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Attn: Hilti Technical Support  
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RESEARCH REPORT: RR 25651  
(CSI # 03 16 00; 05 05 23; 09 22 16.23)

BASED UPON ICC ES EVALUATION  
REPORT NO. ESR-2184

REEVALUATION DUE  
DATE: April 1, 2018  
Issued date: April 1, 2016  
Code: 2014 LABC

**GENERAL APPROVAL** – Reevaluation and Clerical Modification - Hilti Power-Actuated X-CC Ceiling Clip Assemblies and X-CW Ceiling Wire Assemblies.

**DETAILS**

The above assemblies and/or products are approved when in compliance with the use, description, design, installation, conditions of use, and identification of Evaluation Report No. ESR- 2184, reissued June 1, 2015, of the ICC-ES Evaluation Services, LLC. The report, in its entirety, is attached and made part of this general approval.

The parts of Report No.ESR-2184 which are excluded on the attached copy have been removed by the Los Angeles City Building Department as not being included in this approval.

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

1. The X-CC Ceiling Clip Assemblies and X-CW Wire Assemblies are recognized for use when subject to the seismic loads as follows:
  - a) The assemblies may be used with nonstructural components listed in Section 13.1.4 of ASCE 7-10.
  - b) The assemblies fastened to concrete may be used to support acoustical tile or lay-in panel suspended ceiling systems. The assemblies fastened to concrete may be used to support acoustical tile or lay-in panel suspended ceiling systems, distributed systems and distribution systems where the service load on any individual assembly does not

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- exceed the lesser of 90 lbf (400 N) or the allowable load shown in Table 2 or 3 of attached evaluation report number ERS-2184, as applicable.
- c) The assemblies fastened to steel may be used where the service load on any individual assembly does not exceed the lesser of 250 lbf (1112 N) or the allowable load shown in Table 4 of the attached evaluation report ESR-2184.
2. Installation in lightweight concrete over metal deck shall be per Table 3 and Figures 4 and 5 of ESR-2184.
  3. The allowable values listed in the attached ICC-ES ESR-2184 tables are for the X-CC Ceiling Clip Assemblies and X-CW Ceiling Wire assemblies only. Connected members shall be checked for their capacity (which may govern).
  4. Hilti X-CC Ceiling Clip Assemblies and X-CW Ceiling Wire Assemblies are manufactured and identified in accordance with evaluation report ESR-2184.
  5. For the use of the X-CC Ceiling Clip Assemblies and X-CW Ceiling Wire Assemblies installed into concrete over metal deck, the fasteners shall be installed through the metal deck and into the concrete at the upper or lower flute as designated in the table. The fastener must be a minimum of 1 1/8 inches from the edge of the deck web and 3 inches from the end of the deck. The minimum fastener spacing is 4 inches.
  6. The X-CC Ceiling Clip Assemblies and X-CW Ceiling Wire Assemblies shall be limited to dry and interior locations.
  7. The X-CC Ceiling Clip Assemblies and X-CW Ceiling Wire Assemblies shall be installed per the manufacturer's instructions, a copy of which shall be available at each job site.

## **DISCUSSION**

The Clerical Modification is to change the company address.

The report is in compliance with the 2014 Los Angeles City Building Code.

The approval is based on tests in accordance with ICC-ES Acceptance Criteria for Fasteners Power-driven into Concrete, Steel and Masonry Elements (AC70) dated June 2014.

This general approval will remain effective provided the Evaluation 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.

Hilti, Inc.

Re: Hilti Power-Actuated X-CC Ceiling Clip Assemblies and X-CW Ceiling Wire Assemblies

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.

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: ICC ES Evaluation Report No. ESR-2184 (5 Pages)