

ETABS® 2013 Version 13.1.4 Release Notes

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Notice Date: 2014-04-17

This file lists all changes made to ETABS since the previous version. **Most changes do not affect most users.** Incidents marked with an asterisk (*) in the first column of the tables below are more significant and are included in the ReadMe file.

Changes from v13.1.3 (2013-11-01)

Modeling

Enhancements Implemented

*	Incident	Description
	61086	The section property database files Chinese.xml and ChineseGB08.xml have been enhanced by adding new sections. In addition, the section GB-I12.6 in ChineseGB08.xml was updated for an incorrect value of R33.

Database Tables

Enhancements Implemented

*	Incident	Description
	58456	An enhancement was implemented adding new tables for "Shell Uniform Load Set" definitions and for applied "Shell Loads - Uniform Load Sets".
	59671	An enhancement was implemented to add a new database table containing the moment-frame beam-connection type assignments. This table provides the data for RBS and SidePlate connections.

External Import/Export

Enhancements Implemented

*	Incident	Description
	42946	An enhancement was made for the export to SAFE where the minor-direction properties for beams defined as general sections are now being exported. These properties have little, if any, effect upon SAFE models.
	57654	The import of architectural objects from DXF or DWG files has been enhanced as follows: (1) Architectural objects imported from DXF or DWG file are now saved with the model and remain persistent across modeling sessions. (2) The default value of the scale factor in the Architectural Plan Import dialog is now 1.0, which is consistent with the fact that the user can also specify the units of the file to import and ETABS converts all distances accordingly.
	59016 59102	The import of Revit Structure .exr files from CSIXRevit has been enhanced as follows: (1) Sloped columns imported from Revit are now automatically divided at story levels. (2) Vertical planar walls with openings on their right and/or left edges can now be imported; previously they were not.
	62575 62628	The import of objects from 3D DXF or DWG files has been enhanced as follows: (1) ETABS now only generates stories at the z-elevations at which it finds beams or horizontal slabs in the file to import. If the file does not contain any, then ETABS generates stories for each of the different z-elevations in the file. In both cases, the user can review the stories and rename them, merge them, and delete them in the Story Data form shown as part of the import process. (2) Walls spanning over several stories are now divided at intermediate story levels when they are imported from a 3D DXF/DWG file. This improves the reporting of the results and the design of the reinforcement.

*	Incident	Description
		(3) The ETABS unique names of the imported objects will be their original CAD handles, with a numerical sequence suffix appended in the case of objects that have been divided. CAD handles are unique within single drawings but are not unique across multiple drawings. Accordingly, ETABS generates a different default unique name if a given CAD handle is already in use in the model.

Open Application Programming Interface Enhancements Implemented

*	Incident	Description
	60659	The OAPI function SapModel.FrameObj.SetDesignProcedure has been updated to allow all design options available through the ETABS GUI.

Miscellaneous

*	Incident	Description
	64762	The version number was changed to v13.1.4 for a new minor release.

Installation and Licensing Incidents Resolved

*	Incident	Description
	56354	An incident was resolved where multi-step load patterns, such as multi-directional seismic and wind loads, could not be run as nonlinear static load cases when using the Plus license level.
	59219	An incident was resolved where the Nonlinear level license did not permit the use of non-isotropic frame hinges in a nonlinear static analysis. The correct behavior has been reinstated: The Nonlinear license level permits frame hinges, except fiber hinges, to be used in a nonlinear static analysis. The Ultimate license level is required for the use of fiber hinges, and for the use of any frame hinges in a nonlinear direct-integration time-history analysis.

User Interface and Display Incidents Resolved

*	Incident	Description
	57936	An incident was resolved where the "Add Copy of Property" command was not working properly for non-prismatic frame sections. A copy of the section was not being created. This error did not affect copying of other types of frame sections.
	58315	An incident was resolved where the tool button "Assign Slab/Deck/Wall Section" did not actually include deck and wall sections. Now a separate tool button is provided each for slab, deck, and wall section assignments.
	58676	An incident was resolved where entering an illegal wall thickness while defining a pipe or tube frame section property could cause the software to become non-responsive.
	60765	An incident was resolved where using the command File > Create Video would sometimes cause the application to become non-responsive and fail to create a video file. When this occurred the application would have to be terminated, but no data was lost and no results were affected.
	61914	An incident was resolved where multiple error messages could be generated during analysis if the number of lines written to the Analysis Monitor window exceeded approximately 20000. No results were affected.
	62647	An incident was resolved in which the coordinates displayed in the bottom status bar of the user interface were not always correct when displayed as architectural units. No results were affected.

* Incident	Description
63456	An incident was resolved where Spandrel assignments were not fully processed if the model was already run and locked. Assignments made when the model was unlocked were OK. This was just a post-processing issue and analysis results were not affected.

Graphics and Drafting Incidents Resolved

* Incident	Description
64877	An incident was resolved where snaps to reference lines, and orthogonal snaps to line objects and to area-object edges, were not working in elevation view.

Modeling Incidents Resolved

* Incident	Description
61361	An incident was resolved where frame section properties of type "General" were not reading the section modulus values from the section database files.

Section Designer Incidents Resolved

* Incident	Description
60163 60499	An incident was resolved in which the Section Designer calculated and reported the section properties of a rod shape as being all zero.
62599	An incident was resolved in which the Section Designer produced incorrect section properties for a steel-section object with a fillet radius > 0 and also having a non-zero rotation angle. This did not affect solid steel shapes or steel sections with zero rotation angle.

Loading Incidents Resolved

* Incident	Description
55693	An incident was resolved where user-specified overwrites of diaphragm eccentricities for auto-lateral static seismic loads were not being saved and were not being applied to the model. This error affected only the ASCE 7-10 and ASCE 7-05 codes.
56748	An incident was resolved for the definition of wind loads where the "Include Parapet" checkbox was available when the option "Exposure from Shell Objects" was selected, even though the parapet loads were not being applied nor were they intended to be applied for this case. Now the "Include Parapet" checkbox will be unavailable for the option "Exposure from Shell Objects". No loading or results have changed, only the behavior of the forms used for defining wind load.
* 59781 62334	An incident was resolved for User-specified Wind Load where the diaphragm extent specified by the user was not being enforced.
60278	An incident was resolved for the ASCE 7-02 auto-seismic load pattern in which the definition of the seismic coefficients would revert to 'Per Code' if the load pattern settings were viewed in the form after initially defining them. The analysis results would match the last values that were set in the form when the OK button was clicked.

Analysis Incidents Resolved

* Incident	Description
* 60157	An incident was resolved where the panel zone flexibility was not being correctly modeled for some cases where the columns were rotated from the default. The minor and major direction flexibility may not have been transformed correctly.

*	Incident	Description
*	63461	An incident was resolved where area loads were being applied multiple times for models with multiple towers. Such models should be re-run using the new version.
	64841 60884	An incident was resolved where the self-weight of composite column sections defined directly may not have been computed correctly. Composite sections defined through the Section Designer had their weight calculated correctly.

Frame Design Incidents Resolved

*	Incident	Description
	59174	An incident was resolved for the default design combinations created for frame and shear wall design where reducible live load patterns were not being added with wind loads. This error was obvious from the definitions of the generated load combinations and the results agreed with the load combinations as generated.
*	59973	An incident was resolved for concrete frame and shear wall design using the AS 3600-2009 code where the PMM interaction curve(s) for column/wall were incorrectly computed. ETABS 2013 was using phi-compression-controlled as 0.65 instead of 0.6 and phi-tension-controlled as 0.9 instead of 0.8. Column/Wall design should be rerun for the AS 3600-09 code.
	60767	An incident was resolved for concrete frame design using the Eurocode 2-2004 code where the enforcement of the minimum shear rebar (avmin) could be incorrect when the shear force (VEd) was greater than the concrete shear capacity (VRdc) and the computed shear rebar (av) was less than avmin. This error only affected models where the database units were not N-mm; database units are those in effect when the model was created and can be seen in the text model file (.Set or .e2k).
*	64458	An incident was resolved where, for certain cases, the unbraced length used for the design of frame members was not traced correctly when the member was unsupported at an intermediate joint. When this occurred, the incorrect unbraced length was used for design and reported as such. This error did not affect unbraced lengths that were specified by the user as a design overwrite.
	64525	An incident was resolved for AISC 360-10 composite column design where concrete filled pipe capacities were incorrectly computed. Sometime, negative axial capacity is produced by program which was obviously incorrect.

Composite Beam Design Incidents Resolved

*	Incident	Description
	64732	An incident has been resolved for composite beam design using the CSA S16-09 code in which the vibration frequency for deflection check was sometimes being set to zero. When this occurred the error was obvious from the reported values.

Shear Wall Design Incidents Resolved

*	Incident	Description
*	59973	An incident was resolved for concrete frame and shear wall design using the AS 3600-2009 code where the PMM interaction curve(s) for column/wall were incorrectly computed. ETABS 2013 was using phi-compression-controlled as 0.65 instead of 0.6 and phi-tension-controlled as 0.9 instead of 0.8. Column/Wall design should be rerun for the AS 3600-09 code.
	59979	An incident was resolved where shear-wall design was unable to be performed when regional settings on the computer were set to "Turkey".
	60649	An incident was resolved for shear wall design where the messages describing design inadequacy were not being reported in the design details or in the Shear Wall Design Summary tables when D/C ratios were greater than 1.0. The D/C ratios were reported correctly; only the descriptive messages were missing.

* Incident	Description
60671	An incident has been resolved for shear-wall design using the ACI 318-08 and ACI 318-11 codes in which the shear rebar calculations for seismic load combinations could be slightly conservative for certain conditions. An understrength factor, Phi, value of 0.6 was being used instead of 0.75 in the Chapter 14 equations. This has been corrected. The value of 0.6 is still used for Phi in the Chapter 21 equations.
61071	An incident was resolved for shear wall design using the "Eurocode 2-2004" code where the shear design was based on wrong longitudinal rebar area and where z was not defined properly. Previously the total longitudinal rebar area was used to calculate Rho_I. Now only half of the total longitudinal area is used to calculate Rho_I, assuming that only half of total longitudinal rebar area will be on the tension side. Previously d was being used instead of z, where d is taken as 0.8*h and z is 0.9*d, and h is the overall section depth. Now z is being used properly.
61072	An incident was resolved for shear wall design using the "BS 8110-97" code where the shear design was based on wrong longitudinal rebar area. The rebar area used was too small, causing shear capacity to be calculated incorrectly. The effect of this error was very small and conservative.
62962	An incident was resolved for shear wall design using the Indian IS 456:2000 or New Zealand NZS 3101:2006 codes where the shear design was incorrect due to an incorrect initialization. The shear walls were being overdesigned for the New Zealand code, and an overstress condition (OS) was being reported for the Indian code.
64640	An incident was resolved for shear wall design using the Eurocode 2004 code where spandrel design was producing an OS "overstressed condition" for all spandrels. This error was inadvertently introduced in v13.1.3 and does not affect previous versions.
65053	An incident was resolved where shear-wall design preferences were not being imported from model text files (.SET or .E2K) for the Eurocode 2-2004. When this error was present warning messages were given during the import process and design default values were used for the preferences.
65055	An incident was resolved for shear wall design using the Simplified T and C method where the edge member length (DB1) for the right edge could not be overwritten using the command Design > Shear Wall Design > View/Revise Pier Overwrites. The actual values used for design were reported in the design results. Overwrites specified in the model text file (.SET or .E2K) were correctly imported and used in design.

Results Display and Output

Incidents Resolved

* Incident	Description
54462 56199	An incident was resolved that addressed several issues related to the on-screen display of frame and shell forces: (1) Frame results for in-plane shear and in-plane moment did not display. (2) The values shown when moving the cursor over the screen when displaying frame results were in some cases given for the wrong window if several windows were showing frame results at the same time. (3) The max-min values shown in the message area for shell and frame results were obviously incorrect. (4) Frame- and shell-result displays now refresh much faster. All of these issues affected on-screen display only; the tabulated values and the design values, as well as the plotted diagrams themselves, were correct.
59590	An incident was resolved in which auto-seismic user-load and auto-wind user-load calculation sheets in the report presented incorrect information for models with multiple towers. This was a reporting issue only and did not affect the results.
59834 60287	An incident was resolved where a report could sometimes not be generated if it contained calculation sheets for ASCE 7-10 auto seismic load pattern(s). This was a report-generation issue only and did not affect the results.
60487	An incident was resolved in which a report could not be generated if the Model Explorer was not open. Now when using the report generation menu commands the Model Explorer is automatically opened.

* Incident	Description
60679	An incident was resolved in which the terrain category for Eurocode 1-2005 wind loading was incorrectly reported in the report calculation sheet. The correct value was being used for the calculation of the loads used for analysis. This was a reporting issue only.
60947	An incident was resolved in which the auto-seismic load-calculation sheets in the report for NBCC 2005 and 2010 reported incorrect results for the seismic-response coefficient. This was a reporting issue only. The analysis used the correct coefficient for calculating the loads.
62396	An incident was resolved in which the ASCE 7-02 auto-seismic load-calculation sheet in the report incorrectly calculated the Cs,min value according to equation 9.5.5.2.1-3. The report was using Sd1 instead of Sds. This was a reporting issue only and did not affect the analysis results.
64840	An incident was resolved where the joint displacements were displayed instead of reactions in the tabulated form shown when a right-button click on a joint was done in a graphical display of reactions. The reaction results were displayed correctly on the display itself and when the cursor hovered over the joint.

Detailing Incidents Resolved

* Incident	Description
56824	An incident was resolved in the shear wall detailing for certain models in which the elevation views showed the wrong wall geometry at certain stories. This was a detailing issue only and did not affect the design results.

Database Tables Incidents Resolved

* Incident	Description
60296 60524	An incident was resolved in which the modal case definition database tables would generate an error when trying to display or export them if the modal case contained loads from links. This was a database table issue only and did not affect results.
60874 61790	An incident was resolved in which displaying or exporting a table set to Excel, Access, or XML would not use the table options defined in the table set if any table had previously been displayed in the user interface prior to exporting. The exported data was still correct, but possibly not in the desired units or using specified selections and filters. This was a table export issue only and did not affect results. Now each table set will always use the options defined for that table set whether displaying or exporting the table, independent of the options set for other tables that are not part of any table set. A new context (right-click) menu option has been added to the table sets in the table tree to directly set the table options.
60942	An incident was resolved in which the "Frame Sections" and "Frame Sections - Summary" tables incorrectly reported the material property name for nonprismatic sections. This was a database table issue only and did not affect results.
62117	An incident was resolved in which the Mass Source database table showed different mass source settings when multiple rows were displayed to show the load patterns from which mass was calculated. This was a database table issue only. The first row of the table showed the mass source settings, while additional rows showed the load patterns. Now all rows show the same mass source settings.

Data Files (.EDB, .E2K, .SET) Incidents Resolved

* Incident	Description
64277	An incident was resolved where deleted loads on areas were exported to text files in some cases. The analysis and design results were not affected.
64793	An incident was resolved where exporting and reimporting a model text file with steel joists may result in the self-weight calculation of the joists to be incorrect.

*	Incident	Description
	65059	An incident was resolved where importing text files (.\$ET or .E2K) created using v9.7.4 or earlier would give a warning message if the Indian Steel Design code had been used. A newer version of this design code is now used and a one-to-one translation of the Frame Type is not possible. The import now sets "SWAY FRAME" to "SMF" and "NONSWAY FRAME" to "OCBF". Users should verify this setting after importing older files and change it if necessary.

**External Import/Export
Incidents Resolved**

*	Incident	Description
	43318	An incident was resolved where some slab/drop areas were not being exported from ETABS to SAFE. The error was obvious when the model was imported into SAFE. The export to SAFE now also transfers information on the slab type (Slab, Drop, Waffle, Ribbed, or Stiff).
	59333 60449	An incident was resolved that addresses several issues with the import of STAAD files: (1) When a STAAD load case includes a self-weight specification in the vertical direction for the entire structure, this is imported in ETABS as a self-weight multiplier for the generated load pattern. Previously, ETABS loads were being generated for all frame objects, but no loads were generated for shell objects. (2) When a STAAD load case includes a self-weight specification for a specific set of STAAD members or elements, ETABS loads are now generated only for the corresponding ETABS frame or shell objects. Previously, ETABS loads were not being generated for the shell objects, but ETABS loads were being generated for ALL frame objects, possibly resulting in multiple self-weight loads on individual ETABS frame objects. When this occurred, the results agreed with the model as imported. (3) When the STAAD joint numbering was not sequential, the ETABS joint constraints created for the STAAD Master Slave commands occasionally referred to incorrect ETABS joints. They now refer to the correct joint numbers. When this occurred, the results agreed with the model as imported.
	63111	An incident was resolved where models that included springs or that had the P-Delta option set to "Non-Iterative – Based on Mass" were not able to be exported to CIS/2. When this occurred, the CIS/2 file was not being created. Now such models can be exported.
	63544 63330	An incident has been resolved which affects the import of circular slab edges and circular walls from Revit Structure using CSiXRevit. When a Revit model contained a circular slab edge or circular wall that used a series of curves where the first and the last segments in the series were concentric arcs, the slab edge or wall was imported with an incorrect geometry or not at all. When this occurred, the results agreed with the model as imported. Circular slab edges and circular walls are now correctly imported. In addition, two enhancements have been made to the import of projects from Revit Structure: (1) There is now an option to align ETABS objects along their X, Y or Z coordinates when their edges are parallel to the Y-Z plane, X-Z plane and X-Y plane (respectively) and their X, Y or Z coordinate are close (within a user-specified tolerance) to the X, Y, or Z coordinates of other imported objects. (2) The forms for specifying the mapping of materials, frame sections, floor sections, and wall sections now display fully when using the large-font setting in Windows, and these forms can be resized.
	65033	An incident was resolved in which polylines with straight edges were sometimes imported from a DXF file with incorrect curved edges when other polylines in the file had curved edges. When this occurred, the error was visually obvious and the results agreed with the model. Polylines with straight edges are now imported accordingly.

Open Application Programming Interface

Incidents Resolved

*	Incident	Description
	60726	An incident was resolved for the Open API in which it was not possible to set all the insertion-point offsets back to zero using the function SapModel.FrameObj.SetInsertionPoint if any of them had been set to non-zero values.

Documentation

Incidents Resolved

*	Incident	Description
	56113	<p>The following corrections and updates were made to the verification examples and documentation:</p> <p>(1) Analysis model EX8.EDB - The response-spectrum function damping was incorrect and did not match the response-spectrum load case damping, hence the results produced did not match the documented value. After correction, the example produces the expected and documented results.</p> <p>(2) Documentation for Analysis Example 03 - The name of code IBC2000 was changed to ASCE 7-02, as actually used in ETABS 2013 (IBC2000 was used in v9.7.4). In addition, the document was corrected for the actual values produced by ETABS 2013. These values have not changed since v13.0.0. The documented values were for ETABS v9.7.4 and some changed in v13.0.0 due to the use of a different solver. The change has no engineering significance.</p> <p>(3) Documentation for Analysis Example 06 and Example 07 - The document was corrected for the actual values produced by ETABS 2013. These values have not changed since v13.0.0. The documented values were for ETABS v9.7.4 and some changed in v13.0.0 due to the use of a different solver. The change has no engineering significance.</p> <p>(4) Documentation for Analysis Example 15 - The document was corrected for the actual values produced by ETABS 2013. These values have not changed since v13.0.0. The documented values were for ETABS v9.7.4 and some changed in v13.0.0 due to the use of a different solver, and due to the difference in how wall elements are connected to beams. The change due to the solver has no engineering significance. The change for wall elements was an enhancement.</p> <p>(5) Documentation for Concrete Frame Design EN 2-2004 Example 001, Concrete Frame Design NTC 2008 Example 002 - The values produced by ETABS 2014 were updated in the document for a change in v13.1.3 under Incident 59154 (Ticket 23901) where the coefficients Alpha_CC and Alpha_LCC were not taken into account in certain cases.</p> <p>(6) Documentation for Concrete Frame Design AS 3600-2009 Example 002, Shear Wall Design AS 3600-2009 WALL-002 - The values produced by ETABS 2013 were updated in the document for a change in v13.1.4 under Incident 59973 where the phi factor was incorrectly computed.</p>