ETABS v23.1.0 Release Notes

Notice Date: 04-November-2025

This document lists changes made to ETABS since v23.0.0, released 14-October-2025. Items marked with an asterisk (*) in the first column are more significant.

Design – Composite Column

Enhancements Implemented

*	Ticket	Description
	11746	An enhancement was added for AISC 360 Composite column design where stiffness modifiers EA and EI in the Direct Analysis are now linked with analysis model. Re-running analysis after composite column design is completed will update the stiffness of composite columns.

Design – Composite Shear Wall

Enhancements Implemented

*	Ticket	Description
	11768	An enhancement was made to update the reporting of the minimum and maximum area of steel check in the composite shear wall report. Previously, these values were calculated separately for each wall leg, and only the most critical value was reported. Now, the check is performed for the entire wall section as a whole.

Design – Steel Frame

Enhancements Implemented

*	Ticket	Description
*	10549	An enhancement has been made to implement the design for stability using the Direct Analysis Method for CSA S16-19 and CSA S16-24 steel frame designs. In particular, Section 8.4 'Design for Structure Stability' of the CSA S16-19 is implemented in combination with Annex O.2 'Stability effects in elastic analysis' to amplify the required design moments. The effective length method is also included.

Internal

Enhancements Implemented

*	Ticket	Description
	11738	The version number has been changed to v23.1.0 for a new minor release.

Structural Model

Enhancements Implemented

*	Ticket	Description
	11733	An enhancement has been introduced to include default rebar and tendon materials in material libraries that previously did not contain them. The default rebar material has a minimum yield strength of 500 MPa. The default tendon material has a characteristic tensile strength of 1860 MPa (equivalent to 270 ksi). The affected libraries are as follows 1) Rebar Material: Europe, Spain 2) Tendon Material: Canada, Europe, India, Italy, Spain, and Vietnam. For the newly added materials, the region is identified as “Default” when defining a new material.
	11769	An enhancement was made to allow selection of tower for multi-tower models while drawing Slab Panels.

*	Ticket	Description
	11782	The behavior of non-prismatic frame objects with their insertion point set not at the centroid and with stiffness transformation enabled (Assign menu > Frame > Insertion Point) has been improved to account for variation of section dimensions along the length of the frame object.

Design – Composite Beam

Incidents Resolved

*	Ticket	Description
	11763	An incident affecting interactive composite beam design per all codes was resolved. When interactively designing a beam with an auto-select section, clicking on the Specify Section... button and then selecting a section different than the optimal selected section in the auto-select list resulted in a temporary change only, with the beam section reverting to the optimal section when the model was later re-analyzed. This issue affected ETABS v23 only. A work-around was to unlock the model and explicitly assign the desired section to the beam.
	11764	An incident affecting the beam design of castellated and cellular beams was resolved. When such beams were designed using parallel processing, the sections of these beams would occasionally become I-sections. When this occurred, the error was visually obvious and subsequent design results agreed with the model. This incident affected ETABS v22.5.0 and later. Turning off parallel processing - i.e. selecting a single thread in the Design and Response Recovery Options form - avoided the problem.
	11767	An incident affecting composite beam design per the AISC 360-16 and AISC 360-22 codes of chord beams with slender sections was resolved. When designing such beams, ETABS computed the compression effective areas of their sections based on the elastic buckling stress of the beams instead of their nominal stress. When this occurred, the effective area was underestimated and the error was on the conservative side - with the underestimate increasing as the unbraced lengths decreased. Beams with compact and non-compact sections were not affected, nor were beams designed without accounting for axial forces. This incident affected ETABS v22 and later.

Design – Concrete Shell

Incidents Resolved

*	Ticket	Description
	11762	An incident was resolved for ACI 318-25 shear wall design where h_n for omega_v calculation in ACI 18.10.3.3.3 was using pier height in database unit instead of ft unit. For US Customary units, database unit for length is in inch. Computed omega_v was conservative.

Design – Shear Wall

Incidents Resolved

*	Ticket	Description
	11742	An incident was resolved in the AISC 360-22 composite shear wall where some calculations incorrectly used the web plate thickness instead of the flange plate thickness. This affected only the design and reporting of wall properties, causing negligible differences in the computed capacities. Analysis results were unaffected.

Design – Slab

Incidents Resolved

*	Ticket	Description
	11785	An incident has been resolved for the Eurocode 2-2004 concrete shell design in which the contour display of the design results was missing for the triangular elements with three nodes. The design results are not affected and can still be accessed by right-click design report and design data tables.

External Import and Export

Incidents Resolved

*	Ticket	Description
	11749	Fixed an issue that allowed duplicate embedded beams to be included in the same group during model export to Perform3D.
*	11765	An incident was resolved where "Export Story as SAFE V12 .f2k File" operation failed to export any loads from above & column and wall distortions. This issue only affected V23.0.0.

Loading

Incidents Resolved

*	Ticket	Description
	11752	An incident was resolved where a portion of the loads applied to a floor object with a membrane-type section using the Staged Construction operation "Load Objects" with a user-defined group may be lost. Membrane-type section properties are either Slab sections with Membrane modeling type (Define>Section Properties>Slab Sections) or Deck sections (Define>Section Properties>Deck Sections). This issue only occurred when the membrane-type floor object was auto-meshed in a way where the load was distributed to program-created joints created by auto-meshing and the loads that were lost were associated with these program-created joints. This issue only affects Nonlinear Staged Construction load cases. This issue was resolved in ETABS v22.6.0, but was inadvertently omitted from the Release Notes for that version.
	11773	An incident was resolved where a response spectrum function could be deleted even if it was referenced in an ASCE 7-22 Auto Seismic load pattern. When this response spectrum function was deleted the model was corrupted leading to an error message. Now the response spectrum function is not allowed to be deleted till it is still referenced.

Results Display and Output

Incidents Resolved

*	Ticket	Description
	11777	An issue was resolved that previously caused incorrect display of deformed shapes for variable section frames. The fix ensures accurate visualization for both cubic and non-cubic deformation modes.

Structural Model

Incidents Resolved

*	Ticket	Description
	11766	An incident has been resolved to make the weight and mass modifiers visible on the forms used to define named frame and shell property modifier sets. In earlier versions of the program, these modifiers could only be edited through the interactive database tables and text files, but were not displayed directly within the definition forms.
	11770	An incident was resolved where deleting the floor area mesh using General Mesh was producing "Error Meshing Area Objects" warning messages for some rare cases. This issue was inadvertently introduce in v23.0.0.

User Interface

Incidents Resolved

*	Ticket	Description
	11751	Resolved an issue where the object property form accessed via right-click on an object for information failed to assign the correct index to dropdown properties. The error was obvious. This issue affected V22.0.0 to V23.0.0.

ETABS v23.0.0 Release Notes

Notice Date: 13-October-2025

This document lists changes made to ETABS since v22.7.0, released 14-July-2025. Items marked with an asterisk (*) in the first column are more significant.

API

Enhancements Implemented

*	Ticket	Description
	1961	An enhancement has been implemented which adds ETABS API functions for defining section cuts by group or quad, identical to those in the SapModel.SectCut property in the SAP2000 API.
*	11585	An enhancement has been implemented to add a new API method, SapModel.EditArea.MergeToCreateUserMesh, which allows users to merge selected floor objects into a single object with an internal user mesh.

Data Files

Enhancements Implemented

*	Ticket	Description
	11687	An enhancement has been implemented where the material library for the Korean region has been updated to include materials in accordance with the KS22(S) standard, in addition to those already available previously based on the KBC 2016 standard.
	11689	An enhancement has been implemented that adds a new steel section database for sections from Korea per their KS21 standard.

Database Tables

Enhancements Implemented

*	Ticket	Description
	11674	An enhancement was made to add the field "Consider Max Freq?" to the "Load Case Definitions - Damping - Modal" database table, corresponding to the ability to enable or disable the Maximum Considered Modal Frequency checkbox in the Direct Integration Damping form (Define menu>Load Cases).

Design – Composite Beam

Enhancements Implemented

*	Ticket	Description
	7838	An enhancement has been made which affects composite beam design per all the supported design codes. When a beam which is not shored is subject to any out-of-plane bending during the construction stage, the design takes it into account. Likewise, when a beam is subject to any out-of-plane bending at locations where it is not being designed assuming composite action, the design takes it into account.

*	Ticket	Description
	11627	Several related enhancements to the Composite Beam Design Overwrites form were implemented. 1.) If a beam cannot be made composite because of the section types of the adjacent floor objects, or because its effective width is zero, the options for the Beam Type item in the Studs tab are now limited to "Non-composite w/o Studs" and "Non-composite w. Studs" and the Minimum PCC and Maximum PCC items are set to zero and are read-only. 2.) For "regular" beams, if the selected Beam Type item in the Studs tab is "Non-composite w/o Studs" or "Non-composite w. Studs" the Minimum PCC and Maximum PCC items are set to zero and are read-only. 3.) For "regular" beams with a selected Beam Type of "Composite as Required" or "Force Composite", the default value of the Minimum PCC is that computed by ETABS for the beam itself - which in the case of the AISC code, the Eurocode and the Indian code will occasionally exceed the baseline code-mandated minimum percentage of composite action.

Design – Concrete Frame

Enhancements Implemented

*	Ticket	Description
*	11502	An enhancement has been made to add the Vietnamese TCVN 5574:2018 concrete frame design.
*	11571	An enhancement has been made to add the ACI 318-25 concrete frame design code.
	11582	An enhancement was added for ACI 318-19 beam shear design where axial forces are now accounted in computing beam shear capacity. Axial compression can be ignored in computing beam shear capacity when option "Ignore Beneficial Pu for Beam Design?" is set to Yes in the concrete frame design preferences. Axial tension is always considered in computing beam shear capacity.
	11637	An enhancement is made in ACI 318-19 column shear rebar design where Avmin is not enforced in column design when shear force, Vu without Avmin is <= phi*Vc/2.

Design – Shear Wall

Enhancements Implemented

*	Ticket	Description
*	7518	An enhancement has been made to add the Eurocode 2-2004 concrete shell design. This option is available with the Ultimate level license.
*	8194	An enhancement has been made to add the CSA A23.3-19 shear wall design code.
*	10958	An enhancement has been made to add the CSA A23.3-24 shear wall design code.
*	11572	An enhancement has been made to add the ACI 318-25 shear wall design code.

Design – Slab

Enhancements Implemented

*	Ticket	Description
*	11573	An enhancement has been made to add the ACI 318-25 code for reinforced concrete and post-tensioned slab design.

Design – Steel Frame

Enhancements Implemented

*	Ticket	Description
	11577	Several related enhancements to the Steel Design Overwrites form were implemented. (1) The pull-down lists of options displayed when the user modifies items for which "Program Determined" is a valid choice now always includes that choice. (2) After selecting "Program Determined" for an item and returning to the form, the item is still displayed as "Program Determined" instead of being displayed as its current value. (3) Units were added to some item labels that should have included them.

*	Ticket	Description
	11681	A change has been made for Eccentrically Braced Frame (EBF) link beam design outside of the link itself. The beam was being designed by amplifying the design axial load and both major and minor moments by the ratio of the link capacity major moment to the design moment. Now the minor direction moment is not amplified, only the axial load and major moment are amplified. Design of EBF link beams based on the AISC 360 and KBC codes is affected. The original design was conservative.

External Import and Export

Enhancements Implemented

*	Ticket	Description
*	10494	An enhancement has been made to allow importing a SAFE model into ETABS at a selected story level with options for merging of geometry, properties and loads.

Installation and Licensing

Enhancements Implemented

*	Ticket	Description
*	11421	The following improvements have been made to sign-in licensing within the application. (1) The authentication process for sign-in licensing has been modified to now use the system browser on the client machine. This improves the sign-in experience by eliminating the connecting popup that was displayed on subsequent runs after signing in the first time. This change will require users to sign in to ETABS the first time this new version is run. (2) Personal Access Tokens (PATs) can now be used for scenarios where the normal authentication flow is not possible, such as for headless machines. (3) Remote checkout licensing is now available for dark-site or air-gapped machines that do not have internet access.
*	11620	The standalone, network, and cloud key licensing options have been removed from ETABS v23. All licenses will now use cloud sign-in licensing which is more flexible and secure.

Internal

Enhancements Implemented

*	Ticket	Description
*	11544	The version number has been changed to v23.0.0 for a new major release.

Structural Model

Enhancements Implemented

*	Ticket	Description
*	11096	The program now includes FEM-based buckling analysis through the integrated BucklingFEM plugin. Steel frame elements can be easily imported and converted into more detailed shell-based FEM models, which are then analyzed using eigenvalue buckling procedures. This enables the capture of both global and local buckling modes, providing a more realistic assessment of member stability than traditional simplified checks. The FEM model is analyzed as a separate process using the SAPFire engine multiprocessing capabilities and the results can be explored directly in the plugin. Additionally, the model can also be imported into SAP2000 for further editing and more advanced analysis. This feature is limited to the Ultimate level license.
	11614	An enhancement was made to the "Frame Assignment - Hinge Overwrites" form (Assign menu>Frame>Hinge Overwrites) to add the checkbox "Use Hinge Length Overwrite Instead, if Available" in the Auto Subdivide groupbox. This new checkbox is available when the option to auto subdivide frame objects at hinges is enabled and, if checked, will use the existing Hinge Length Overwrite from the hinge assignment for the hinge subdivide length instead of the specified relative length. This new checkbox is intended for use for the frames using non-user Frame Hinge Definition Types, such as Distributed Plasticity or Equal Spacing which have program-determined hinge lengths, or for the User Defined hinge assignments where the hinge length overwrite is used.

*	Ticket	Description
	11709	An enhancement has been implemented to improve slab meshing in cases where in rare cases the column point location would not match the meshed point location.

Analysis

Incidents Resolved

*	Ticket	Description
	11548	An incident was resolved where the center of rigidity calculations were based on the p-delta stiffness rather than the unstressed (initial) stiffness on models that specified a preset P-Delta option.

Database Tables

Incidents Resolved

*	Ticket	Description
	11680	An issue causing blank display in the Report Viewer / Design Detail Report on Windows 11 systems configured with Thai Locale settings has been resolved. The fix ensures proper rendering of report content across affected environments.
	11712	An incident was resolved where the "Shell Element Cracked Section Modifiers" database table (Display men>Show Tables) was incorrectly showing zero values for the Sf11 and Sf22 fields. This issue affected ETABS v22.5.0-v22.7.0.

Design – Composite Beam

Incidents Resolved

*	Ticket	Description
	11598	An incident affecting composite beam design per the Eurocode and the Indian code was resolved. For some beams with point loads on them, a message stating the percentage of composite action was less than the required minimum was displayed if the percentage of composite action developed by the shear studs located between the point load with the largest bending moment and the nearest location with zero bending moment was indeed less than the required minimum. This message was informational only and did not affect member section or shear stud selection. The only percentage of composite action compared to the required minimum is now that developed by the shear studs between the location with maximum bending moment and the nearest location with zero bending moment. All versions of ETABS capable of designing beams per the Eurocode or per the Indian code were affected.
	11654	An incident affecting composite beam design per all codes was resolved. When some of the composite beam design load combinations did not include the structure selfweight, and some girders were loaded by their supported beams only -resulting in a portion of the moment diagram around the location of the maximum bending moment being flat for these load combinations - ETABS designed these girders as non-composite. When this occurred, the issue was obvious and the selected design was conservative. Making sure the structure selfweight was included in all composite beam design combinations resolved the issue. All versions of ETABS capable of designing composite beams were affected.

Design – Concrete Frame

Incidents Resolved

*	Ticket	Description
	11586	An incident was resolved where checking the box for “Ignore Flange for Area, Weight and Mass” for T-shape and L-shape sections was also reducing the sectional area used for analysis and design. This produces slightly conservative rebar design.

*	Ticket	Description
	11619	An incident has been resolved in the concrete frame design codes "Eurocode 2-2004" and "Italian NTC 2018" in which torsion design of concrete beams per Eurocode EN 1992-1-1:2004 section 6.3 has been reinterpreted and re-implemented based on the procedure as described in the updated manual. The main difference between the new implementation and the old one is in the application of factor 2 and subtraction of Tcon from TEd as described in the equation of Vt on page 3-43 of the previous manual. The new method is consistent with section 6.4 of the book "Designer's Guide to EN1992-1-1 and EN1992-1-2---Eurocode 2: Design of Concrete Structures. General rules and rules for buildings and structural fire design" by R. S. Narayan and A Beeby. This new implementation will lead to a change in results in the stirrup areas.
	11671	An incident has been resolved in the concrete frame design codes "Eurocode 2-2004" with German National Annex, in which the minimum shear rebar area as calculated using DIN EN 1992-1-1/NA:2011-01 section NDP Zu 9.2.2(5) was improperly implemented. Previously, the expression used for Asw,min/s was Asw,min/s = 0.16 sqrt(fctm) / fyk, which was wrong and which is corrected as Asw,min/s = 0.16 (fctm / fyk). The program and documentation are updated.
	11716	An incident was resolved for concrete frame design where in rare cases the beam design shear force was unrealistically high when the distance between design stations was extremely small. This was a numerical tolerance issue.

Design – Shear Wall

Incidents Resolved

*	Ticket	Description
	11589	An incident was resolved where designing composite shear walls was in rare cases generating an error "Error during design of pier xx". This occurred when both Composite and Concrete shear walls were to be designed in the same model.
	11650	An incident was resolved for composite shear wall design for AISC 360-22 code where flexural stiffness was reported in incorrect units. This was just a reporting issue. Also, coupling beam stiffness reporting was updated to use beam height instead of beam length. Coupling beam now uses axial stiffness modifier as 0.8 and bending modifier as 0.64. These values were only reporting items in the wall design report and do not affect the analysis results. This incident also resolved an issue in using sign convention for computing flexural capacity about M2-axis. This only affects wall capacity of non-symmetrical walls. User should rerun the design of nonsymmetrical composite walls.

Design – Steel Frame

Incidents Resolved

*	Ticket	Description
	11581	An incident has been resolved in the steel frame design code "AISC 360-22" in which the compactness limits Lambda_s (slender), Lambda_r (non-compact), and Lambda_p (Compact) were correct, whereas the limits Lambda_md (moderately ductile) and Lambda_hd (highly ductile) were not accurate. The latter two limits were taken from ANSI/AISC 341-16, rather than ANSI/AISC 341-22. The documentation has been updated.
	11649	An incident affecting steel design per the AISC, CSA and Eurocode codes was resolved. When the demand/capacity ratio was overwritten for a member in the Steel Overwrites form, the Interactive Steel Design and Review form did not use the overwritten value, and instead used the value specified in the Steel Design Preferences. When this occurred, the error was obvious, and a more optimized design could still be selected after checking the Show All Alternates form. This error affected ETABS v22.6.0 and v22.7.0.
	11664	An incident affecting model definition and composite beam design was resolved. When a castellated or cellular beam section was defined, its material was set to the first steel material defined in the model and could not be modified. When this happened, the analysis results and designs agreed with the model. All versions of ETABS in which castellated and cellular beam sections can be defined were affected.

Detailing

Incidents Resolved

*	Ticket	Description
	11562	An incident was resolved where an incorrect material reference was shown for the vertical reinforcement in Column Stack Detailing.

External Import and Export

Incidents Resolved

*	Ticket	Description
	11546	An incident affecting the import of walls from Revit .EXR files was resolved. Walls with a complex top edge and a sloping rightmost edge were only partially imported with no warning reported in the EXRLog file. When this occurred, the problem was visually obvious and the results agreed with the model. All versions of ETABS capable of importing EXR files were affected.
	11622	An incident was resolved for NBCC 2020 response spectrum functions where importing a function via Access database or Interactive Database Editing was not successful and default values were reinitialized.
	11685	An incident was resolved where, when exporting an ETABS model to Perform3D (File menu>Export>Perform3D Structure File), Point-type Frame Loads (Assign menu>Frame Loads>Point) in the Gravity direction would be exported with the opposite sign, resulting in a reversed load in the exported Perform3D model.

Graphics

Incidents Resolved

*	Ticket	Description
	11547	An Incident was resolved where wall and floor mesh were not displaying correctly for upper stories in very large models in DirectX graphics mode.
	11646	An incident was resolved where shell objects with a Layered Shell section property may have been displayed with an incorrect color when using the "View by Colors of Material Properties" option in the Set View Options form (View menu>Set Display Options). The behavior of the "View by Colors of Material Properties" option has been corrected so that shell objects with a Layered Shell section property will be displayed using the color corresponding to the material property of the thickest layer in the property definition.

Loading

Incidents Resolved

*	Ticket	Description
	11718	An incident was resolved for ASCE 7-22 auto seismic load case where seismic load results were not available when method for computing seismic coefficient was based on Method 1 and building Period > Time Period, Tmax.

Structural Model

Incidents Resolved

*	Ticket	Description
	11550	An incident was resolved where for multitower models auto generated stiff area objects over columns and walls would get tagged as belonging to Tower 1. This could affect the meshing of floors to account for these stiff areas.
	11635	An incident was resolved where frame objects assigned a Buckling Restrained Brace type frame section property may be more flexible than the Linear Effective Axial Stiffness reported in the Frame Section Property Data form (Define menu>Section Properties>Frame Section).