



2001 CBC Specification Seismic Restraint of Suspended Utilities

1.01 Related documents

[List all related specification sections that need to be referenced]

1.02 Summary

A. Seismic bracing shall comply with the following standards:

- a. 2001 CBC Volume 2, Chapter 16A, section 1632A.6 & A.6.1
Horizontal forces based on Formulas 32A-1 thru 32A-3
- b. Construction criteria and standards of seismic restraint design for suspended pipes, ducts and mechanical equipment shall be per the International Seismic Application Technology (ISAT) OSHPD OPA #0485 Design, Installation and Inspection Manual.
1-877-999-ISAT (4728) www.isatsb.com

1.03 Submittals

- A. Submittal to include appropriate ISAT OSHPD preapproved details and reflect actual jobsite conditions. Submittal to be wet stamped by a licensed California Structural Engineer.
- B. Jobsite conditions not covered by the ISAT Seismic Bracing Guidelines (OPA # 0485) shall be engineered by ISAT and all calculations shall be wet stamped by a licensed California Structural Engineer.
- C. Submit Seismic Bracing Layout for all suspended utilities on shop drawings wet stamped by a registered California Structural Engineer. Layout drawings to include:
 - a. All seismic brace locations.
 - b. All anchorage connections to the structure. Quantity and Size
 - c. Brace reactions at all connection points to the structure for Structural Engineer of Record use in checking suitability of the building structure.

- d. Type and size of brace member.
- e. Suspended utility max lbs per lineal foot or max pipe size at all seismic locations.
- f. Minimum all thread rod size at all seismic locations.

1.04 Quality Assurance

- A. Representative of seismic restraint system manufacturer to walk the project and provide documentation indicating conformance to ISAT shop drawing seismic restraint layout.

- B. Install Identification tags at all seismic brace locations to include the following information:
 - a. The specific g force the location was design to resist.
 - b. Max brace reaction to the structure.
 - c. Specific pipe size for individually suspended items.
 - d. Maximum lbs per lf for all multiple pipes or trapezed locations.
 - e. Maximum weight for all suspended equipment.
 - f. Nomenclature that matches location identification as marked on plan set layout.