SAP2000® Version 16.1.1
Release Notes

Notice Date: 2014-05-20

This file lists all changes made to SAP2000 since the previous version. **Most changes do not affect most users.** Incidents marked with an asterisk (*****) in the first column of the tables below are more significant and are included in the ReadMe file.

Changes from v16.1.0 (Released 2014-01-24)

Modeling
Incidents Resolved

*	Incident	Description
	61550	An incident was resolved where the command Edit > Extrude > Add Solids Between Areas did not always create any or all of the expected solid objects when the selected area objects were offset from each other in the direction perpendicular to the line connecting the centers of the areas. This was particularly the case when using the option "Make Best Shape". It is still possible in certain cases that solid objects will not be created if the two areas are offset or oriented in such a way that the generated solid elements are overly distorted and would be unsuitable for analysis. This incident was previously resolved with the release of SAP2000 v16.1.0 but was inadvertently omitted from the Release Notes.
	62586	An incident was resolved where the command Edit > Extrude > Add Solid Between Areas did not always work correctly when the positive normal direction of the first area object did not point toward the second area object. Now the extrude command works regardless of the directions of the normals of the two areas, provided they are not perpendicular to each other.

User Interface and Display
Incidents Resolved

*	Incident	Description
	62782	An incident was resolved where the table and wave plot displayed from within the wave loading form may have shown incorrect values when the wave direction was not 0 degrees. This error did not affect analysis results or the wave forces displayed on-screen with the model.

Analysis
Incidents Resolved

*	Incident	Description
	63938	An incident was resolved where analysis would sometimes terminate with an error message when running a nonlinear staged-construction load case with time-dependent behavior (both creep and shrinkage, with or without aging) in a model containing triangular shell elements with time-dependent materials. When this error occurred, results were not available. When this error did not occur, results were not affected. This error did not affect models having no triangular shell elements, and it did not affect models where either creep or shrinkage, but not both, were considered. This error only affected version 16.1.0.
*	65678	An incident was resolved where assigning advanced local axes to solid elements did not rotate the material local axes as specified. Instead, the default orientation was being used, even though the graphical display and tables indicated that the advanced local axes had been assigned. Results, however, were consistent with the use of the default axes, not those specified. Note that assigning

*	Incident	Description
		basic rotation angles for the local axes did work as expected.

Database Tables

Incidents Resolved

*	Incident	Description
	62543 62603	An incident was resolved where some Excel files created with SAP2000 versions 15 and earlier could not be imported into SAP2000 v16.0.0 to v16.1.0. This was due to the presence of the fields (columns) "LicenseBR" and "BridgeCode" in the "Program Control" table. If these columns were removed, the Excel files could be imported into SAP2000 v16. No results were affected.

Frame Design

Incidents Resolved

*	Incident	Description
*	63568 63960 64828 64866	An incident was resolved for steel frame design using the AISC 360-10 code where an error message was sometimes generated when designing certain members. When this occurred the results were unavailable for the affected members. Other results were not affected.

Section Designer

Incidents Resolved

*	Incident	Description
	64450	An incident was resolved for Section Designer where the range of axial force used to calculate moment-curvature relationships and to generate Caltrans frame hinge properties was taking into account prestress axial force, if any, specified for Caltrans sections. Now the axial force range is determined independently of any prestressing force that may be present. Moment curvature relationships were not affected by this issue, only the range of axial force for which they could be computed. Caltrans hinges were affected in terms of the maximum and minimum axial force of the interaction surface, however, the moment values for any given value of axial force were not affected.

Miscellaneous

*	Incident	Description
	66184	The version number has been changed to v16.1.1 for a new minor release.