



Civil Solutions 2027.0



Plateia
by CGS Labs



Ferrovia
by CGS Labs



Aquaterra
by CGS Labs



Autopath
by CGS Labs



Autosign
by CGS Labs

What is new in CGS Labs Civil Solutions 2027.0 | ROAD



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1. Supported CAD platforms

CGS Labs Civil Solutions 2027.0 is now compatible with the new Autodesk version 2027, as well as the latest BricsCAD v26.

With CGSLABS 2026 Civil Solutions, support for CAD platforms now includes the following CAD platforms:

Autodesk	BricsCAD
AutoCAD/Civil 3D	
2027	V26
2026	V25
2025	V24
2024	
2023	
2022	
2021	
2020	

CGS LABS 2027 Civil Solutions is a major version upgrade. Users can install the newest CGS LABS 2027 Civil Solutions side by side with previous CGS Labs versions (e.g. 2026, 2025 or older). Thus, preserving settings on existing CGS Labs software versions. Further updates are going to affect the latest CGSLABS 2027 version only.



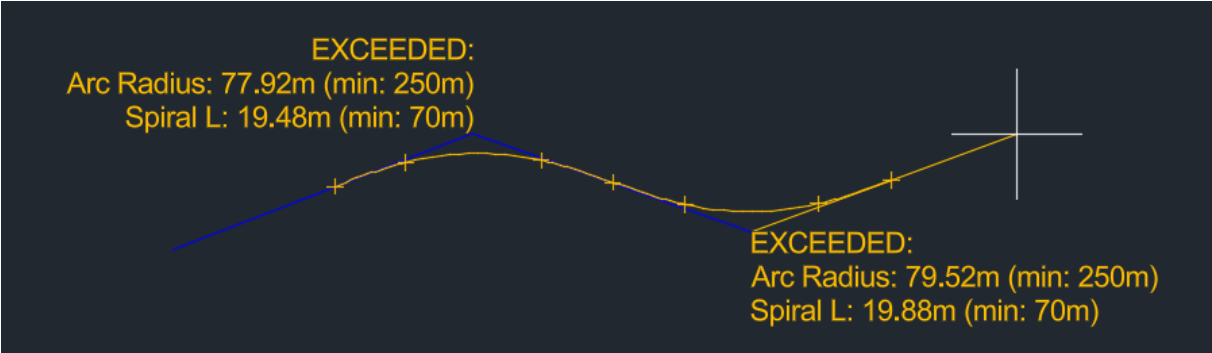
2. PLATEIA

2.1. ENHANCEMENTS

21E, 21F – Horizontal alignment standard compliance check

A new interactive compliance check has been introduced to verify whether the horizontal alignment meets minimum and maximum design parameters for the selected road category. The check evaluates parameters such as minimum radius (Rmin), minimum curve length (Lc min), minimum spiral parameter (A min), minimum spiral length (Ls min), and minimum and maximum tangent lengths (Lt min, Lt max), based on the selected country standard or technical specification.

If the previewed alignment exceeds defined limits, the affected elements are highlighted in orange, providing immediate visual feedback during design. This allows potential issues to be identified and corrected before the alignment is finalized, reducing the need for later adjustments.



31G, 3H – Profile Line standard compliance check

New interactive way of checking if the design is compliant with minimum/maximum design parameters for selected road category has been implemented. This now checks maximum longitudinal slope (S max), minimum convex radius (R min convex), minimum concave radius (R min, concave) and minimum distance between bends depending on the selected country standard or technical specifications.

This is now seen as orange line or text if the preview location is exceeding those parameters. This gives user visual feedback that something probably needs to be changed instead of only getting this information after the vertical alignment is already drawn.

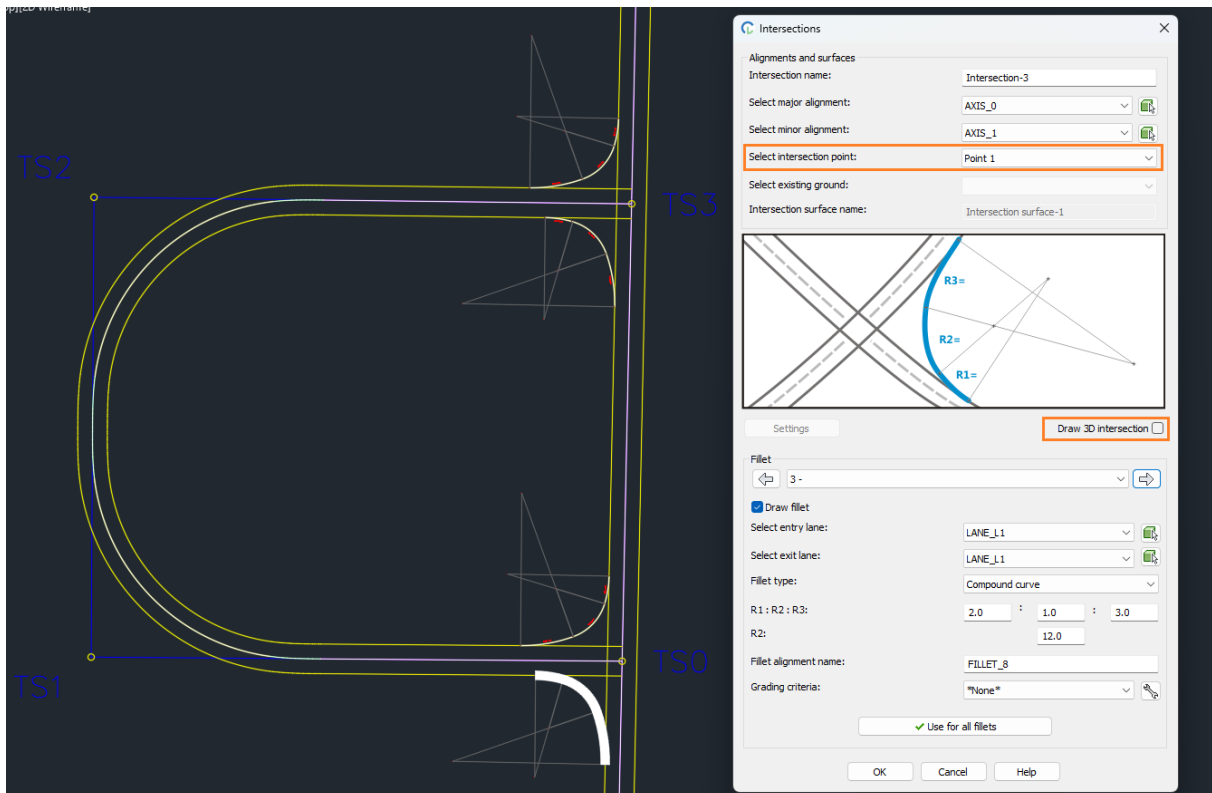


52D1 – Multiple intersection points and 2D intersection

Two improvements have been made to the CGS Intersection command, which allows you to automatically create an intersection between two CGS alignments, including all fillet alignments.

Users can now create 2D intersections for quick drafts without requiring terrain data for the function to work.

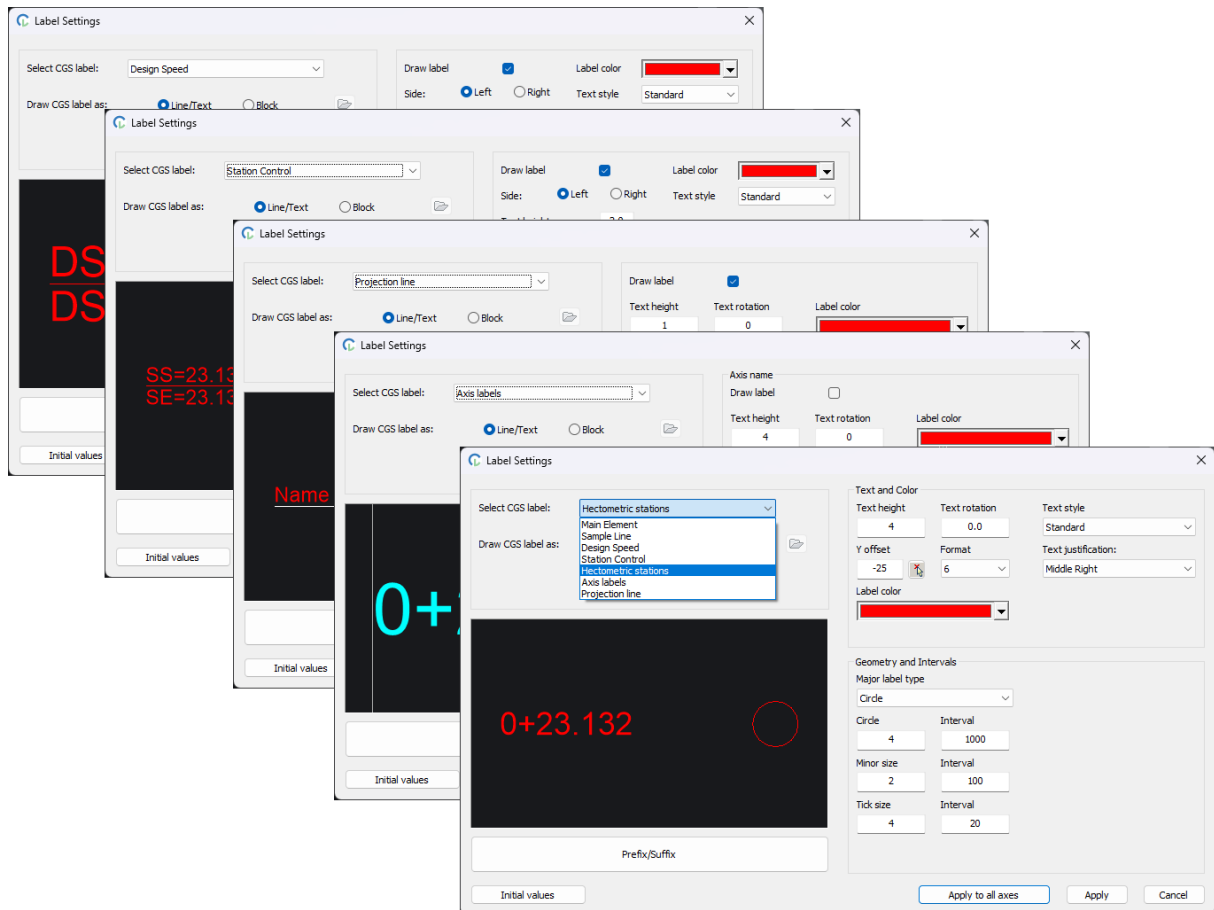
Additionally, users can now choose at which intersection point between two CGS alignments the intersection is created. A minor alignment can typically intersect a major alignment at both its start and end points, and intersections can now be created at either location.



21A7 – Multiple labels added to Label Settings

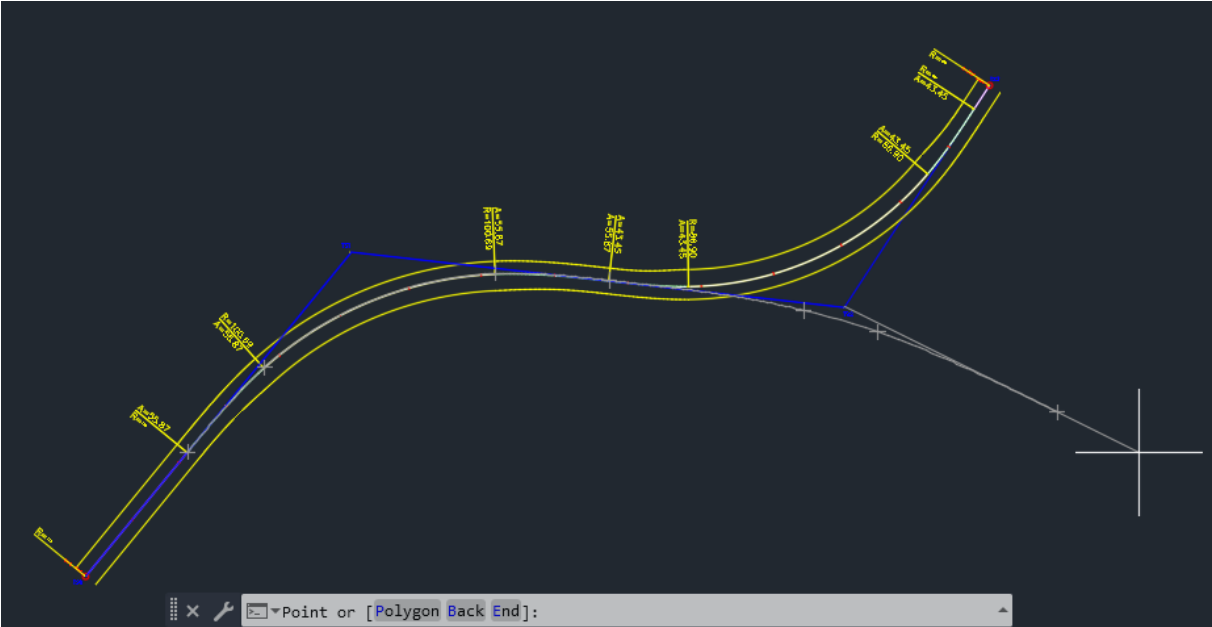
With CGS 2026.1, a new interface for configuring label settings was introduced. In this release, additional labels have been added to the list, including Design Speed, Station Control, Axis Name and Station, Projection Lines, and Hectometric labels.

Each of these now includes extended settings for color, justification, length, and more, making it easier to customize labels as needed. All labels can be defined individually for each alignment and previewed in a dynamic window.



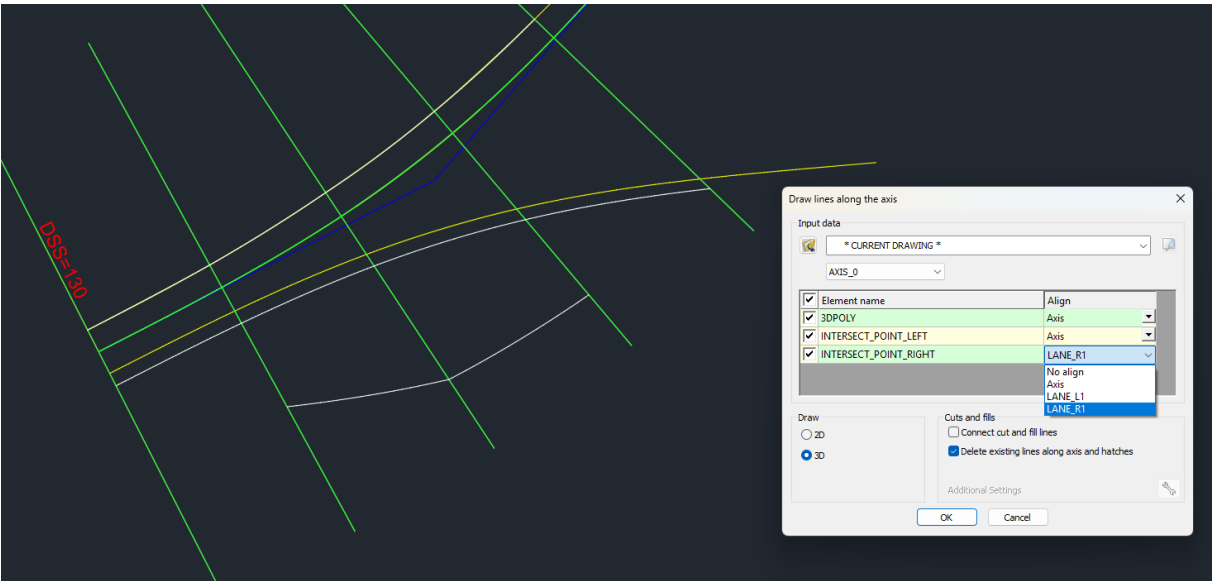
21E3 – Added “Back” option to Tangent Polygon

An option to go back one step (or more) when drawing Tangent Polygon alignment was missing from horizontal alignment creation. This is now added and can be used while drawing a new alignment or while editing it.



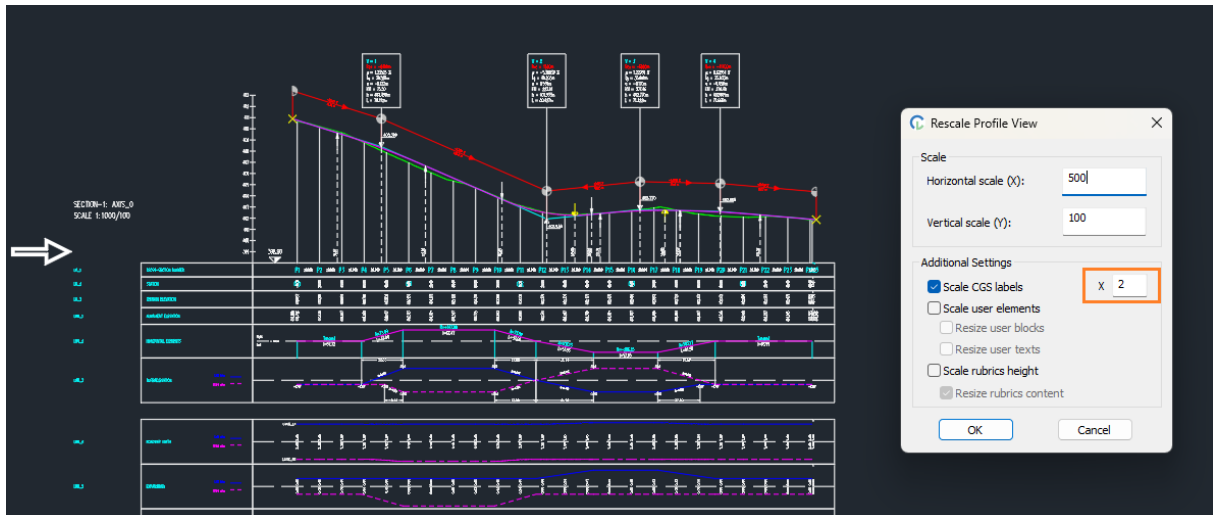
21M1 – Align projection lines to different curves

A new option has been added for aligning projection lines in the layout based on cross-section data. This provides the ability to determine how a 2D or 3D projection polyline is curved between sample lines. In previous versions, the default option always followed the curvature of the alignment. Now, projection lines can be created without aligning (linear between points) or additionally based on individual lane polylines.



31D5 – Rescale multiplier user input and value shown

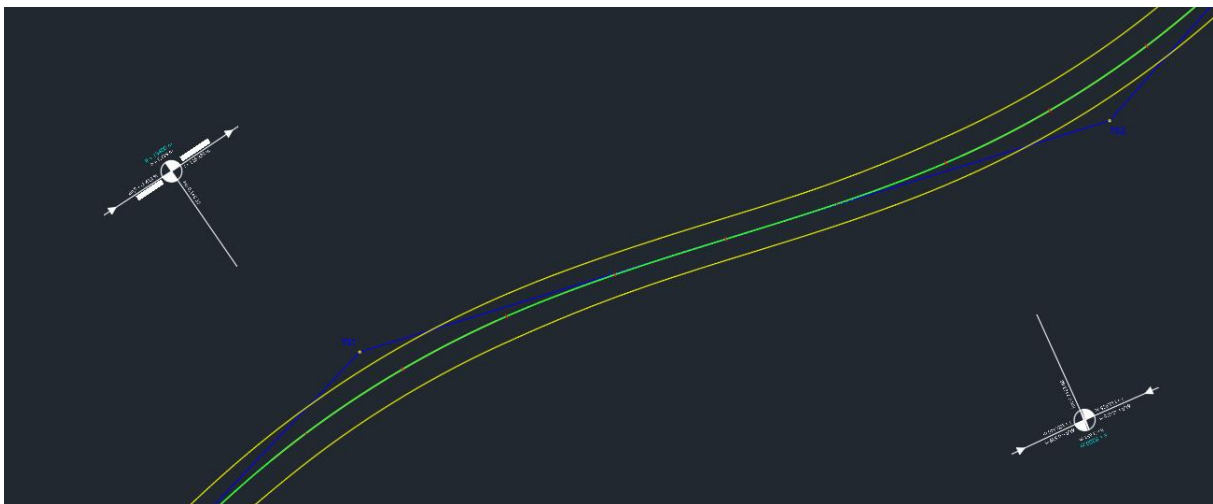
CGS labels within Profile View were always rescaled based on the difference of scale for the whole Profile View. Based on requests and challenges using it, we added additional multiplier option so that CGS labels can be scaled independently of other elements within Profile View.



2101 – Vertical label mirror option added

Vertical labels, which display information such as vertical slope and vertical radius, were previously always placed on the left side of the horizontal alignment. An additional option has now been introduced, allowing users to choose either the left or right side as the default placement.

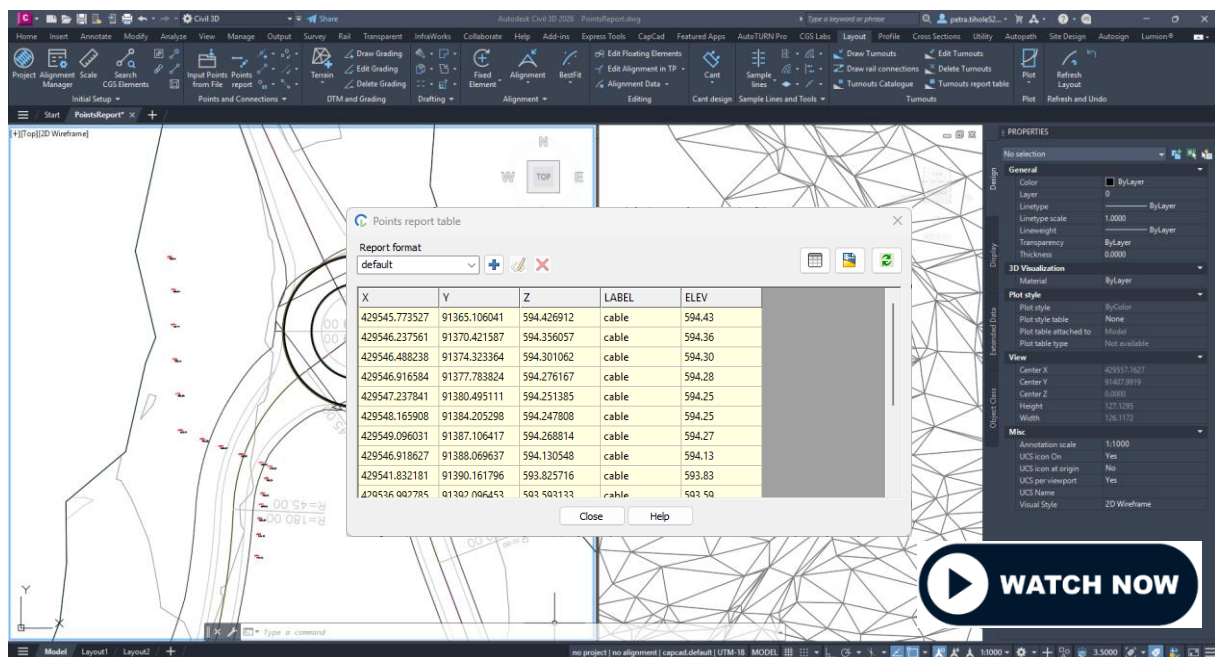
Users can also adjust the position of individual labels and mirror them to the other user side or reset them for the entire alignment.



11FB – Enhanced Point Report with Automatic Display of All Point Attributes

The Point Report has been improved to automatically display all attributes available on the selected points. Along with the basic geometric data (X, Y, and Z coordinates), the report now includes attributes such as labels, elevations, and other point-specific information by default.

Previously, these attributes could also be included, but users had to manually define a custom report format and add the required fields. With this enhancement, the additional configuration step is no longer required, which simplifies the workflow and reduces preparation time.



Users still have full access to tools for creating custom report formats, giving them flexibility to adapt the report output to different project requirements.

LandXML export – Added cross sections option

Continuing the improvements to LandXML export, cross sections (sample lines) have now been added to the list of elements available for export in CGS. Station, name, elevation, and offset data are read from the cross sections and Profile and exported in LandXML 1.2 format.

```
<CrossSects>
  <CrossSect sta="0." name="P1">
    <CrossSectSurf name="0">
      <PntList2D>-12. 36.976 -11.774 36.893 -11.398 36.742 -10.809 36.481
    </CrossSectSurf>
  </CrossSect>
  <CrossSect sta="5." name="P2">
    <CrossSectSurf name="0">
      <PntList2D>-12. 37.794 -11.354 37.349 -11.301 37.298 -11.177 37.394
    </CrossSectSurf>
  </CrossSect>
  <CrossSect sta="10." name="P3">
```

2.2. CHANGES

21A7 – Label Settings user interface update

As more labels have been added to the interface, the settings dialog has been slightly updated. Instead of clicking OK to apply changes and automatically close the dialog, the button has been changed to Confirm, allowing changes to be applied while keeping the dialog open. This enables editing multiple labels without needing to reopen the dialog.

21R1 – Different layer for Axis Station labels

User-defined station labels, which can be placed in any location, were previously placed on the same layer as sample line labels. Any change to the position of a horizontal alignment or change of sample lines definition caused sample line labels to be deleted and redrawn to ensure accurate information. This also resulted in user-defined station labels being deleted, which is why these labels are now placed on a separate, dedicated layer.

31 – Linetype scale is no longer modified

When using any command in the Longitudinal Profile (31 commands), the LTSCALE CAD system variable was previously changed to 0.1 (from the CAD default value of 1.0) to ensure proper display of CGS linetypes in the Profile View (e.g., dividing lines in rubrics, superelevation lines, lane width lines).

Because this caused issues for users who used a different linetype scale in their layouts, this behavior has been removed.

The affected CGS linetype definitions have been adjusted to maintain correct visual representation. The “LK_HIDDEN”, “LK_CENTER”, “LRI_LB”, and “LRI_RB” linetypes now have definitions that are 10 times smaller in the CGSApps.lin file.

2.3. FIXES

CGS Labs crashes on BricsCAD V26.1.08

Due to changes in BricsCAD (version 26.1.08 or higher) and a missing JSON file, the application crashed after opening a new drawing or accessing the license manager. This issue has been resolved.

21A7 – Sample line labels issues and interface can be opened multiple times

The text height and text style of sample line labels could sometimes only be changed when switching from the block option to the line/text label option. Another issue allowed the Label Settings window to be opened multiple times. Both issues have been fixed.

21C – Delete an axis removes associated DCT data

In CGS 2026.1, independent records for each alignment were added so that individual settings could be saved. However, these records remained even after an alignment was deleted from the drawing. If a new alignment was then created, it would inherit the old settings instead of the default ones. This issue has been fixed, and the associated records are now also deleted when an alignment is removed.

21EE - Horizontal offset analysis report and text misplacement

The horizontal offset analysis did not take into account the starting station of the horizontal alignment, which resulted in the offset values and graph being displaced horizontally by the starting station amount. This has been corrected, and the graph and text values are now positioned correctly.

21F7 – Different values displayed in Main element labels for the same station

Main element block labels for the start and end stations differed when more decimal places were used. The end stations were calculated incorrectly, using a rounded value instead of the actual length. This issue affected only the labels, not the actual station values. The issue has been resolved.

21O1 – Crash when creating labels at large coordinates

When drawing vertical labels with the 21O1 command, the application could crash if the alignment was located at large coordinate values. If there were also many decimal places, intersection points could not be calculated, which caused the crash. This issue has now been fixed.

21P1 – Jump 3D polylines are elevated twice as much as defined

In specific cases where the horizontal offset of a jump was zero, the vertical offset was applied at twice the defined value. An additional check has been implemented to prevent this, ensuring that the vertical offset for the 3D polyline is now applied correctly.

21T1 – Define Plot area does not generate frames with correct paper dimensions

Generating frames for plotting is based on calculating sections of the horizontal alignment based on width interval to fit each frame. The default interval was set to 1 meter, which could result in imprecise

paper dimensions of up to 1 cm. A step size for width has now been added to the 21T1 command, giving users the option to achieve more precise paper dimensions.

21X, 31X – CGS Refresh affects BricsCAD v26 UI

Refreshing the layout with 21X or the Profile View with 31X in BricsCAD V26 no longer causes any changes to the UI (such as hidden toolbars or other elements). The issue has been fixed.

31D1 – Insert Profile View crashes in a specific case

Due to incorrectly defined widening data, the Profile View could not be inserted (LK_PROFINS function returned an error). In such cases, the Profile View will now be created without the widening rubric (LRO_5) being filled out.

31D5 – Labels scale removed after rescaling without labels option

When rescaling the Profile View without selecting the CGS labels option, the previously used scale factor information was reset, causing CGS labels to be scaled using default values again. This information is now retained in the Profile View, and the issue has been resolved.

31D5 – Rescale Profile View fails until profile is refreshed

Rescaling the Profile View could result in a crash if the lane width data was inconsistent between the internal library and what was drawn. This could be resolved manually by refreshing the Profile View (31X). The issue has now been fixed.

31D5 – Profile vertical lines and tangents circles are scaled twice

Profile vertical lines and tangent circles were incorrectly scaled by both the label scale and the rubric scale. This has now been fixed so that scaling is controlled only by the label scale, which can now also be changed manually.

31D5 – Profile Line removed after rescaling

Due to corrupt or incorrect widening data in the dictionary, the rescaling process could not be completed fully, causing the Profile Line not to be reinserted. In such cases, the widening rubric is now left empty, allowing the rescaling process to complete successfully.

31D5 – Rescale changes axis name in Profile View

If multiple alignments existed in the drawing and one without a Profile View was selected, it could unintentionally rename the Profile View of another alignment. An additional check has now been implemented to ensure that the currently active alignment has a Profile View, preventing this issue.

[POL] 31G – Previous selection stored for minimum distance between bends

The *Minimum distance between bends* parameter could still be visible if the previously selected design speed was greater than 50 km/h. Now, when selecting a design speed of 50 km/h or less, this parameter is automatically turned off, as defined in the design guidelines.

31H9 – Table without vertical curve, Mode »0« move table

If a Profile Line contained tangents without vertical curves and the label tables were moved, labels without vertical curve information could be positioned incorrectly because the EED data from the curve was missing. This has been fixed by computing the tangent point when it cannot be read from external data.

Additionally, when the NIV_CURV_TPMODE setting was set to “0” (table positioning mode based on reference height), the table labels could not be moved. Now, when the move command is used, the setting is automatically changed to “1”.

31K3 – Crash when profiles stations are active

There were two issues related to stationing and decimal rounding. In certain cases, the start and/or end point of the main element and the position of the sample line almost coincided, but not exactly due to precision in CAD. The tolerance has been adjusted, resolving crashes and issues where some superelevation values could not be modified.

41E1 – CSs with only correspondent sample lines can now be created

When a horizontal alignment contained only corresponding sample lines from an adjacent alignment, but not its own sample lines, terrain data for cross-section creation was not read. This has been fixed, and cross sections can now be created for alignments that have only corresponding sample lines.

41F1 – Profile data not inserted on some corresponding sample lines

In cases where multiple records of profile data existed at the same station, the data in the cross sections was not correctly applied. This resulted in the roadway for the main or additional alignments not being drawn. This issue has been corrected, and the Profile Data Export (31N) now also saves each alignment in a separate record (if records are on the same station).

41G5 – Substructure with offset slope inverted

When drawing a substructure element by selecting only an element on the right side of the alignment, the position of the new element was inverted (placed up instead of down). This issue has been fixed, and it now works correctly in all cases (selecting only the left side, only the right side, or elements on both sides).

41K2 – No offset of projection lines in CS on AutoCAD

In some cases, projection lines could not be drawn in cross sections, even though the line existed in the layout. The issue was resolved by finding the closest point when an intersection was not detected due to CAD precision limitations. Projection points are now drawn in all cases.

41M1 – Planimetry name defined with lower case with interactive method

In CGS 2026.1, the interactive method for planimetry was incorrectly changed so that it differentiated between lowercase and uppercase letters, whereas previously only uppercase letters were used for quantities. This has been reverted, and planimetry quantities defined with either uppercase or lowercase letters are now recognized as the same quantities.

52D4 – Refresh Intersection changes DTM and border

Refreshing an intersection to apply changes in profile lines or superelevations could result in a differently drawn boundary and surface compared to the initial *Draw Intersection* command. Minor improvements have been made to ensure the correct borders are used for the boundary.

52E1 (31D1) - Draw Profile View of roundabout without trimming alignment

CGS alignments with the same start and end station (such as roundabouts), or where the endpoint touches another part of the alignment (such as a local residential road), were not recognized properly. As a result, the Profile View and cross sections could not be drawn without manually trimming a small part of the alignment. This has been fixed, and the start and end points are now correctly recognized, allowing the Profile View and cross sections to be created without any additional steps.

LandXML export – Profile View not recognized

Depending on how horizontal alignments and Profile Views for multiple alignments were created, elements such as the profile terrain and design profile were sometimes not recognized during LandXML export. An additional check has been added to identify the correct alignment and associated elements for export, resolving the issue.

LandXML import – File not read because of the boundary data

In some cases, the boundary was defined with only a single point or was missing a boundary type definition. This caused issues during import, which have now been resolved.

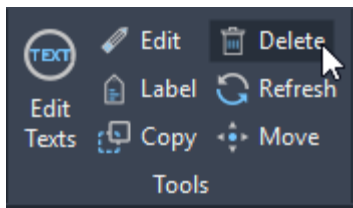
3. AUTOSIGN

3.1. ENHANCEMENTS

55H4 - Delete the vertical sign

Deleting signs is now quicker and easier. Users can delete a complete sign by selecting the sign or its post and pressing **Delete** key on your keyboard.

The **55H4** command can now be used to delete signs as well. Simply select Delete in a ribbon or run **55H4**, select one or more signs, and press **Enter**.



3.2. FIXES

55C1 - Sign post too big

Sign posts now display at the correct size in **ACAD**. Previously, when inserting a sign with **55C1**, the post could appear 1000x larger than its defined value. This issue affected ACAD only and did not occur in ACAD Civil 3D.

55H1 – Wrong parameters when editing Line/Cross Markings

In the version 2026.1, the command **55H1 – Edit** displayed the parameters of the last marking created with **55D1** or **55D2**, instead of the marking selected for editing. This fix restores the behavior from version 2026.0 and earlier.

55D1/55D2 – Line/Cross Marking "color" parameter

The **Color** parameter is now also stored in the drawing dictionary. (Autosign remembers the last-used parameter values for traffic signs and road markings in each drawing. In new drawings, the default values are loaded from the database.)

55H1 – Editing Post Attributes

The **Dimension** and **Foil** attributes are no longer displayed for posts in the Edit dialog, as these parameters apply only to signs.

