Release Notes
Topcon Office
August 9, 2024

Topcon Office V9 Release Notes

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The following new additions/revisions have been made to Topcon Office v9.0.

Please take time to read the release notes. They contain information about the following:

- New Features
- Feature Enhancements
- Issue Resolutions

Information

System Requirements:

Operating System
Microsoft Windows 11 (64-bit version)
Microsoft Windows 10 (64-bit version)

Processor Speed
2GHz Core2 processor or higher

RAM
2GB RAM or more recommended

Memory
Local hard drive space of 2GB or higher recommended

Computer Resolution
1280x1024 display resolution

Internet Connectivity
Can be required by some functionality.

Contents

Version 9.0 includes the rebranding of Magnet Office to Topcon Office. Users may notice some new icons and splash screens and other similar changes that do not affect the performance or configuration of the software product. These changes do not affect the user experience; Topcon Office remains a reliable and powerful office solution for construction and surveying professionals.

Unless otherwise noted, new features, improvements and resolutions are included in the Topcon Office base configuration. Items that are included in specific modules have a module designation at the end of the description. Module designations:
- **(Survey)** – Survey module
- **(Site Prep)** – Site Prep module

Key Features

Sitelink3D

Users of Topcon 3DMC and Pocket 3D can now connect to and work with data through the Sitelink3D web portal. New functionality for Office v9 includes.

> Added **Site Key** creation option in the Sitelink3D ribbon. This creates a site key for the connected Sitelink3D Site.

> **Sitelink3D Site Discovery ID,** listed on the Site Settings dialog has been updated to support selection and copy. Copy can be selected by Ctrl +C or from the context menu.

Takeoff (Site Prep)

The Takeoff dialog has been updated to a modeless UI which contains new functionality and takeoff element types. This allows for quick data insertion, modification, and setup of takeoff items without having to close and reopen the dialog required in previous versions.

Takeoff Ribbon (Site Prep)

- The Takeoff ribbon group has been updated to rationalize the functionality related to specific takeoff functions and types. The takeoff ribbon group now contains Settings, Manager and Report. The takeoff manager option opens the new takeoff modeless UI where takeoff types and functions are now managed.

Takeoff Elements (Site Prep)

- A new **Materials** takeoff element has been added to the dropdown in the Takeoff UI.
    - New materials can be created and assigned to entities simultaneously using the "pick" button in the takeoff UI. Material type creation for area, subgrade, count, and length are supported using the "pick" button. Volume type, used for subgrades requires creation in the materials project or program library.
    - Material types, area, subgrade, length and count, once defined, report the material properties when picking on the material(s) in the list without requiring a complete takeoff calculation. Picking on the material performs a material only calculation.
- **Strip** is a new takeoff element added to the element dropdown in the Takeoff UI.
    - Removal areas are now included in Strip areas. Strip areas can be used to define topsoil removal and demolition areas. When using demolition areas, a new option to define specific backfill material(s) and their depth is supported.
    - Strip area depths can optionally be defined by a surface. Any surface can be used including strata surfaces created in the "borehole" function in Office.
- **Over Excavate** is a new takeoff element added to the element dropdown in the Takeoff UI.
    - Over Excavate areas are defined by selecting the polygon defining the area where the over excavation is to be added. Define the horizontal offset, the vertical offset or both. The Tie dropdown is used to define the tie slope for the over excavate area as a slope value or vertically.
    - Over Excavate area limits will be shaded in the main view when selected in the takeoff panel after the takeoff calculation is executed. The shaded area includes the tie slope area.
- **Takeoff Panel** updated to include "Hide Unassigned" boundaries/polygons for takeoff elements. This applies to Site boundaries, BOI, Strip, Over Excavate, Replace, Subgrade, and Material elements.
- **Takeoff Report** updated to new reporting mechanism supporting customization of content via the preview display (context menu) or by the new configure dialog.

    - A new Report option has been included in the Takeoff Panel. This option is a quick summary report, of the selected takeoff items in the takeoff element dropdown. Configuration of the report can be done in the report preview by using the context menu when clicking on a column header or using the "configure" option in the preview window.

Ortho Modes

New option for creating linework vertically, horizontally (0,90,180,270 Azimuth) or at right angles to the previous segment.

- On/Off toggles are available in the Settings ribbon and the context menu.
- Relative Ortho constrains linework creation to 0,90,180,270 angles from the previous segment. The "Back Bearing" option, in the context menu, can be used to define the reference bearing/azimuth for the relative ortho mode when a previous line segment is not available.

- Ortho Modes can be triggered temporarily while holding the "Shift" key (Ortho) or "Ctrl" key (Relative Ortho).

Merge DTM

Updated to include new merging options.

- Added new option to "Update base DTM". This option updates the base DTM during the merge process. Undo/Redo supported.

- Elevation Priority options added:

  - **Standard** is the legacy method of merging DTMs but has been updated to fill gaps or holes in the design DTM with the specified base DTM in overlapped areas.

  - **Lowest** is a new option that uses the lowest elevation in areas where the merging DTMs overlap.

  - **Highest** is a new option that uses the highest elevation in areas where the merging DTMs overlap.

  - **Average** is a new option that uses the average elevation in areas where the merging DTMs overlap.

Spot Elevations (Survey, Site Prep)

New options to add spot elevation labels and symbols manually or on a defined grid interval added. Optional leaders and arrows, text box, positioning settings and label prefix/suffix are provided. The symbols representing the spot elevation location are not added to the project database as points.

- **Elevations from two** DTMs provides support for labeling of the elevation of the two specified DTMS.

- **Elevation Difference** calculates the elevation difference between the two DTMS and provides optional labeling of the difference. This option must be used in conjunction with Elevation from two DTMS.

- **Leader and Positioning** section includes settings and options for leaders, arrows, and label positioning.

- **Labels** section includes On/Off options for the reference, target and elevation difference labels. Prefix and suffix options included for each surface and the elevation difference. Elevation difference labels provide optional prefix/suffix settings for Cut and Fill values.

- **Decimal Place** setting for the labels is provided on the dialog. This is independent of the project decimal place settings.

- **Cut/Fill DTMs** are supported for labeling. Specifying a CF DTM as the reference DTM will deactivate the Target DTM field but include the ability to provide labels for the two DTMs used in the creation of the CF DTM including the elevation difference between them.

Text with Leader (Survey, Site Prep)

New function located in the Insert Ribbon, Text group, for the quick insertion of labels containing a leader.

- A Quick Labels toggle located on the Leader with Text dialog allows for the labeling of point data as text. Use the Display Options to select the data and the order of the data labels to be inserted as text. Point Number, Coordinates, Elevation, Code, Notes and Description are available for labels. Coordinate quick labels have addition labeling order options accessed from the right mouse click context menu when the "coordinates" is selected. Coordinate labels can be defined as N/E Staked (vertically) or N/E Following (horizontal).

- Project Annotation Settings updated to include new Text with Leader tab. Use these settings to define the leader options, positioning of the labels, multiple leader segments on/off and label prefix/suffix.

- A new program library, accessed from the Library ribbon, Annotation, named Text with Leader is now included. These settings mimic the project annotation settings and allow for creation of new libraries for text with leader. The Project Annotation settings include a CopyfromLib option for easy access and setting of custom text label configurations.

Offset

The offset function located in the modify ribbon has been updated to support 2D/3D offsets. The command Insert Parallel Polygon functionality, previously located in the Insert ribbon, now replaces the previous offset function.

- Offset now supports creating a polygon from unclosed linework with the option of chamfer or rounded corners when required to meet the offset specifications. Great for quickly creating polygons for takeoff tasks, creating pads, boundaries etc.

- The Offset function now supports lines, arcs, circles, polygons, boundaries, pads, and strings. For unclosed linework an option to create a polygon is available. When offsetting linework with the create closed polygon option off, the resulting offset linework will retain their original entity type.

Alignment Editor (Corridor Ribbon) (Site Prep)

The Vertical Alignment editor has been updated to include a toolset of functions for use with the graphical view within the editor. Additionally, a reference surface or a reference profile can be set for use during creation or modification of a vertical alignment. The following options are available in the new graphical vertical alignment UI.

Vert Alignment Toolbar

- Add IP – Adds vertical intersection point at picked location in graphic view of editor. The Station and Level fields on the toolbar can be used for IP definition.

- Add IP by Grade – Add vertical intersection point based on specified grade from selected IP.

- Add IP by Intersection – Add vertical intersection point based on grade from two selected vertical intersection points. Calculated IP is added between the two selected IPs.

- Move IP – allows for moving IP in graphic view.

- Delete IPs - allows for individual selection of IP to delete or a window selection of IPs to delete.

- Delete all IPs – deletes all vertical intersection points.

- Snap IP - snaps to nearest surface, defined reference surface or active profile surface based on cursor location.

- Undo/Redo

- Elevation Difference icon - creates an elevation difference report

- **Smooth Profile** – opens smooth settings for definition and creates VCs based on these settings.

- **Station Field** can be used to check an elevation of a station along the profile.

- **<<** button - the Toolbar, by default, is ON and displayed, selecting the "<< button" in the graphic view controls the display of the toolbar on/off.

Vertical Alignment Settings

- Profile display settings, on/off, are provided for curve length, PI's, grade, Hi/Lo Points (vertical curves), reference surface and smooth indicator.

- Vertical Exaggeration setting

- Elevation Difference – is a new option to display or label depths between a reference surface and the active profile or an existing profile and the active profile.

- Color option allows for the specification of the reference surface or profile.

- Options – provides settings for leaders and display options.

    o Leader spacing

- Show Leaders – on/off toggle

- Show Leader Labels – on/off toggle

- Display Depth on Flyover – displays the depth between the reference surface or profile and the active profile on the cursor in the graphic view of the vertical alignment editor.

General

- Performance improvements have been included that improves speed and program stability when working with projects containing large DTMs and many layers. This update required a database structure update for layers. Projects created in version 9.0 <u>cannot</u> be opened in previous versions. When opening a project created in a previous version the project will be converted to the new database structure. A backup file (*.bak), with the same file name as the project will be created in the folder where the project is located when opened. This file can be renamed to filename.mjo and opened in a previous version. MAXML (*.mxl) format can also be used to import v9.0 data into previous versions.
- **IFC** support
    - updated to support working with snaps when creating points from the 3D model.
    - Clipping Plane updated to display 3D Planes when used as a clipping plane.
    - Added select similar options and settings.
    - Improved object and layer isolate and restore options.
- **Grid Points** updated to define area for grid points to be defined by two picked points/locations. The row, column and step settings have been removed and are now based on the grid interval setting. The rotation option has been updated to rotate the grid within the defined area as opposed to rotating the defined area.
- **DTM Editor, Delete by Boundary (multiple)** improved to support defining of temporary boundaries during the command.
- **Data Cleanup** has been updated to remove the option to display the report. The report is now shown in a displayed dialog showing the results.
- **Drawing Editor (plot windows)** updated to support snap settings for working with data displayed from the survey view and data created in the drawing view. (Survey, Site Prep)
- **Tie DTM** updated to include a DTM name field. (Survey, Site Prep)
- **Segment** line, arc, polyline, string updated to reinstate the option to temporarily deactivate prompt for properties if on. (Survey, Site Prep)

Import/Export

- Import Topcon Field (*.mjf) updated to include optional toggle to "Apply Office survey codes". When on the properties of the points and linework will use the properties of the survey codes as defined in the Office code library.

- Import MicroStation (*.dgn) files updated to correct issue with missing reference files which prevented import of the file into office.
- Added import/export support for 12dxml format.

Reports

- Customized Report Preview has been updated to include a "Configure" option to allow for the reconfiguration of an existing report or configuration of a new report in a tabulated way. This includes hide/show of data, order of sections and columns and separate sheets (for Excel). Report configuration can also be defined in the report preview graphically using the right click context menu.
- Reports updated to support the report configuration, include Takeoff report, and Resurface report. (Site Prep)
- Resurface report updated to support color highlighting and a new wide table option. Wide Table available for Fill, Pre-Fill, Mill, Natural & Design Slopes and elevations. (Site Prep)

Program Preferences

- Updated to include option to "Open project into a new tab group".
  - When option is ON, default setting, creating new projects or opening existing projects, each project will be open in a new tab group. This results in the opened projects in individual tabs and shown in a vertical split screen, current v8 method.
  - When option is Off, newly created or opened existing projects will be opened in the current tab group and displayed on top of the existing tabbed documents in the same tab group. Pre version 8 method.

Coordinate Systems

- Added Alaska LDP projection.
- Added new Slovakia geoid.
- Added Slovenian Geoid VRP 2016
- Added GGM 10 geoid model.
- Updated support for the Portugal / Coordinate Systems to the 2023 Revision.
- Added import support for NTv2 file for the area of Bavaria

Notices/Issue Resolutions

- **Notice:** When installing Topcon Office, previous settings from Magnet Office are automatically copied. This is apart from the Data, Library and Temp folders which are redirected to the Topcon Office default paths. Users can copy their previous library files to the new library paths

to continue using their previous library files and reconfigure paths, if necessary, under Settings > Program Settings > Libraries. Note that Data and Library files are not deleted during installation.

- Resolved issue when uploading project containing a background image to Enterprise. Importing the file from Enterprise resulted in the background image not being included.
- Import *.pdf file updated to resolve issue with layer names containing unsupported symbols. Unsupported symbols in the layer name are converted to a $ symbol in the resulting office layer name.
- Import *.kmz/kml updated to resolve issue with location of kmz/kml after import when using a localization in the mjo project.
- Import *.dgn sdk updated to correct issues that prevented the import of dgn files in some cases.
- Enterprise upload/download updated to include background images when present.
- Export to Autodesk *.dwg updated to export text box for text entry with box. The text box boundary is now exported as a polyline. (Survey, Site Prep)
- Resolved issue with Takeoff subgrade highlighting when encountering overlapping subgrades. (Site Prep)
- Insert> Background image - updated to support zstd tiff format for support of additional image compression types.
- Polygon selection updated to reinstate selection of polygon by its centroid. Note, the centroid dot must be selected by picking on it.
- Resolved issue with Select Linked Points toggle enabled and using ctrl or shift keys to move, copy or modify linework configuration. Previously these options were unavailable with the select linked points toggle enabled.