since in some special cases the program changes the original direction of the section. **Repaired** – If the node connects two sections of opposite directions (which means it is either the first or the last node for both of them), the program will mark it as **main node**, which means that this node will be the end of the branch.
5. Function **Selection manager** (on top of the Workspace) – options **Append to selection** and **Remove from selection** don't work properly. **Repaired.**
6. Function **System check** – The program shows a warning Node close to section, but not connected for the subsystem nodes of house connections/gutter drains. **Repaired.**
7. **Editing – Node editing – Connect existing node to section** – This function should insert the node to the existing section, which means that it will split that section in two. In case



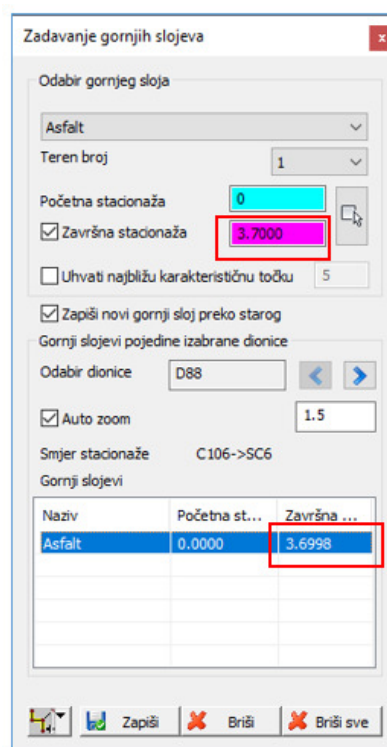
when this node is already connected to some other section, it will become the node where three sections meet, and it should be converted to main node. The program doesn't do it, so **System check** function shows a warning: "Node XY should be defined as main." **Repaired.**

2.3 Previews

1. **Dynamic previews** – Draw AutoCAD table – the program doesn't show the header in the table. **Repaired.**
2. Data validation – Options **Between** and **Not between** show the same results, instead of the opposite. **Repaired.**
3. Classic previews (Workspace) – Option **Justify Left/Center/Right** doesn't work for the first data in the table. **Repaired.**

2.4 Excavation data and report

1. When assigning different items of upper layers to sections, the program doesn't store the proper value, regardless of the input method (numerically, graphically). The value is correct in first two decimal places, but not in four (which can be seen in the input field). **Repaired.**
2. When assigning more upper layers on the same section (from station to station), the calculation of upper layer volume is not correct. The program never includes the last item of the last upper layer in the calculation. When the array is reversed, the program doesn't include the last item of the first upper layer. The error was related with the direction of elements. **Repaired.**
3. When an item from the upper layer group has been defined as a **pavement structure** (which means that it is possible to define wider area of excavation for this layer), the program defines all other items as pavement structures as well. **Repaired.**

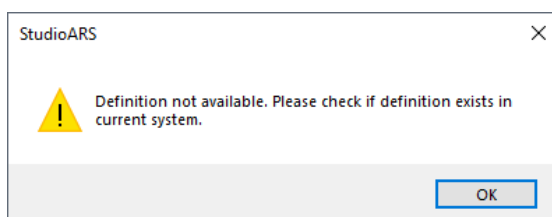


2.5 Longitudinal sections and related functions

1. Configuration of longitudinal section – the program reverses component order. It happens in the following case:
 - a. Configuration – **Edit** – change some data or graphical parameter (i.e. pipe color) – **Apply** button
 - b. Add new component**Repaired.**
2. System **Vacuum**. When inserting **LIFT** node, the program removes all auxiliary elements (i.e. vertical lines or lines parallel to terrain line). **Repaired.**
3. **Longitudinal section** – component **Longitudinal section data on stations** offers various data (terrain elevation, pipe elevation, pipe top depth, node station...) to be shown on various characteristic points – nodes, arcs, additional points, vertical lines, intersection points.... It didn't work properly on vertical lines. **Repaired.**

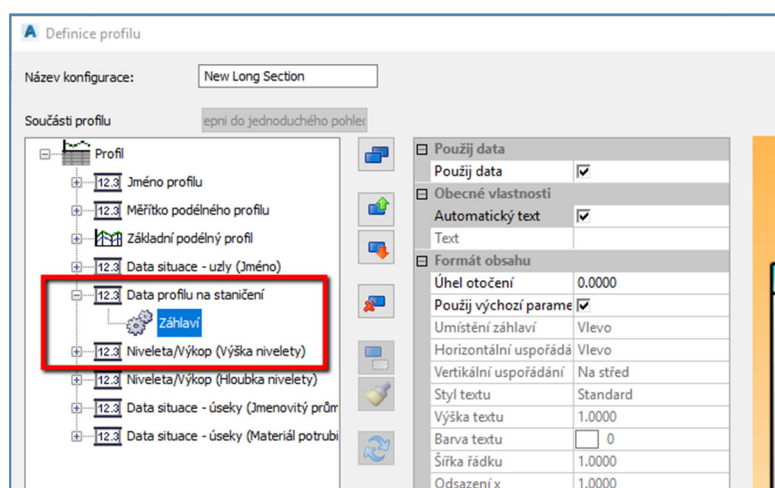


4. Command **Edit configuration** doesn't work if the user selects longitudinal section that belongs to another system (not currently active). The program shows this message:



After that, the program shows an error and shuts down unexpectedly. **Repaired.**

5. Longitudinal section – Component **Longitudinal section data on stations**, stations of arc nodes doesn't work properly in case when the station has been assigned to elements by using function **Insert data – Custom station**. **Repaired.**
6. **Longitudinal section** – Component **Longitudinal section data on stations** – It is not possible to edit data, only header. The function has been licensed under wrong module. **Repaired.**



7. **Longitudinal section** – Component **Level Line/Trench** (i.e. Invert elevation, Invert depth) – Connection lines – If the component doesn't contain any data, the program draws connection lines on high coordinates. **Repaired.**
8. When assigning trenches to sections, trench data in longitudinal sections (trench bottom depth or elevation) will not be automatically updated. It is necessary to redraw longitudinal sections. Graphical part will be updated automatically. **Repaired.**
9. When redrawing longitudinal sections, the program shows an error and closes unexpectedly. The problem was caused by the manhole that has been assigned to a node, but its definition wasn't available in the catalog. The error has been repaired, and if this happens again, the program will redraw longitudinal section. Unavailable manhole will be ignored.
10. **Longitudinal sections - Draw frames to Layout** – When selecting more longitudinal sections and sending them to more layouts (by restricting the paper length), the program doesn't insert the table. **Repaired.**
11. **Longitudinal sections – Draw frames to Layout** – If the configuration of longitudinal section has been defined in units [mm], paper length restriction didn't work properly. **Repaired.**



12. New function **Edit invert in longitudinal section** – option **Move node invert**. The function didn't work properly, but only in some specific cases (it was related to certain settings inside of the longitudinal section configuration).
13. **Input and edit pipe invert** – Default pipe position has been set as **bottom inner**, but when using this function, the program would define the pipe with the position **bottom outer**. When changed at least once, it worked properly. **Repaired**.

2.6 Automatic invert calculation

1. Option Cascade parameters has been repaired. In certain cases, the program didn't consider conditions for minimal and maximal cascade depth.
2. Option Insert nodes has been changed. This option was previously working in a way that the program would only check the distance from the previous node, while it should have checked the distance from the following node as well. This has been **repaired** in a way that the program inserts new nodes on same distances (splits the section in two, three, four new sections...).

2.7 Canalis

1. Function Flow calculation manager has been renamed to Flow calculation.
2. **Rain flow – IDF method** – In the list of parameters, number of possible decimal places has been increased to 10. Water viscosity equals 0,00000131. The problem has been noticed when comparing results for “Time of flow thru section” calculated by IDF method calculation and by Hydraulic calculation in Canalis. The difference was minor, but it happened since Hydraulic calculation considers value of viscosity as 0,00000131, while the IDF calculation considers 0,000001 (first 6 decimal places only).
3. **Rain flow – IDF method** – It is possible to define calculation accuracy to 10 decimal places. Also, maximum number of iteration steps has been increased from 20 to 50. This doesn't affect the calculation speed.
4. **Rain flow – IDF method** – Option **If the pipes are set** offers several choices. Option Ignore wasn't clear enough, so it has been changed to Ignore existing pipes.
5. **Calculation of transit flow** – Function didn't work properly if another system's section has been connected to certain node. After that node, transit flow has been found to be zero, which means that the program started over in that node. Older function for the calculation of transit flows has been working properly. **Repaired**.
6. **Flow calculation** – Calculation of transit flows didn't consider sections that were drawn afterwards, after the calculation of transit flows has been done at least once. All other calculation options offer the possibility to select elements, while the function for calculation of transit flows always considers the entire system. To make the program consider new sections, it was necessary to delete the old configuration for calculation of transit flow and create a new one. **Repaired**. Now the program will automatically consider all sections present in the drawing at that moment.
7. **Flow calculation – Additional flows – Foreign waters**
 - a. For calculation option Using house waste flow influence areas, parameter **Waste water flow coeff. [l/s/ha]** has been changed to **Waste water flow coeff. [l/s/ha] or [l/s/inhab.]**, because of the option Use average population density (it is turned on by default).
 - b. If this option is turned on, **Waste water flow coeff.** should be defined in [l/s/inhab.], which means that the program will multiply this value with the **number of the inhabitants on section**.



- c. If this option is turned off, **Waste water flow coeff.** should be defined in [l/s/ha.], which means that the program will multiply this value with the **influence area that belongs to that section.**
8. **Flow calculation – Additional flows – Additional rain flow inside waste water channel**
 - a. Additional flow coeff. [l/s/ha] will now be multiplied with catchment area, instead of influence area.
 - b. This function will not include number of inhabitants.
9. **Hydraulic calculation in pressure pipelines** – Closing the function dialog didn't finish the function properly. Because of this issue, the program didn't update hydraulic calculation data in this function and other hydraulic calculation functions automatically (Flow calculation in Canalis, Pipe optimization and Hydraulic calculation in Hydra, Water demands and Scenario Analysis in Hydra).

2.8 Pipe statics

1. When the value of coefficient **Alpha B** turns out to be more than 1.00 for pipes with the outer diameter smaller than 250 mm, the program should consider its value as 1.00. **Repaired.**
2. When selecting bed type as type III, the program doesn't calculate forces that affect the pipe – results are equal to zero. The problem is in pipe bed angle – for this type of bedding (III), it is required to choose pipe bed angle of 180 degrees (pipe is on top of the bedding, it is not lowered inside).

2.9 Hydra

1. **Refresh labels** – After performing hydraulic calculation of water supply system in Hydra, hydraulic values in node and section labels were updated automatically, while arrows that show flow direction were not updated automatically. **Repaired.**
2. **Water demands and scenario analysis** – When creating configuration for water demands and rename it in the dialog, the program renames it in the tree-view on the left as well, but it doesn't rename the corresponding user data. When closing the dialog and open it again, the configuration has the old, default name. **Repaired.**

2.10 Geodesy

1. **Parametric trench – Excavation report** – Program shows warnings when creating excavation report, although the parametric trench has been defined properly, with all the relevant data (trench layers, top layers...). In the excavation report, excavation quantity is equal to zero for some cross sections, without any apparent reason. This happens in case when the main axis has been created by conversion from AutoCAD polyline which contains arc. By changing it – creating polyline without arc (arc divided to many small straight segments) and **then** converting it to the main axis, everything works fine. The problem was caused by the calculation of stations (chainage) of two adjacent cross axes – they were different in the tenth decimal place. **Repaired.**
2. **Draw – Draw cross lines (axes)** – When drawing cross lines on constant distance, option “In node points” has been renamed to “In alignment breakpoints”.



2.11 Polygon

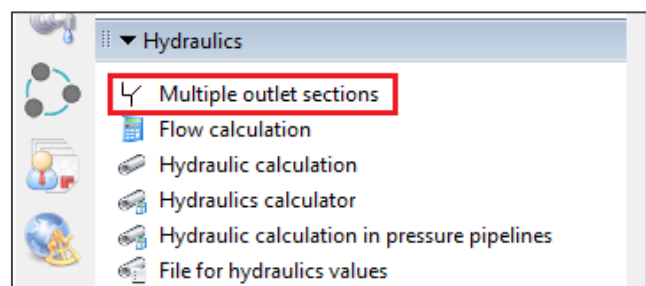
1. Function **Overlapping polygons** – If the user deletes all drawing entities of the system (while the function is still open), and then clicks on one of those polygons inside the list, the program shows an error and closes unexpectedly. **Repaired.**
2. Applying **Marking** for polygons – option **Interactive**. If picking more than one polygon, the program shows an error and closes unexpectedly. **Repaired.**
3. Function **Fast preview** doesn't work properly, if configuration contains recently created user data (i.e. created when importing SHP file). **Repaired.**
4. **Table previews** for polygons (classic). Polygon sorting doesn't work properly, in some cases the program shows an error and closes unexpectedly. **Repaired.**
5. Function **Search** (icon Binocular) on top of the Workspace doesn't work for polygon system. Program shows all available polygons, but when selecting some of them in the list, nothing happens. It is the same when typing the name of specific polygon. **Repaired.**
6. Function **Copy nearest data**. When selecting few polygons and hit the **Conversion** button, program lists many warnings "Data without entities", since it checks all texts/blocks. Because of this check, the function takes the same time when reading data as it would take if the entire system was selected. For now, the program will not show these warnings no more, while it will still check the entire system.

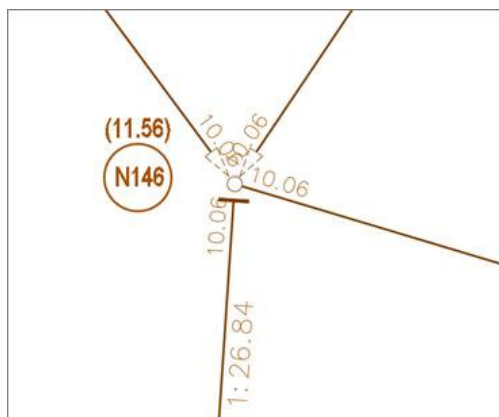
2.12 ISYBAU-XML

1. **Repaired problems related to ISYBAU-XML import/export (German version)** – Problem: ISYBAU-XML file exported from Urbano 9.1 wasn't readable by program HYSTEM-EXTRAN, while it worked fine for the file exported from Urbano 9.
Comparing both ISYBAU-XML files and loading them to HYSTEM-EXTRAN, we have found that Urbano 9.1 didn't properly read the dwg file created by Urbano 9, and thus the export didn't contain all the proper information. ISYBAU-XML file exported by Urbano 9.1 doesn't contain proper information about nodes (Knoten) and sections (Haltungen) that the program HYSTEM-EXTRAN requires when importing the file.

2.13 Turkish extension

1. Changes in the function **Automatic invert calculation** (see 2.10).
2. New options in the Style for Bank of Cities (İlbank):
 - a. For the nodes that connect more exiting sections, new graphic marking has been added. Short line will be added for the section that represents the start of the new array/branch that is not functionally connected with the previous sections. The program will mark it automatically, but it is required to use the function **Multiple outlet sections** to determine which section will be used to transfer the flow and which one will be "blind" (start of a new branch/array).





b. Tools – Insert data for Bank of Cities style – New category added – 3rd Stage.