Release Notes for RISA-3D

Version 19.0.4 Enhancements/Corrections

- Hot Rolled Steel:
    - Fixed a graphical issue in the double angle Detail Report where an equation in the Flexural Buckling Stress section reported 3.77 rather than 4.71 as per AISC Eq. E7-2.
    - Fixed an issue where the Simpson Yield Link Database XML was not properly updated during installation.
    - Resolved an issue where envelope results did not properly include regular and capacity-limited load combinations.
- Cold Formed Steel:
    - Fixed a graphical units issue to report the shear capacity in the Cold Formed Wall Panel Schedule in units of k/ft.
    - Resolved an issue in CFS wall design that was only designing Axial based on a 16-inch stud spacing.
    - Resolved inconsistencies with CFS wall panels where results were reported for regions that did not satisfy the h/w ratio.
    - Resolved an issue that caused CFS walls to be designed even though the code chosen for CFS members was not current enough to meet the CFS walls code.
    - Resolved an issue that prevented the proper redesign of CFS walls.
- Concrete:
    - Corrected the multi-span concrete beam Detail Report to consider all spans when reporting the governing shear force.
    - Fixed an issue where concrete reinforcement designed to 'Leave room for horizontal rebar splices' from the Model Settings was opposite the expected behavior.
    - Corrected an issue that erroneously reported seismic unity checks for concrete wall panels using an Ordinary seismic design rule.
    - Corrected a graphical issue in the detail reports for custom rebar concrete members where the total shear strength was not displayed.
- Wood:
    - Enhanced the strong axis Flexural Analysis section of glulam Detail Reports to clarify Cm, E, and Emin.
    - Updated the Aspect Ratio Factor for wood wall panels using FTAO to be based on the aspect ratio of the wall segment rather than the full height of the wall panel region.
    - Fixed an issue for custom wood materials where COV_E was not updating in the Custom Wood Species Database dialog.
    - Resolved a rare issue where the wood material databases were in some cases read inconsistently with multi-core processing computers which caused the incorrect display of wood species in the Materials spreadsheet.
- Plates:
    - Resolved an issue that was deleting loads applied to duplicate plates when performing a Model Merge.
- Wall Panel:
    - Enhanced the Wall Internal Force Summation Tool to only snap to points on wall panels in the same plane.
    - Updated the graphical representation of regions drawn on Wall Panels that are not rectangular.
    - Fixed an issue which prevented wall panels from being copied using Copy Local Offset.
    - Corrected an issue where using Ctrl + Z in the Wall Panel Editor sometimes caused the program to close unexpectedly.
    - Resolved an issue that caused linear loads to not be applied correctly to wall panels when the wall is moved by changing coordinates of nodes manually.
    - Resolved an Exception Message when solving after deleting a wall panel boundary condition.

- Resolved a graphical display issue that showed an incorrect numbering of wall panel regions in Detail Report for CFS and General wall panels.
- Analysis:
  - Updated the Advanced Dynamic solver to better handle very large symmetrical models.
  - Enhanced the behavior of locked instabilities to always report LOCKED user generated nodes in the Node Reactions spreadsheet and provide the user the option to mute the instabilities notification.
  - Corrected an issue that caused the program to close unexpectedly when solving for an Envelope Only solution.
  - Fixed an issue where Excluded elements were affecting the results.
  - Resolved an issue where applying a partial distributed load would incorrectly affect the total seismic weight of the model.
  - Fixed the P-Delta divergence error message which was occasionally not properly specifying node and load combination information.
  - Resolved an issue where solving an eigensolution with only Plus X and Plus Z Eccentric Mass caused the program to close unexpectedly.
  - Corrected the calculation of the scaling factor with the NBC 2015 code.
  - Resolved an issue that prevented the Scale Factor from being properly calculated in RSA analysis.
- Graphics:
  - Improved the load graphics while panning a model.
  - Increased the text limit for the Project Notes input box within the Project Info dialog.
  - Enhanced the Moving Load arrows and text for better visibility during animation in dark mode.
  - Corrected a graphical issue where transparency values in Model View Settings were being cut off slightly.
  - Fixed an issue where the checkbox to open the Diaphragm spreadsheet was not working.
  - Resolved an issue that prevented the graphical representation of Enveloped Overstrength loads in the 3D View.
  - Resolved a graphical issue with the deflection ratio results, L/y and L/z.
  - Resolved an issue where graphically displaying nodal reactions would sometimes cause the program to unexpectedly close.
  - Resolved a graphical issue for moment reactions where the arrows were inconsistently displayed.
  - Resolved an issue with the display of the Strap / Hold-Down unity ratio.
  - Resolved a graphical interface issue that caused the incorrect node label to be shown in the Time History Trace dialog.
  - Resolved an issue where the model view changed from Color Coded to Wireframe when the Contour Diagram Tool was selected.
- Spreadsheets:
  - Improved the speed of opening spreadsheets.
  - Improved the speed and behavior of copying spreadsheet values within the program.
  - Resolved an issue where newly created rows were unable to be deleted from the Materials spreadsheet.
  - Corrected an issue that prevented concrete materials from being deleted from the Materials spreadsheet.
  - Resolved an issue that prevented copying and pasting data into the Boundary Conditions spreadsheet.
  - Fixed an issue where the program would close unexpectedly after pasting an invalid shape name in the Section Sets spreadsheet.
  - Resolved an issue where changing the material of a member would change the design list in the Members spreadsheet.
  - Resolved an issue where the Surface Loads spreadsheet was not consistent with the actual loads in the model.
  - Resolved an issue that prevented pasting loads in the local axis direction into a loading spreadsheet.
  - Resolved an issue where diaphragm drift definitions could be deleted in the Drift Definitions spreadsheet.
  - Resolved an issue that caused the program to close unexpectedly when opening the Mode Shapes spreadsheet.

- Detail Reports:
  - Improved the quality of Detail Reports for members and walls.
  - Improved the graphical scaling of the CFS Cross Section Detailing section of the Detail Report.
  - Improved the representation of large Cross Sectional Details of walls in Detail Reports.
  - Corrected an issue where the program would close unexpectedly when switching to the next member within the deflection diagram of a member Detail Report.
  - Corrected the unbraced length reported in the Elastic Buckling Stress section for hot rolled steel member Detail Reports.
  - Corrected an issue that was preventing the bending results being displayed for the masonry wall detail report.
  - Corrected graphical unity checks in the masonry wall Detail Reports.
  - Fixed a Detail Report display issue for custom wood materials to report the correct COV_E value in the Shape Properties section.
  - Fixed an issue where the Detail Report was not expanding for visually or mechanically graded solid sawn custom wood materials.
- Printing:
  - Improved printing of spreadsheets to only include lines that contain information.
  - Improved the ability to filter input spreadsheets in report printing.
  - Added the ability to print from within the Time History Trace dialog.
  - Added the ability to print the detail diagram of Contour Cut results.
  - Resolved an Exception Message that would occur when printing the aluminum tab of the Materials spreadsheet.
  - Fixed an issue where the Basic Load Cases spreadsheet was unable to be printed using the Print Spreadsheet option.
  - Resolved an issue that prevented the ability to print Contour Diagrams using the Print Graphics option.
  - Resolved an issue where the date and time were not displayed in the Print Report preview.
  - Corrected an issue where the program does not respond while having the print report preview open.
- Operations:
  - Increased the speed of minimizing the main window.
  - Improved cursor selection behavior when the mouse extends beyond the RISA program window.
  - Improved the speed of clearing model results before opening a new model in the same session.
  - Improved the efficiency and speed of the Model Merge function of the program.
  - Improved the behavior of the Coordinates tab of the Criteria Select tool.
  - Improved the behavior of the Response Spectra Library dialog to rename entries by pressing Enter.
  - Updated the wording within the 'New Version Available' dialog.
  - Updated the behavior of Node selection in Criteria Selection Dialog.
  - Resolved an issue that prevented File Locations from being reset to default after selecting Reset all Program Defaults.
  - Corrected an issue that prevented the Autobackup feature from backing up properly.
  - Corrected a rare issue that prevented the program from opening model files created in an earlier version of RISA-3D.
  - Resolved an Exception Message caused by empty strings in the material defaults.
  - Resolved an issue where the Member/Wall to Node drawing option was not working correctly.
  - Resolved an issue that kept member information shown in the Properties Panel after deleting that member from the Members spreadsheet.
  - Corrected an issue with the Truss Template generator where the unbraced lengths were being applied incorrectly.
  - Corrected an issue that prevented decimal inputs within the Truss template generator.
  - Corrected an issue where switching the vertical axis could inadvertently change the member rotation.
  - Corrected an issue where clicking the cancel button in the Boundary Conditions dialog would still apply the settings.
  - Corrected an issue where the wind load generator would cause the program to freeze in some instances.
  - Resolved the inability to create Point Loads from a Load Combination that includes a Moving Load.

- Resolved an issue that included newly generated elements in previously saved selection states.
- Resolved an issue that reapplied a linear load to the active member of two duplicate members after using Model Merge to delete duplicate members.
- Fixed an issue where the wall and diaphragm Internal Force Summation Tool did not work properly after opening a saved solution.
- General:
  - Improved the behavior of the lateral load generation tools to delete unattached nodes when the lateral code is set to None.
  - Fixed a graphical issue where the X and Z parameters for wind load using IS 875: 1987 were flipped in the Wind Load Generator dialog.
  - Resolved an issue where the generated notional loads were applied to the incorrect axis.
  - Corrected a rare issue where the seismic generated loads were not being applied to the model.
  - Fixed the Slab Internal Force Summation Tool which, in some cases, could not find elements for the internal force calculations.
- Integration:
  - Enhanced the behavior of importing an SAF file into a new RISA-3D file by automatically switching the vertical axis to Z.
  - Resolved an issue in RISA-3D that made elements copied from RISAFloor unable to be edited.

Version 19.0.3 Enhancements/Corrections

- Cold Formed Steel:
  - Resolved an issue where studs within CFS walls were incorrectly being assumed to be braced about their weak axis by the wall sheathing.
  - Resolved an issue where Ltorque was not using the full height of a stud within a CFS wall.
- Wood:
  - Corrected a units issue where changing material strength defaults to 'psi' would change Emod to 1,000 for wood materials.
  - Corrected an issue to retain modified custom wood material labels.
- Masonry:
  - Corrected a graphical issue in Masonry wall detail reports where detailed calculations for bending design were not being shown.
- Solution:
  - Added an error message when a Custom Redesign List was created using a different database than the Default Shape Database.
  - Resolved an Exception Message when trying to use the Snapshot feature before the model is saved.
  - Resolved an issue that prevented a solution in RISA-3D due to an erroneous mesher error.
  - Resolved an issue that caused Suggested Design not to choose a shape from the design list.
- Detail Reports:
  - Corrected a graphical issue in the Concrete wall detail report where wall region labels did not match what was shown visually and in the calculations.
  - Corrected an issue with CFS member detail reports where the required tension force was not matching force diagrams.
  - Resolved an issue that was causing the Out-of-Plane Unity Checks of Concrete wall panels to show infinity as the unity check.
  - Fixed a rare occurrence that caused concrete wall regions to be inaccurately reported as passing or failing in the wall detail reports.
- Spreadsheets:
  - Resolved an error that was given when manipulating certain cells in the Load Combination spreadsheet.
  - Resolved an Exception Message when using the Fill command in the BRB tab of the Members spreadsheet.

- Resolved an issue that prevented copying and pasting functions from working correctly when including rho or omega in the Load Combination spreadsheet.
- Resolved an issue that prevented large amounts of data from Excel to be copied correctly into the Load Combination spreadsheet.
- Printing:
  - Enhanced the Print Report dialog to not show Inactive or Excluded elements from the Available Reports list.
  - Added the ability to use of no sketch number in Graphical Prints.
- Graphics:
  - Resolved a graphical issue to retain the display of reactions after running a new solution.
  - Resolved a graphic display issue that was showing NC for some members when displaying Unity Check values.
  - Resolved a graphic display issue that prevented the viewing of Envelope results for models using Stainless Steel members.
  - Updated the Graphical display of loads to not show if applied to elements that are not visible in the 3D view
  - Fixed the Design Results toolbar to show the Connection Detail Results icon after designing connections.
  - Resolved a rare issue where selecting wood shapes in the shape selector dialog would not populate member properties.
- Operations:
  - Added the ability to graphically select nodes from the Boundary Condition spreadsheet
  - Enhanced the Distance Measure tool to reflect the 'Decimal Places for Input' specified in the Application Settings.
  - Enhanced the area load magnitudes to reflect the 'Decimal Places for Input' specified in the Application Settings.
  - Resolved an issue that prevented the changing of Wall Panel Boundary Conditions of some walls created in RISAFloor.
  - Updated the program to prevent the creation of Shapes with the same label.
  - Resolved an issue that prevented the Add Nodes tool to work when the member previously had any nodes in the location of the proposed generated nodes.
  - Resolved an Exception Message when using the Global Copy tool.
- General:
  - Resolved an issue that prevented the program from opening on machines with Aero Windows themes being used.
  - Resolved an issue where a mismatch between the Section Set sizes and the Member sizes caused the member sizes to change after solution.
  - Resolved an issue where the General database (GEN_DB32.fil) was causing unexpected program behavior.
  - Resolved an issue that prevented the Append feature to work for models with several boundary conditions.
  - Corrected an issue where the program will not open a model file if section set labels or design rule labels contain quotes.
  - Updated the Seismic Design Rule Editor to have the proper defaults for OCBF.
  - Resolved an issue that caused a crash upon solution of specific models while using Processor Cores Utilization of any option besides single.
  - Fixed the behavior of the Seismic Load Generator to prevent adding generated loads into a Basic Load Case with existing loads.
  - Resolved an issue that prevented the drawing of Wood members when Region was set to Europe.
  - Resolved an issue that caused an erroneous error stating that specific Time History loads are not valid load numbers.
  - Resolved an issue that was not properly reassigning shapes as the warning log stated it was.
  - Resolved an issue that caused Live Load Reduction to not be considered in RISA-3D if units for Force were in pounds.

- Updated the model text file to include the full username and email address listed under Cloud ID.
- Added a safeguard to Network licenses that go idle with the ability to 'Save and Exit' from the model to allow users to preserve their work.
- Integration:
  - Fixed a rare occurrence where the program will close unexpectedly during a solution when a semi-rigid diaphragm is assigned in RISAFloor.
  - Resolved an issue that prevented TEKLA models being exported to RISA-3D.
  - Resolved an issue where integrating from RISA-3D to RISAConnection caused an Exception Message.
  - Resolved an issue with steel joist type being changed in RISAFloor after integration with RISA-3D
  - Resolved an issue that changed specific Wood Types to None when using Director to RISA-3D.

Version 19.0.2 Enhancements/Corrections

- Hot Rolled Steel:
  - Added Capacity-Limited Seismic Design for Special Concentrated Braced Frames (SCBF).
  - Added the ability to choose whether to include the gravity load effects in BRB axial force diagrams.
  - Enhanced the seismic detailing checks to differentiate between braced and moment frames regarding seismic requirements.
  - Added the design of columns and beams according to the expected brace strength for SCBF and BRBF.
  - Added design consideration for BRB under response spectra (RSA) loads.
  - Corrected the capacity calculation for members with only tension loads to follow chapter D of AISC 360 instead of chapter H.
  - Resolved an issue of incorrectly checking Beam/Column Ratio for a Specially Concentric Braced Frame.
  - Updated the calculations for SCBF and OCBF brace required connection force and unbalanced force per AISC 341-2010 and AISC 341-2016.
  - Corrected an issue where a member was being code checked even when the L/r limit was exceeded.
  - Resolved an issue where width-to-thickness requirements for SMF were erroneously applied to members assigned the OMF Seismic Design Rule.
  - Resolved an issue where the calculation of thermal deflection for a Hot-Rolled Steel member was affected by enabling the stiffness adjustment.
  - Corrected the seismic detailing slenderness check for SCBF according to section F2.5b of AISC 341-2010 and 2016, and 13.2a of AISC 341-2005.
  - Resolved an issue causing the area of the steel core to change with each solution iteration.
  - Resolved an issue that showed 'No Val' in the Gov LC column of Hot Rolled Code Check spreadsheets for IS800 2007 Code.
- Cold Formed Steel:
  - Improved the visibility of code selection for CFS wall panels so that it appears greyed out when any code other than AISI S100-16 is selected.
  - Corrected an issue where CFS walls were producing erroneous node reactions.
  - Resolved a graphical display error for Stud Spacing in Cold Formed Steel Wall Detail Report.
  - Resolved an erroneous error message for Aspect Ratio not being met for Cold Formed Steel Walls.
  - Resolved an issue that was not checking the Aspect Ratio correctly for Cold Formed Steel walls with Fiberboard sheathing.
  - Resolved an error where results were shown for CFS Walls when the shear panel was not valid.
  - Corrected an issue where invalid sheathing configurations were chosen for slender CFS wall panels during optimization.
  - Corrected an issue where the program was providing a design for CFS wall panels which exceeded the allowable aspect ratio.
  - Corrected an occasional issue preventing the design of CFS walls when solving a DL only load combination.
  - Corrected an issue where CFS shapes were inaccurately reporting wrong width of the member resulting in inaccurate Open Structure area loading.

- Corrected an issue with the optimization of CFS walls where the selection of sheathing panels was not compatible with the selected stud size.
- Corrected an issue where the program selects invalid sheathing sizes for CFS wall panes during optimization.
- Resolved an issue that prevented CFS Wall Panel Code change to be Saved as Default.
- Wood:
  - Added the Specific Gravity Adjustment Factor to reduce the shear capacity for wood framed shear walls.
  - Corrected bending capacity of wood members due to Cm factor being applied twice during member capacity calculations.
  - Corrected an issue where the Cr (repetitive use factor) would equal 1.0 regardless if it was enabled.
  - Corrected an issue where the Total Area of Openings of a perforated shear wall was being calculated incorrectly.
  - Resolved an issue preventing wood materials from merging when appending models.
  - Corrected the imperial to metric unit conversion calculation for manually entered 'Net Rectangular' NDS wood shapes.
  - Corrected a graphical issue in the wood wall detail report where the tension stress was reported incorrectly.
  - Resolved an issue that was causing Wood Diaphragm properties to not be read correctly from Database.
  - Resolved issue preventing newly added Custom Wood Materials from being retained after closing the program.
  - Fixed an issue that allowed a Poisson's ratio greater than 0.5 to be entered in the Wood tab of the Materials spreadsheet.
  - Resolved an issue with axial tension capacity reported as zero for round wood members using NDS91&97 ASD.
  - Corrected an issue where the Wood Design List was not properly being filtered by the shape and material of the member.
  - Resolved an issue where custom Canadian wood materials were not properly retained when using Save As Defaults.
  - Corrected a graphical display issue where incorrect strap results were reported in the wood Wall Panel Detail Report.
  - Corrected an issue where the Wood Design List was not populating correctly in the properties panel after changing Material type.
- Concrete:
  - Added the ability to consider the amplified shear demand (Ve) for Special Concrete Shear Wall per Section 18.10.3.1 of ACI 318-19 code.
  - Resolved an issue causing the program to close unexpectedly when opening a Detail Report for a concrete member with custom rebar.
  - Resolved a graphical units issue for the Out-of-Plane shear reported in the concrete wall panel Detail Report.
  - Resolved a graphical issue for concrete wall panels where the Cross Section Detailing did not match analysis.
  - Resolved an issue that was only preventing shear design of concrete beams when members met Deep Beam criteria.
  - Resolved an issue causing the moment capacity of concrete walls to erroneously be reported as zero in some models.
  - Corrected graphical issue in the concrete wall panel detail report in regard to rebar detailing.
  - Resolved an issue of '-1' being occasionally shown for Unity Check of some Concrete Wall Panels.
  - Resolved an issue that was displaying incorrect units in the Concrete member Detail Reports using Non ACI codes.
- Masonry:
  - Resolved an issue on rebar optimization in masonry wall boundary zone.
  - Corrected an issue where masonry wall results would change after multiple solutions in rare instances.
  - Fixed a graphical issue with masonry lintels after switching vertical axes.

- Fixed an issue preventing changes to the Custom Wall Design Rule from being retained for masonry walls.
- Corrected an issue where the masonry wall Detail Report for shear in plane limit state was showing a FAIL when there is no in plane shear in the panel.
- Plates:
  - Improved the warning and error checking for the Degenerate Plate Check.
  - Corrected an issue when applying projected surface loads to 3-node plates would cause an exception error message.
  - Resolved an issue that prevented submeshing plates properly.
  - Fixed inconsistent behavior using the Rotate Axis function for single plates.
- Solution:
  - Added the ability to view Semi-Rigid Diaphragm submesh after Dynamic solution.
  - Improved the area load mesher to provide better results at larger area load mesh sizes.
  - Improved the minimum length threshold for wall mesher to avoid mesher snapping issues.
  - Enhanced the snapping algorithm to resolve some cases of Error Code 2125 where errors were detected in the polygon input for the mesher.
  - Resolved an issue where incorrect UC was reported in the expanded Bending & Axial Interaction Check section of Detail Reports for Stainless Steel HSS members.
  - Fixed an issue that the 3D display of nodal reactions may not include results from overstrength LCs properly.
  - Fixed an issue causing a Dynamic Solution to be cleared when changes were made to the Load Combinations spreadsheet.
  - Resolved an issue with Inactive walls not properly being excluded from the calculation for Mass in the Seismic Load Generation.
  - Resolved a graphics issue preventing reactions from displaying after a dynamic solution is performed.
  - Resolved an issue where some models would not solve when wall surface loads were added.
  - Resolved an issue preventing the ability to solve a dynamic solution in some models.
  - Resolved an issue that was not correctly showing the Delta Max values in the Wall Panel Detail Report when an Envelope Only solution was performed.
  - Resolved an issue preventing the ability to explicitly select sheathing panels for Wood or CFS walls.
  - Resolved an issue causing Plate and Wall Panel Contour Diagrams to not be smooth.
  - Resolved an issue causing dynamic solution results from being deleted after making changes to the scale factor.
  - Corrected an issue causing reactions to display when only the option to view the Member Results was selected.
  - Resolved a rare issue that was not allowing Saved Results to be read when reading File that was saved to a cloud location.
- Detail Reports:
  - Enhanced the Detail Report for wood members to show the how torsion is incorporated into the shear analysis.
  - Improved the display of member local axes in Detail Reports.
  - Enhanced the Bending and Axial Interaction Check section of aluminum Detail Reports for clarity.
  - Resolved a graphical display issue of some wood members not showing the correct Unbraced lengths in the Design Properties section of Detail Reports.
  - Resolved an issue that was preventing Detail Report Diagrams to properly display when Envelope solution was run.
  - Resolved an issue causing some information to be excluded when printing fully expanded Wall Panel Detail Reports.
  - Corrected labeling of Combined Check in Wall Detail Report for Masonry Walls.
  - Resolved a unit conversion issue in the display of results in the Detail Report for Wood Members being analyzed with CSA Codes.
  - Resolved units issues in the concrete wall panel Detail Report.
  - Resolved graphical units issues in the masonry wall panel Detail Report.

- Corrected a graphic display issue in Detail Reports where 'Lcomp,top' was reported as the variable label when the controlling value of the unbraced length was 'Lcomp,bot'.
- Resolved an issue resulting in an Exception Message when opening the Detail Report for concrete members defined as Vbrace, HBrace, or None.
- Resolved a display issue of axial compression demand in Detail Report when force unit is in pounds.
- Fixed a graphic display issue where units were inconsistently reported in the Detail Report for masonry wall panels when custom units settings were specified.
- Resolved graphical display error of units shown in Wall Panel Detail Reports.
- Resolved text being cutoff for Concrete Wall Interaction Diagrams in Detail Report.
- Fixed a graphic display issue where the incorrect value for Omega was listed in the Detail Report for the Shear Analysis of a Hot Rolled Steel member.
- Resolved a graphic display issue in Wall Panel Detail Reports where unity checks were reported for partial height regions when using the Transfer In or Transfer Out option.
- Spreadsheets:
  - Improved the speed and functionality for all Input spreadsheets.
  - Improved the speed of the actions made in the Load Combinations spreadsheet.
  - Added the ability to sort Wall Panel Results spreadsheets.
  - Refined the 'Spreadsheet to open after static solution' behavior to also display all results spreadsheets that were already open.
  - Updated the functionality of Members spreadsheet to allow adding lines from any tab.
  - Resolved an issue on sorting by Absolute Maximum and Minimum in Member Forces spreadsheet.
  - Fixed the block fill function in the Wall Design Rules spreadsheet.
  - Resolved an issue that prevented the Members spreadsheet from opening due to the RISASection shape name.
  - Corrected an issue allowing negative values to be entered into the 'Min # Bars Per Layer' in the Wall Design Rules spreadsheet.
  - Corrected an issue where the program would produce an Exception Message after values in the Load Combination spreadsheet.
  - Resolved an issue causing an Exception Message to appear when using the Fill command to make loads Active in the Distributed or Point Loads spreadsheet.
  - Fixed an issue which removed the filter from the Envelope results spreadsheet after changing the display of Batch results.
  - Corrected the behavior of selecting columns of data in various input spreadsheets.
  - Resolved an issue causing Diaphragms levels to be incorrectly ordered in spreadsheet.
  - Resolved an issue that caused an erroneous error message when trying to Undo adding a line to a spreadsheet.
  - Resolved an issue preventing the Copy with Headers feature from working within the Basic Load Case Spreadsheet.
  - Resolved an issue causing an exception message to appear when making changes to the Seismic Design Rule for CFS members in the Advanced tab of the Members spreadsheet.
  - Fixed 'Undo the last operation' function while in the Wall Panels Spreadsheet.
  - Corrected an issue preventing the ability to choose 'Graphical Highlight' when the Solids spreadsheet is open.
  - Fixed sorting of 'Activation' column in the Advanced tab of the Members Spreadsheet.
  - Fixed an issue with the display of the envelope unity check (UC) result for BRB members in the detailed reports may change after sorting the UC column in the Code Check spreadsheet.
- Printing:
  - Resolved an issue preventing the ability to print to PDF in some instances.
  - Resolved an issue causing the program to close unexpectedly in some instances when attempting to print.
  - Fixed a printing issue by setting a default design code if any codes were erroneously blank.
  - Resolved an issue that prevented report sections from being added to the Current Report for printing.
  - Fixed an issue where printing a wood wall expanded Detail Report printed a summary report instead.

- Fixed an issue that prompted an Exception Message when Printing Graphics.
- Resolved an issue that caused the program to close unexpectedly when printing to large paper formats with high print quality.
- Corrected 'View Extents' display when printing graphics.
- Graphics:
  - Improved the program to display the Results View Settings that were active prior to clearing results when a new solution is performed.
  - Updated Reactions to show Magnitude by default when using Quick View option.
  - Improved the graphical display of distributed loads on wall panels to update when changes are made to the wall panel geometry.
  - Corrected a graphical issue where shear unity checks were not being displayed.
  - Corrected a graphical display issue where the global axes headers in the Seismic and Wind Load Options dialog were inconsistent with the applied load direction.
  - Corrected a graphics issue where the incorrect code reference was reported in the Seismic Load Generator dialog when a SDC A was specified.
  - Corrected graphical issue in the concrete wall panel Detail Report where the units did not match model settings units.
  - Resolved an issue with minimum reactions missing in the moving load reaction graphic display.
  - Corrected a graphical issue related to the Cross Section Detailing for Cold Formed Steel Walls when dimensions change from imperial to metric.
  - Fixed a graphical issue to show the original member properties in the Properties Panel after using the Split tool.
  - Resolved a graphical display error that showed 1 for member labels set to kyy that did not have a value entered manually for the member.
  - Resolved a graphic display issue preventing the display of Node Reactions when enabled through the Quick View toolbar.
  - Corrected the display of Enveloped reactions to show maximum and minimum reactions.
  - Corrected an issue that caused loads to display after disabling the view of Member Results.
  - Resolved a graphic display issue that prevented updating of graphs when Tracing Nodes using Time History Loading.
- Operations:
  - Enhanced the interface behavior to switch between open windows when using Ctrl+Tab and Ctrl+Shift+Tab.
  - Improved the Copy/Move features related to Local Axes to have the Local Axes label shown when the tool is activated.
  - Improved the speed of navigating within the Shape Selection dialog.
  - Added the ability to toggle the graphical view of Wall Panel Boundary Conditions on and off.
  - Updated the Member Design Rules to not allow Min Depth to be larger than Max Depth.
  - Resolved an issue preventing the 'Save Current Settings as Defaults' option from working within the Generate Project Grid Lines dialog.
  - Resolved an issue where switching units to metric and specifying a 'Net Rectangular' wood shape size used a FS suffix instead of MFS.
  - Resolved an issue preventing the ability to change wood members from a Section Set to the Shape Database in the Properties Panel.
  - Resolved an issue where the Design List was not properly being saved in the Section Set dialog box.
  - Resolved an issue where the Design List was unable to be selected when using a wood SCL material.
  - Resolved an Exception Message when performing Undo after deleting a custom wood material.
  - Resolved an issue where negative member rotation prevented the Seismic Design Rule from being applied.
  - Resolved an issue preventing members from being drawn when a decimal value was entered into the offset field under the Member to Member draw options.
  - Resolved an Exception Message which appeared in some instances when using the Global Copy feature.
  - Corrected an issue where copying or moving plates using Local Offset used the wrong axis.

- Resolved the inability to copy triangular area loads.
- Fixed an issue preventing the Flip Axis tool from working for selected plates.
- Corrected an issue keeping the 'Keep Tool Active' option selected after choosing a different tool from the Modify tab.
- Resolved a false warning when drawing partial line loads using the Apply to Selected feature.
- Resolved an issue preventing new point loads inputted via spreadsheet to be properly added to the Basic Load Cases spreadsheet.
- Corrected an issue preventing loads from being applied to lintels when Z is the vertical axis of the model.
- Resolved an issue causing distributed loads to become inactive when using the Split Members tool.
- Resolved an issue causing nodes to be duplicated when drawing member area loads which, in turn, prevented them from being copied properly.
- Resolved the inability to read in some custom shapes with the model.
- Resolved an issue causing a model file to become corrupt when custom shapes are added.
- Fixed an issue where custom shapes with certain name formats (e.g. names starting with numeric values) could not be saved properly.
- Corrected a rare issue where the program prevented users from recalculating section properties for a custom shape.
- Corrected an Exception Message when trying to access the Snap View buttons.
- Resolved an Exception Message when running a Model Merge in some instances.
- Corrected an issue that caused plate elements to be removed when performing a Model Merge.
- Resolved an Exception Message that appeared during solution after deleting and regenerating load combinations.
- Resolved an Exception Message when creating a saved selection state.
- Resolved several issues with retrieving saved selections in Lock/DimLock mode.
- Resolved an issue of showing warning messages for elements that are set to Inactive or Exclude.
- Corrected an issue with the analysis of members that were affected by setting loads to 'Inactive'.
- Corrected an issue where member activation turns from Inactive to Exclude after checking the Inactive (makes Active) box in the Select Elements by Property window.
- Resolved an issue preventing program generated nodes from being deleted.
- Corrected an issue preventing blank time history input files from being deleted.
- Resolved occasional errors when reading/writing to the Time History library.
- Resolved an issue causing the solution to be cleared when accessing the Pan option through the right-click menu.
- Resolved an error that was given when trying to scroll through Expanded Diagrams of member Detail Reports.
- Resolved an issue that caused an error message when trying to adjust width of Available Sections for Report window.
- Resolved an issue where the model saved results were being deleted when performing a 'Save As'.
- Corrected an issue where the unstable model dialog box and locked nodes were prompted for a model with a P-Delta divergence.
- Fixed a rare issue that would prevent the program from initializing due to the license manager.
- General:
  - Enhanced silent install functionality by disabling the program from launching after install.
  - Resolved an issue causing the program to close unexpectedly after modifying the Unscaled Base Shear when Dynamic results are present.
  - Resolved an issue that using Notional Load Generator for models with both rigid and semi-rigid diaphragms may cause an exception message.
  - Updated Reactions to show Magnitude by default when using Quick View option.
  - Resolved an issue on erroneous information shown in the properties panel after splitting members with partial length distributed load.
  - Resolved an issue preventing the program from suggesting designs from international redesign lists.

- Resolved an issue where the ALL boundary condition created when using the 2D mode was affected by adding a new boundary condition.
- Resolved an issue preventing newly added RSA coordinates from being automatically reordered to descending upon solving a dynamic solution.
- Resolved an inability to view Virtual Joists in the Shape Selection dialog.
- Corrected an issue causing incorrect density values listed in the Materials spreadsheet for the General Material Type.
- Fixed an issue that in certain cases the Subgrade Springs feature generated springs with CS0 stiffness.
- Resolved an issue where an Exception Message may appear when clicking the triple dots in the Seismic Design Rule spreadsheet.
- Resolved an issue where the Generated Time History phase would give an exception message if the entry was outside of the acceptable bounds.
- Resolved an issue with inconsistent warning messages for wall panel regions exceeding aspect ratio limits.
- Corrected an issue causing program generated seismic loads to be deleted when an eccentricity other than 5% was entered.
- Corrected the application of stiffness reduction factor onto nominal flexural capacity for aluminum members.
- Resolved an issue preventing changes to the 'Stiffness Adjustment' from being saved as a default.
- Resolved an issue causing an empty error message dialog to appear when creating a new Redesign List.
- Resolved an issue preventing Notional Loads from generating after an attempt has been made to generate loads based on a time history load combination.
- Corrected the wall panel boundary conditions when using the 'convert existing data' option while changing the vertical axis.
- Resolved a graphical display error that prevented the ability to view semi-rigid diaphragm contours.
- Resolved issues related to regenerating loads using Seismic Load Generator.
- Corrected an issue where nodes created in RISAFloor that were copied in RISA-3D became uneditable.
- Resolved an issue where the RSA scaling factor did not properly apply the controlling I/R limit.
- Corrected a graphics issue where the incorrect code reference was reported in the Seismic Load Generator dialog when Seismic Design Category A was specified.
- Resolved an issue causing the value of Ct to change after pressing Calc Loads when determining the Static Base Shear.
- Corrected application of wind loading when using Wind Load Generator.
- Resolved an issue that was created by inactive Nodal Mass and Nodal Displacements affecting solutions.
- Resolved the inability to copy triangular area loads.
- Resolved an issue that caused Wall Panel Forces to be reported as zero when analyzed using a Moving Load.
- Resolved an issue where the Time History Sinusoid was not being drawn properly.
- Resolved a rare issue that was not allowing Saved Results to be read when reading File that was saved to a cloud location.
- Resolved a Graphical Display issue of Response Spectra Graph not updating with changes made in RSA Generator dialog.
- Improved the behavior of the Ribbon Toolbar such that the options on the Home tab are available when spreadsheets are open.
- Updated the geometric checks per updated Simpson's Yield-Link Design Guide for beams and columns when assigning a Simpson Yield-Link as an end release.
- Resolved an issue causing an error message after deleting all General shapes from the Shape Database.
- Corrected an issue preventing the background color from resetting to white after selecting the option to 'Reset all Program Defaults' in the Application Settings.
- Resolved an issue that caused the program to close unexpectedly when solving a load combination including Time History, but no Time History loads are defined.
- Corrected an issue where some units remained Imperial in the Add Shape window after being changed to Metric.

- Corrected the ability to change the Load Step input when multiple Animations are opened.
- Corrected an issue where aluminum members were not receiving the correct stiffness adjustment factor in some cases.
- Resolved an issue where an error message may occur when the Wall Internal Force Summation Tool is used when wall panels and other elements are selected.
- Corrected the rare case that the preview of RISASection shapes in the Shape Selection dialog was incorrect.
- Resolved an issue in some models originating from RISAFloor where an exception message appeared when attempting to delete a member after a solution has been run.
- Resolved the inability to transfer RISAFloor/RISA-3D models to RISAConnection for some users.
- Resolved an issue preventing some models from transferring to RISAFoundation due to missing scaling factor data.
- Resolved an issue causing the program to close unexpectedly in some instances when integrating with RISAConnection.
- Resolved an issue that was causing Boundary Conditions from RISAFloor to overwrite those chosen in RISA-3D.
- Resolved an issue preventing copied elements from RISAFloor from being deleted, causing the program to close unexpectedly.
- Resolved an issue preventing some models created in a previous version of RISAFloor from integrating.
- Resolved a rare occurrence that caused the model file to close unexpectedly when adding Lcomp_bot value to a member after integrating from RISAFloor to RISA-3D.
- Resolved an issue preventing foundation elements from being retained after changes are made to the RISAFloor and/or RISA-3D models. Resolved an issue about potential shape loss assigned in RISA-3D after double round-tripping between RISAFloor and RISA-3D.
- Resolved a rare issue that would cause RISA-3D to close unexpectedly during the integration from RISAFloor.
- Improved the Reaction Elevation Variations dialog to recall the last input when integrating from RISA-3D to RISAFoundation.
- Resolved the inability to load specific shapes from RISASection into RISA-3D Database.
- Resolved an issue that caused elements linked to RISAFloor to have labels editable in RISA-3D.
- Resolved an issue that caused labels of element created in RISAFloor to not be updated in RISA-3D.
- Resolved an issue that caused relabeling of nodes to not work in RISA-3D models that originated in RISAFloor.
- Resolved an issue that prevented the deleting of materials in RISA-3D if the model originated in RISAFloor.
- Resolved an issue preventing Vertical Brace to Baseplate connections from transferring to RISAConnection from RISA-3D.
- Updated license manager application that prevented a limited number of users to launch the program.
- Enhanced silent install functionality by disabling the program from launching after install.
- Adjusted behavior of program launch when Windows color profiles are corrupted.
- Removed requirement of specific media system files to be installed for the program to run.
- Integration:
  - Corrected an issue where nodes created in RISAFloor that were copied in RISA-3D became uneditable.
  - Updated the Rendered view of RISAFloor Gravity members to include Wood and Steel Joist members.
  - Resolved an issue that was preventing the modification of Masonry Design Rules if the model originated in RISAFloor and had both Gravity and Lateral Masonry Walls.
  - Resolved an issue in some models originating from RISAFloor where an exception message appeared when attempting to delete a member after a solution has been run.
  - Resolved an issue for models originating in RISAFloor that prevented the ability to sort some spreadsheets.
  - Resolved an issue that was causing Boundary Conditions from RISAFloor to overwrite those chosen in RISA-3D.

- Resolved an issue preventing copied elements from RISAFloor from being deleted, causing the program to close unexpectedly.
- Resolved an issue that was caused by being able to edit the Function of Hot Rolled members from RISAFloor.
- Resolved an issue preventing some models created in a previous version of RISAFloor from integrating.
- Corrected values reported by the Internal Force Summation Tool when obtaining wall panel forces with flexible diaphragms.
- Resolved a rare occurrence that caused the model file to close unexpectedly when adding Lcomp_bot value to a member after integrating from RISAFloor to RISA-3D.
- Corrected an issue causing erroneous P-Delta divergence when the model is created in RISAFloor.
- Resolved an issue preventing foundation elements from being retained after changes are made to the RISAFloor and/or RISA-3D models.
- Resolved an issue about potential shape loss assigned in RISA-3D after double round-tripping between RISAFloor and RISA-3D.
- Resolved a rare issue that would cause RISA-3D to close unexpectedly during the integration from RISAFloor.
- Resolved an issue that caused elements linked to RISAFloor to have labels editable in RISA-3D.
- Resolved an issue that caused labels of element created in RISAFloor to not be updated in RISA-3D.
- Resolved an issue that caused relabeling of nodes to not work in RISA-3D models that originated in RISAFloor.
- Resolved an issue that prevented the deleting of materials in RISA-3D if the model originated in RISAFloor.
- Improved the Reaction Elevation Variations dialog to recall the last input when integrating from RISA-3D to RISAFoundation.
- Resolved an issue preventing some models from transferring to RISAFoundation due to missing scaling factor data.
- Resolved an issue causing the program to close unexpectedly in some instances when integrating with RISAConnection.
- Resolved the inability to transfer RISAFloor/RISA-3D models to RISAConnection for some users.
- Resolved an issue preventing Vertical Brace to Baseplate connections from transferring to RISAConnection from RISA-3D.
- Resolved the inability to load specific shapes from RISASection into RISA-3D Database.
- Corrected the rare case that the preview of RISASection shapes in the Shape Selection dialog was incorrect.

Version 19.0.1 Enhancements/Corrections

- General:
  - Added the ability to select the spreadsheet to automatically open after solution including disabling the Node Reactions spreadsheet.
  - Added a warning message when deleting nodes that define rigid diaphragms.
  - Added a checkbox "Keep Tool Active" for the Modify tools.
  - Improved the speed of the Wall Panel internal plate mesher.
  - Improved the Filter Results function to default to the 'Filter out UnSelected Items' option.
  - Improved the Wind Load Combination Generator by adding the option to choose None from the list of additional options available.
  - Resolved an issue causing program generated nodes to be locked for instabilities.
  - Resolved an issue preventing units from updating in some sections of the Detail Report for walls and in the wood Member Properties dialog.
  - Corrected an issue allowing Nodes to be tethered to themselves.
  - Corrected an issue allowing more than 999 segments to be created when using the Split Members and Add Nodes tools.

Resolved an issue that prevented deleting of loads when using the Click to Apply option of the Delete Multi tool.

- Enhanced the Material Take Off to list General walls independently from the other wall types.
- Resolved an issue where loads hidden from view when the Lock and DimLock options are on got deleted when using the Delete Multi option.
- Resolved an issue where the Internal Force Summation Tool (IFST) was not properly considering only the elements in a Locked view.
- Resolved an issue preventing nodes to be regenerated when seismic and wind loads are generated a second time.
- Interaction:
  - Added consideration of accidental torsion for semi-rigid diaphragms for models from RISAFloor.
  - Added the ability to transfer skewed shear tab connections from RISA-3D to RISAConnection.
  - Fixed an issue where boundary conditions were automatically generated at the base of walls that are supported by a semi-rigid diaphragm.
  - Resolved an issue preventing wall panel boundary conditions from being deleted for models under RISAFloor.
  - Resolved an issue where a model created in RISAFloor with CFS walls would close unexpectedly during solution in RISA-3D.
  - Fixed an issue to prevent the I and J Offset parameters from being edited in RISA-3D if the Start and End Col Eccentricity from RISAFloor was checked.
  - Resolved an issue where semi-rigid wind load reactions were not equal and opposite for WL+Z and WL-Z.
  - Resolved an issue causing Drift Definitions to become corrupt when integrating with RISAFloor.
  - Corrected an issue preventing some shape properties from loading from RISASection files.
  - Resolved an issue where brace forces for an OCBF seismic system were not properly transferring to RISAConnection.
  - Resolved an issue preventing the Reset Defaults option from working within the Application Settings when the model originated in RISAFloor.
- Wood:
  - Resolved an issue preventing the glulam database from automatically updating when switching between versions of the CSA code.
  - Corrected an issue where the incorrect value of Fb was used in the calculation for the adjusted bending design value for wood members 5in x 5in and larger.
- Plates:
  - Improved error message reporting when the Submesh Plates tool is unable to mesh the plates.
- Solving:
  - Improved the warning message for members requiring P-Delta analysis to appear prior to solution.
  - Corrected an issue preventing concrete wall panels from being analyzed when the 'Enforce code required P-Delta analysis' is unchecked.
  - Corrected an issue where acceleration was incorrectly calculated in a Response Spectrum Analysis when using metric units.
  - Resolved an issue where changes made to the Load Combination spreadsheet caused a Dynamic Solution to be cleared.
  - Resolved an issue preventing seismic detailing results from being properly reported after modifying the seismic design rule.
  - Resolved an issue causing erroneous transient loads when a flexible diaphragm is used and area loads are applied.
- Wall Panels:
  - Corrected an issue preventing loads applied along vertical wall panel edges from being considered in analysis.
  - Improved the behavior of Distributed Loads applied to Wall Panels with sloped edges.
  - Improved error messages for CFS walls when stud and sheathing selections are incompatible.
  - Resolved an issue where the UC for shear in concrete wall panels was erroneously reported as -1.

- Resolved an issue preventing hold down boundary conditions from being generated at openings of CFS wall panels.
- Corrected an issue preventing the design of some CFS shear wall panels.
- Resolved an issue preventing the shear capacity for wood walls from being adjusted for wind loading.
- Corrected an issue where results were reported for wall panel regions with the Transfer In option checked in the Wall Panel Rules spreadsheet.
- Corrected an issue where a superfluous warning message is produced in some cases for CFS walls.
- Detail Reports:
  - Added the ability to open multiple enlarged force diagrams within the member Detail Report.
  - Updated deflection and shear diagram titles in member Detail Reports to be lower case y and z to indicate member local axis.
    Improved error reporting for Custom Rebar not being within the cross section of a member.

  - Resolved an issue preventing member force or deflection diagrams from updating when switching between Load Combinations and Members in the Detail Report.
  - Resolved an issue where the UC in the Detail Report for CFS walls was reported incorrectly.
  - Corrected an issue where the incorrect governing Load Combination was reported in Enlarged Diagrams.
  - Corrected the following sections in the wood wall Detail Report: Wood Wall Summary (to report the total shear and max unit shear), Shear Panel Design (fixed the reported Adjusted Capacity), and the Chord Design (updated the header to reflect the governing UC).
  - Resolved an issue preventing the graphical display of concrete wall seismic piers in the wall panel Detail Report.
  - Corrected the reported number of tension bars in the masonry wall Detail Report.
  - Corrected an issue where the envelope force diagrams were not graphically displaying max and min values.
  - Resolved a graphical issue where concrete metric shape properties were not properly reported in the Detail Report.
  - Resolved a graphical display issue in Detail Reports where bending stresses for concrete members were off by a factor of 1000.
  - Resolved a graphical display issue in the Rebar Detailing section of the Detail Report for members assigned a Customer Rebar Layout.
  - Resolved an issue preventing the display of the controlling LC in the Detail Reports for concrete beams.
- Spreadsheets:
  - Resolved an issue preventing the copy and paste functions from working within some spreadsheets.
  - Resolved an issue preventing the Save as Defaults option from working within the General tab of the Materials spreadsheet.
  - Resolved an issue preventing materials using quotation marks from being saved as defaults.
  - Resolved an issue causing spreadsheets to open outside of the display window.
  - Resolved an issue preventing the Repeat Current Row option from working in spreadsheets.
  - Updated shortcut keys for input spreadsheets.
- Printing:
  - Resolved an issue preventing Detail Reports for Wall Panels from being added in the Print Report dialog.
  - Corrected an issue where BLC headers were not being shown in the printed report.
  - Resolved an issue preventing items from being removed once added to the Miscellaneous section of the Print Report dialog.
- Graphics:
  - Added the ability to display loads simultaneously with results.
  - Resolved an issue to show gridlines in the Wall Panel Editor for walls in the YZ plane when Z is the vertical axis.
  - Resolved a graphical display issue with the drawing grid in the Wall Panel Editor.
  - Resolved a graphical display issue where members with Detailing Information were rotated in the rendered view.

- Resolved a graphical display issue that caused plates to disappear when using the Extend tool.
- Resolved a graphical issue where distributed loads displayed incorrectly when transient loads were present.
- Resolved an issue causing incorrect member labels to be displayed in the 3D view when viewing results.
- Corrected an issue that caused the display of Project Grid Bubbles when the Vertical Global Axis was changed in the Model Settings.
- Operations:
  - Reduced the program launch time.
  - Resolved an issue preventing the program from opening for some users after performing the Windows Update Nov 2020.
  - Resolved a "Sequence Contains No Elements" issue preventing the program from opening in some cases.
  - Resolved an issue causing a model file to become corrupt when custom shapes are added.
  - Resolved an issue where a multi-threaded solution would produce different results than a single thread solution for models using Indian steel code IS 800-2007.
  - Resolved a Not Unique Value issue caused by duplicate Member Design Rule labels which prevented models from opening.

Version 19.0 Enhancements/Corrections

- Interaction:
  - Enabled integration with RISAFloor, RISAFoundation and RISAConnection.
  - Added the ability to transfer Response Spectra Analysis (RSA) results from RISA-3D to RISAFoundation.
  - Added the ability to import and export models from Autodesk Revit.
  - Added the ability to import and export models from Tekla Structures.
  - Added the ability to import and export to CIS/2 file format with detailing information.
  - Added the ability to import tnxTower files.
  - Added the ability to export SDNF files.
  - Added the ability to import STAAD files.
  - Resolved an issue where saved drawing grids would cause the program to close when integrating to RISAFoundation from RISA-3D.
  - Resolved an issue causing a duplicate node for a plate generated by semi-rigid diaphragms in RISAFloor.
  - Corrected an issue where saved results were incidentally deleted after integrating between RISAFloor and RISA-3D and sometimes unexpectedly close.
  - Corrected an issue where a customized wood schedule prevented a model from transferring to RISA-3D from RISAFloor.
  - Corrected an issue where nodes from non-rigid diaphragms in RISAFloor were included in the Drift Definitions spreadsheet, which only supports rigid diaphragms.
  - Resolved an issue where wind loads were conservatively generated for internal bays on some semi-rigid diaphragms.
  - Resolved an issue preventing the camber design rule for % DL from being retained when transferring between RISAFloor and RISA-3D.
  - Fixed an issue where RISAFloor member design rule camber information was not properly retained after integration.
  - Resolved an issue causing unexpected RSA results for some models transferred from RISAFloor.
  - Resolved an issue where certain models with semi-rigid diaphragms integrating from RISAFloor were reporting a non-planar plate mesh error.
  - Corrected an issue causing the program to close during solution due to slender wall panels integrated from RISAFloor.
  - Fixed an issue preventing hold downs and/or straps from being assigned to wood wall panels in some models integrated from RISAFloor.
  - Resolved a rare issue where Concrete Wall Panel Regions in RISAFloor caused the program to close in RISA-3D.

- Resolved an issue where using shapes from RISASection prevented some User Defined shapes from being available in the Shape Database.
- Resolved an issue that was preventing integration with RISAConnection v11 for models with quotations in the material label.
- Fixed an issue where dynamic mass line loads applied in RISAFloor were not considered in the calculation of seismic weight in some cases.
- Resolved an issue preventing base plates and member end reactions for lateral base plate connections from transferring to RISAConnection.
- Resolved an issue causing an erroneous Invalid Connection error for columns assigned with a single column base plate connection.
- Resolved an issue preventing Vertical Brace to Baseplate connections from transferring to RISAConnection from RISA-3D
- Resolved an issue where forces associated with double sided connections were not transferred to RISAConnection when the member was also framing into another double sided connection.
- Updated the calculation for top column distance to consider the height of the column when integrating models to RISAConnection.
- Corrected the top column distance for vertical brace connections integrated with RISAConnection which was conservatively affecting the column flange bending check.
- Concrete:
  - Added the ACI 318-19 concrete code for beams, columns and wall panels.
  - Resolved an issue which was providing erroneous Deep Beam warnings.
  - Resolved a graphical issue in the Rebar Detailing diagrams with custom reinforcement for concrete columns.
- Hot Rolled Steel:
  - Added Seismic Detailing per AISC 341-16 and AISC 358-16.
  - Added Buckling Restrained Brace (BRB) seismic checks to the Seismic Detailing feature.
  - Added the ability to assign Simpson StrongTie Yield Link at member end releases.
  - Improved the compactness class determination for single angles with the consideration of Clause 11.1.2 and 11.1.3 according to CSA S16-14 and CSA S16-09.
  - Updated Material Defaults to Include ASTM A500 Grade C for Round and Rectangular HSS sections.
  - Clarified the seismic detailing results for the width-to-thickness ratio check to show either 'Pass' or 'Fail' when using AISC 341/358 - 2010 and 2016 codes.
  - Corrected an issue where the slenderness check per AISC 341 section F1.5b was being applied to vertical X braces.
  - Resolved an issue where false miscellaneous seismic check/warning would be given for some V and inverted-V brace configurations.
  - Resolved an issue where AISC 358 prequalification limits for beams were causing erroneous Miscellaneous Seismic Checks for columns.
  - Resolved an issue where seismic braces were designed for overstrength load combinations when the Overstrength Reqd option was unchecked.
- Solving:
  - Improved the status bar during solution to show the status of each iteration, and to show the Load Step in progress for Moving Loads.
  - Resolved an issue where a Response Spectra Analysis would cause moment reactions in some members with pinned end releases and rigid end offsets.
  - Resolved a rare issue preventing Node Reaction results from populating after a solution is run a second time.
  - Resolved an issue causing the solution file to be deleted for models containing saved moving load results.
  - Resolved an issue that showed results for Cold Formed Steel members when no design should have been given due to P-Delta analysis not being performed.
  - Resolved an issue where K factors were being calculated for all material types when they should only be applied to hot rolled steel members.

- Resolved a rare issue preventing the display of Eigensolution results.
- Corrected an issue where the slenderness check per AISC 341 section F1.5b was applied to vertical X braces.
- Plates:
  - Added the ability to assign an Orthotropic material to plates.
  - Removed a conservative plate stiffness reduction of 1.5%.
- Solids:
  - Added Corner Force results for solids.
  - Added the ability to use the Internal Force Summation tool on solid elements.
- Wood:
  - Added the ability to edit and delete Custom Wood Materials.
  - Corrected the display of the COV_E parameter for custom wood materials.
  - Resolved an issue causing an erroneous 'No 16 in. thickness values in database...' warning message for wood members less than 16 inches thick.
  - Corrected an issue with Cm value in E'min calculation under the combined bending and axial compression check under NDS codes.
  - Updated the calculation for the flat use factor, Cfu, for solid sawn members 5' or thicker.
  - Resolved an issue where compression analysis according to CSA 086-14 was reporting incorrect values for Fc and Kzc.
  - Resolved an issue where CSA wood material properties would not properly save, causing a 'check wood materials' warning message when opening the model.
  - Resolved an issue preventing copied wood Redesign Lists from saving.
- Aluminum:
  - Corrected the LTB slenderness calculation for Aluminum Rectangular Bars per ADM 2015 Eqn. F4-7.
- Wall Panels:
  - Added Cold Formed Steel Wall Panels
    - AISI S400-15 w/S1-16 & AISI S240-15
  - Improved the Wood Wall Definition Editor by adding drop-down options for stud spacing.
  - Enhanced the Wall Panel Editor to open as a new tab alongside the 3D View.
  - Improved the wall panel meshing algorithm and the snapping tolerance to handle walls with very small offsets (e.g. less than 1in).
  - Updated the graphical In-Plane Shear Capacity being shown in the spreadsheets and Detail reports for Concrete Walls.
  - Resolved a graphical issue in the masonry Detail Report where the Region Section did not correctly report Fail.
  - Resolved a mesh tolerance issue for wall panels that was unconservatively affecting masonry lintel forces and code check.
  - Resolved an issue where lightly loaded concrete wall panels were reporting a capacity of nearly zero.
  - Corrected an issue preventing the 'Slender Compression Failure (Pu > .75Pc)' warning message from displaying in the Detail Report for slender concrete wall panels.
  - Resolved an issue preventing the width of concrete Walls Panels to be converted when project Units were changed.
- General:
  - Added the ability to swap the I and J ends of a member.
  - Added the ability to include up to 100 custom other load cases.
  - Added the ability to Move elements Point-to-Point.
  - Added the ability to apply a scaling factor to Basic Load Cases.
  - Added the ability to set loads to inactive.
  - Added the ability to use the Tab key to cycle through items that are able to be selected within the 3D view.
  - Added move point to point functionality.
  - Added plates and solids to the Material Takeoff spreadsheet with the ability to exclude.

- Added the ability to disable the Smart Ribbon behavior which opens a specific tab on the ribbon toolbar after a particular action is performed.
- Improved keyboard shortcut behavior for switching between different property input regions.
- Updated terminology in the program such that nodes can be tethered to other nodes rather than slaved.
- Increased the upper limit for the number of Segments able to be created using the Split and Add Nodes tools.
- Improved behavior of Copy, Paste and Fill tools.
- Added the ability to view more than one Detail Report at a time.
- Improved the behavior of the Undo command.
- Corrected the rotation axis command in the Copy Rotation Tool.
- Improved Line Loads by automatically populating the End Magnitude when the Start Magnitude is entered in the Property Panel.
- Improved the behavior of the Retrieve Saved View tool.
- Corrected an issue allowing Nodes to be tethered to themselves.
- Resolved an issue preventing the generation of Project Grid Arcs with negative radial increments.
- Resolved an issue where the Properties Panel did not properly update member design properties.
- Resolved an issue where copied shapes were not saving to the database.
- Resolved an issue where spreadsheets remained open when the program was minimized.
- Resolved an issue to correctly display the node coordinates on hover after using the Move operation.
- Resolved an issue where all nodes were selected when the Ignore option was chosen in the Coordinates tab of the Select by Property tool.
- Resolved an issue preventing the Tab key from functioning in the Properties Panel after a value is entered into an empty field.
- Resolved an issue preventing Time History animations from being exported.
- Resolved an issue causing the location of point loads on some members to change when the Model Merge tool was used.
- Resolved an issue preventing forces from being displayed in the Properties Panel when using the Internal Force Summation Tool.
- Corrected an issue where saving results in a model caused transient area loads to be doubled in the Distributed Loads spreadsheet.
- Fixed an issue preventing member end releases from being edited after assigning partial fixity.
- Resolved an issue causing the program to freeze when trying to split a member into a large number of segments.
- Corrected an issue where leaving the base elevation blank in the wind load generator would produce erroneous results in some cases.
- Resolved an issue causing instabilities at nodes generated by lateral load generators.
- Corrected an issue where the option to Filter out Unselected Items from Results did not work for plates with the Color Contour displayed.
- Resolved an issue where member area loads did not properly get copied when using the Global Copy tool.
- Fixed an issue preventing the option to disable Save Results with Model.
- Corrected an issue where some drawing tools were enabled while using the Snapshot feature.
- Resolved an issue where changes to the member label were not retained after closing the model.
- Resolved an issue where force values displayed in the Property Panel when using the Internal Force Summation Tool were not consistent with the Internal Force Summation pop-up dialog.
- Resolved an issue where graphical display of node coordinates weren't updating after moving the node.
- Detail Reports:
  - Added the expanded Torsional Analysis calculations in the member Detail Report for hot rolled HSS members.
  - Modified the Detail Report to clarify that the shear force includes torsion (not applicable to concrete). Fixed a graphical issue in the hot rolled steel Detail Report for the reported shear stress due to torsion value.

- Modified the Detail Report for wood members when the beam stability factor is 1 due to the member being fully braced.
- Updated the graphical display of Slender Bending Span results shown in the Detail reports for Concrete Walls.
- Resolved a graphical display error that showed incorrect Available Shear Capacity in Concrete Wall Detail Report.
- Resolved a graphical issue in the Cross Section Detailing section for masonry out of plane reinforcement.
- Corrected the display of values reported in the concrete member Detail Report for the depth to the equivalent rectangular stress block and for the depth to the neutral axis.
- Resolved an issue where the masonry wall panel Cross Section Detailing graphic did not reflect the correct Wall Design Rule parameters.
- Fixed a graphical issue in the Concrete Rebar Detailing section of the Detail Report for concrete beams with custom rebar defined.
- Corrected a graphical issue in the Detail Report for the Shear Analysis according to CSA 086-14 which was incorrectly reporting Vr and Fv.
- Fixed a display issue for concrete wall panels where the reinforcement layout in the Cross Section Detailing graphic did not match the wall design rule.
- Resolved an issue where custom print reports were not retained in the original program after using the Director tool to integrate between multiple programs.
- Resolved a graphical display issue in the Cross Section Detailing for concrete Wall Panels.
- Spreadsheets:
  - Added masonry wall panels, general material wall panels, and wood wall sheathing to Material Takeoff spreadsheet.
  - Added input spreadsheet for solids.
  - Added Find/Replace functionality to the right-click menu in all Input spreadsheets.
  - Improved the Enveloped Wall Panel Results spreadsheet to include an asterisk on Load Combination numbers that are overstrength.
  - Improved the Math on Block tool to apply the function to only valid highlighted cells in the spreadsheet.
  - Improved behavior of copy, paste and fill tools for input spreadsheets.
  - Improved the Member Design Rules spreadsheet to include Max Axial Check.
  - Added the ability to type directly into the Category column of the Basic Load Case spreadsheet.
  - Added the ability to sort Nodal Deflections spreadsheet when showing Batch Result grouped by element.
  - Added the ability to designate the type of lateral force resisting frame in the Seismic Design Rules spreadsheet.
  - Improved the speed and functionality for all Results spreadsheets.
  - Resolved an issue causing results in the Story Drift spreadsheet to change after results are saved.
  - Corrected an issue that enabled certain columns to be sorted in the Member Forces spreadsheet.
  - Resolved an issue in the Member Deflections spreadsheet where the absolute deflection (y) was incorrectly reported as the relative deflection (y') in the Beam Check tab.
  - Resolved an issue allowing the maximum spacing to be less than the minimum spacing for concrete wall vertical rebar when using the Fill Cells tool.
  - Fixed a graphical display issue where the per unit of length was not included in the heading of the Plate Forces spreadsheet.
  - Corrected the display of the number of decimal places for values entered in the Boundary Conditions spreadsheet.
  - Resolved an issue preventing the ability to sort the Distributed Loads spreadsheet.
  - Resolved an issue preventing the Fill Cells command from working within the Seismic Design Rules spreadsheet.
- Printing:
  - Added the ability to print Dynamic Data and Member Detailing Data.
  - Added the ability to scroll within the Print Preview dialog.

- Added the Time History Loads spreadsheet into the Report Printing dialog.
- Improved Report Templates to save the specific order of the sections in the report.
- Improved the titles of spreadsheets within Printed Reports to reflect the title displayed on the spreadsheets when opened.
- Corrected an issue where landscape oriented images did not rotate to fit portrait oriented reports when printing.
- Resolved an issue causing a portion of the expanded Detail Report to be excluded from the Print Report when using landscape orientation.
- Corrected an issue where BLC headers were not being shown in the printed report.
- Resolved a printing issue producing blank pages in the printed report PDF.
- Resolved a rare issue that caused the program to close when attempting to print graphical image.
- Resolved an issue where certain Masonry Wall design results spreadsheets were not included in the Print Report.
- Resolved an issue preventing spreadsheet row numbers from being printed.
- Graphics:
    - General:
        - Corrected a graphical issue where member lengths displayed incorrectly in the 3D view after changing member node.
        - Improved the color coded display of Member Forces and Column Stiffener Check.
        - Resolved rare occurrence of arrows not being displayed properly in 3D View for Area Loads.
    - Results:
        - Added the ability to scale the deflected shape of the model in fractions of a whole number.
        - Enhanced the Quick View Member Label and Member Color options so that when one is changed, the other is updated to match in the 3D view.
        - Improved the display of member diagrams in the 3D view by Increasing the available range.
        - Improved the display of member force diagrams in the 3D view by disabling the member Unity Check display.
        - Improved the display of the Locked Node View by selecting the entire wall panel when the instability is a hidden node within the wall panel.
        - Corrected description of axis directions in the Slab-IFST dialog.
- Operations:
    - Added the License Manager Version number in the About RISA-3D dialog.
    - Added the ability to recover a file if the model file closes unexpectedly in an integrated program.
    - Enhanced the program to start up on the users primary screen.
    - Improved opening a model with saved results such that the Project Information dialog appears in front of the Warning Log.
    - Resolved an issue preventing a model from opening due to an erroneous Foreign Key Constraint error.
    - Resolved a rare issue that caused an exception message to appear during solution.
    - Resolved an issue causing the model file to become corrupt after using the Append feature multiple times.
    - Resolved an issue producing an Exception Message when opening a masonry Wall Detail Report with merged lintels.
    - Resolved an issue where applying an area load in some cases would cause an Exception Message.
    - Resolved a mouse issue during modeling which resulted in an 'arithmetic operation overflow' error.
    - Resolved an issue preventing the program from launching in demonstration mode after receiving the 'S303 - Connection Error' message.
    - Resolved an issue causing an erroneous Base Exchange Compatibility Warning when integrating with Tekla Structures.
    - Fixed an issue where custom shapes created in RISAFoundation were not retained when integrating.
    - Resolved an issue preventing the Windows Start menu to appear when RISA-3D was full screen.