

# Release Notes for RISA-3D

## Version 13.0.1 Enhancements/Corrections

- Installation & Licensing Updates:
  - Released an update version of Sentinel RMS License Manager to be compatible with Windows Server 2012 R2.
  - Fixed the Network.ini behavior to allow for the file to be placed in the root RISA directory and still be seen by the client installs.
  - Corrected an issue with tnxTower .RT3 models not opening in the current version unless the user had administrative privileges.
- Masonry Updates:
  - Updated the "a" calculation for masonry in-plane strength design. Previously the "b" was always using the effective thickness. Now the program checks the "a" value against the length of the boundary zone. If the "a" is greater than the boundary zone then the effective thickness is used. If the "a" is less than the boundary zone then the nominal width is used.
  - Corrected an error that could cause masonry out-of-plane bending capacity of an over-reinforced wall to be reported as zero.
  - Corrected the out-of-plane stiffness calculation for partially reinforced masonry walls.
  - Addressed an issue with masonry wall panels where the tolerance between the design UC and the user's max UC was increased to alleviate changes in reinforcement for the same load combination.
- Miscellaneous Updates:
  - Added the ability to save a video of the animated deflected shape and mode shapes.
  - Added links to all Warning Log messages that take you directly to the relevant section in the help file.
  - Added new icon to "Select Marked Lines in the Model View" toolbar icon.
  - Added a graphic verification that confirms if you are running in a demonstration version.
  - Changed the name of the Global Parameters dialog to Model Settings. Changed the name of the Plot Options dialog to Model View Options. Changed the name of the Preferences dialog to Application Settings.
  - Improved the calculation of Cb values in RISA-3D where the steel beam bracing is based on RISAFloor data.
  - The detail report for footings in RISA-3D will now be updated/refreshed when switching between unit systems.
  - Diaphragms at unselected floor levels no longer are rendered, making it much easier to investigate mutli-floor models.
  - Added a Degenerate Plate Check tool to identify and fix plates that are not planar, or that are poorly shaped.
  - Added a non-coplanar warning message to RISAFloor models with roof wind loads where the wind load can't be applied because the roof joints are not coplanar.
  - Corrected an issue where the footer for PDF reports was not included on the last page.
  - Corrected flexible diaphragm load attribution to no longer consider "Column," "VBrace," or "None" member types.
  - Corrected an issue related to envelope solution reporting a moving load step for a non-moving load combination.
  - Corrected an issue with the detail report display of KL/r values for tapered members in the AISC 13th / 14th editions. Code checks were correct, but KL/r values could be incorrect for yy value and show na for zz value.
  - Fixed a rare memory allocation issue with the Joint Reactions calculation that could cause the program to shut down if an unstable model with multiple load combinations was run with tension-only members.
  - Fixed a unit conversion error for wood members in tension per the Canadian design code.
  - Corrected an issue where wall panel in-plane transfer parameters were not being updated when solving one LC from another. This affected the  $\Delta_{NS}$  value for a batch solution.

- Corrected an issue with the Delete Joints routine which could cause items (usually members) to reference joints that no longer exist.
- Corrected an issue when clearing an eigensolution between dynamic analyses that would cause the program to shut down.
- Corrected an issue that caused a pedestal in a RISAFoundation from RISA=3D integrated model to display incorrectly in Metric units.
- Corrected a problem where an error message flag caused negative capacity results for hot-rolled steel members.
- Corrected the DXF export display for metric Footings Details.
- Corrected an issue where RISA-3D was not automatically creating boundary conditions at the bottom of wall panel stacks.
- Fixed a problem where the internal PDF writer would print spreadsheet results as images rather than text, causing PDF sizes to be much larger than necessary.

## Version 13.0 Enhancements/Corrections

- Cold Formed Steel:
  - AISI S100-12
  - CANACERO-2012
  - CSA S136-12
  - Added code checks for back to back cold formed steel members.
  - Added L-Torque to CFS members. L-Torque applies to compressive capacity computed per C4.1.2.
- Masonry:
  - Added the ACI 530-13 masonry code.
  - Corrected an issue where the masonry wall panel shear check results were displaying values that did not correspond to the governing load combination.
  - Fixed a problem with the calculation of "a" for out-of-plane strength design of masonry walls, where the program was producing bending capacities smaller than actual.
  - Fixed an issue with the detail report for masonry walls where the shear and moment diagrams could be inaccurate if the wall thickness was changed during that session.
- Hot Rolled Steel:
  - Added the AISC Historic shape database.
  - Added Kaiser Bolted Bracket moment connections for Seismic Detailing code checks.
  - Revised OCBF brace connection force reporting for seismic detailing results to be limited by the overstrength load combinations.
  - Updated an error in the Chinese Single Angle Shape Database where the program was previously taking rx as rz.
- Wood:
  - Added wood member design per the Canadian CSA Standard 086-09 design code.
  - Added new glulam material databases per NDS Tables 5B and 5D.
  - Improved error reporting for mismatched wood sizes/species/grades.
  - Fixed a problem where a wood wall would give erroneous warnings about mis-aligned straps due to the presence of perpendicular walls.
  - Fixed an issue where we were not properly filtering out the non-full height region results for wood wall panels with a segmented design.
  - Corrected a problem with explicit wood header materials unintentionally changing when deleting lines from the Wood Materials spreadsheet.
- Aluminum:
  - Added L-Torque to aluminum members when calculating the member's axial compression capacity for the ADM 2010.
- Concrete:

- Updated the dimensioning of column reinforcement in the detail report to account for the presence of stirrups.
- Updated the shear area of steel output to be on a per foot basis vs a per inch basis in the detail report.
- Corrected an issue with the viewing of detail reports for concrete round columns for the NZS code.
- Dynamic Solution Improvements
  - Added a Ritz Vector dynamic solution option.
  - Added a dynamics solution option for considering residual rigid response.
  - Minor changes to simplify the dynamic solution dialog.
  - Corrected the Spectra Scaling Factor calculation to include the importance factor.
  - Corrected an issue where modes with a frequency higher than the last frequency defined in the spectra did not get assigned the proper zero period acceleration.
- Improved Install Behavior
  - Improved ability of Network Client versions to find a license server.
  - Reorganized all files (databases, defaults, etc) into new sub-folder locations.
  - Added an option in the installer to install to the Program Files and Documents folders.
- RISAFloor/RISA-3D to RISACONNECTION Integration Improvements.
  - Update to include new end plate moment configurations.
  - Update to allow transfer of channel connections as beams and braces.
  - Update to allow transfer of seismic moment connection parameters per AISC 341-10 and AISC 358-10
  - Added a Connection Type field to the Connection Rules spreadsheet to filter list of connections.
  - Corrected an issue with RISA-3D/RISACONNECTION interaction where having Z as your vertical axis could incorrectly produce member / connection orientation errors.
  - Addressed erroneous RISA-3D and RISACONNECTION integration warning related to invalid member slope.
- Loading:
  - Moving loads can now be included in a Batch + Envelope solution.
  - Increased the width of the Load Combinations to allow for 10 Basic Load Cases per Load Combination.
  - Added a feature to generate point loads per a specific moving load time step.
  - Enhanced the Load Combination Generator in order for each RISA program to read its own default settings.
  - Corrected load combination equations for the SBC 301 2007 Saudi Arabia code.
  - Corrected an issue with the Append command that caused the Mx loads to turn into X direction loads.
  - Corrected an error where nodes for the Perp member area load were being re-arranged in the spreadsheet.
- Wall Panels:
  - Added the option to detach a wall panel from a diaphragm.
  - Added a Point to Point Internal Force Summation Tool for Walls and Slabs.
  - Enhanced the Wall Panel Editor with local dimensions for openings and design regions.
- General:
  - Semi-Rigid diaphragms added to a linked RISAFloor ES/RISA-3D model.
  - Added an option to the truss generator to allow for pinned end releases.
  - Added a "Memory" to the Copy Loads with Members checkbox in the Copy Offset tool
  - Improved the capability of tnx Tower to integrate with RISA-3D and RISAFoundation. Previously RISAFoundation input would not be read in after the .rt3 file was created.
  - Common input spreadsheet entries will be merged for appended models.
  - Linked the unbraced length and K factors for columns between RISA-3D and RISAFloor. Now the model will use the same values in both 3D and Floor instead of maintaining separate values.
  - Corrected a units conversion issue with joint reaction COG calcs when units were changed with existing calculations.
  - Fixed an issue where project grids were omitted from the creation of a flat file incorrectly.