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RESEARCH REPORT: RR 26016  
(CSI # 13080)

Expires: November 1, 2020  
Issued Date: March 1, 2019  
Code: 2017 LABC

**GENERAL APPROVAL** – Technical Modification - ISAT Seismic Brackets and Seismic Cable Assemblies for seismic restraint of mechanical, electrical and plumbing (MEP) components.

## DETAILS

ISAT Connection details to steel beams utilizing ISAT and PHD Seismic Brackets. The allowable capacities are listed in the Attachment, pages 27-29.

The ISAT Seismic Brackets are composed of ASTM A36 steel, and are hinged and function in pairs: Lower brace arm rod capture brackets (Attachment, pages 1-4) and upper brace arm anchor brackets (Attachment, pages 3-6). The allowable capacities are listed in the Attachment, pages 1-6.

The ISAT Seismic Cable Assemblies are composed of ASTM 1023A, 7x19 galvanized steel strand, factory manufactured to length with minor adjustments made by the installer. The cable assemblies are attached to the lower brackets (Attachment, pages 1-6), upper brackets (Attachment, pages 4-6) as described in Attachment, pages 8-14. The strut nut (Attachment, page 23), and rigid brace assemblies are described in Attachment, pages 15-22.

The ISAT Seismic Cable in conjunction with the ISAT Seismic Brackets cyclic load holding capacities are listed in Attachment, pages 8-14.

The ISAT Seismic Rigid in conjunction with the ISAT Seismic Brackets cyclic load holding capacities, and strut nut rigid brace assemblies are listed in Attachment, pages 15-22.

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**The approval is subject to the following conditions:**

1. This approval is limited to mechanical, electrical, and plumbing components.
2. The use of ISAT Seismic Restraint Components is for interior use only.
3. The tabulated allowable loads shall not be increased for duration of loading.
4. The values listed in Attachment, pages 1-6 are for the bracket components only. Calculations demonstrating that the applied loads are less than the allowable loads for each individual component within the assembly shall be submitted for plan check at the time of permit application.
5. The values listed in Attachment, pages 8-22 are for the ISAT Seismic Bracket Assembly design values for the entire assembly as specified. Calculations demonstrating that the applied loads are less than the allowable loads for each assembly shall be submitted for plan check at the time of permit application.
6. The ISAT Seismic Brackets and Seismic Cable Restraint Assemblies installation shall be in accordance with the manufacturer's instructions and the requirements herein. A copy of this report and the installation instructions shall be provided at each job site by the manufacturer.
7. Periodic Special Inspection required during installation and anchorage of piping and ductwork designed to carry hazardous material in structures in accordance with LABC 1705.11.6.

**DISCUSSION**

The technical modification is to recognize additional seismic brackets as part of this general approval.

The report is in compliance with the 2017 City of Los Angeles Building Code.

The approval is based on tests.

This general approval will remain effective provided the Report is maintained valid and unrevised with the issuing organization. Any revisions to the report must be submitted to this Department for review with appropriate fee to continue the approval of the revised report.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.

ISAT/TOMARCO

RE: - ISAT Seismic Brackets and Seismic Cable Restraint Assemblies

This general approval of an equivalent alternate to the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this Approval have been met in the project in which it is to be used.

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Attachment: Assembly Details (29 Pages)