

## APPENDIX E

# USE OF COMPUTER MODELS

### SECTION E101 GENERAL

**E101.1 Scope.** This appendix provides guidance on the appropriate use of computer models.

### SECTION E102 REQUIREMENTS

**E102.1 Use and documentation.** The following are issues that shall be addressed when computer models are used in the design of a building or facility.

1. All computer modeling work is required to be conducted under the guidance of the design professional. Although states or jurisdictions may not require licensing or certification for a computer model operator (e.g., fire, structural, mechanical, energy), knowledge and experience is needed in the application, of the program limits and the performance-based design objectives for compliance with performance-based code objectives.
2. Computer program data shall be submitted as part of documentation (e.g., program name, brief description, type of analysis and application, program input and output units and description, and how it is to be used to support design). Statements of exact mathematical model(s) and accompanying submodel(s), if any, uncertainty, assumptions, limitations, scope of applicability and a few reproducible simple benchmark cases shall be included.
3. Background data must be submitted to substantiate why particular scenarios are rejected or accepted.

### SECTION E103 RESPONSIBILITY

**E103.1 Design professional.** The computer modeling approach is merely a tool for high-speed calculations that provides mathematics calculations, graphical and related results. It is the design professional's responsibility to incorporate the above data and background information required as documentation for his or her design document submittal. See Section 103 for more information on documentation.

