



June 21, 2007

SUBJECT: Important Information Regarding Use of Strong-Bolt in Lightweight Concrete

To Whom It May Concern:

The purpose of this letter is to inform designers and installers of an important change in recognition for all post-installed mechanical anchors that are to be designed using ACI 318 Appendix D, including the Simpson Strong-Bolt.

ICC Evaluation Service (ICC-ES), with input from the Concrete Anchor Manufacturer's Association (CAMA), has determined that the ACI 318 Appendix D design provisions for post-installed mechanical anchors are unconservative for installations into sand-lightweight¹ and all-lightweight² concrete.

As a result, ICC-ES is revising design recommendations for such applications. A summary of the new recommendations is given below:

1. In lieu of ACI 318 Section D.3.4, the values of N_n and V_n for post-installed mechanical anchor installations into sand-lightweight concrete shall be modified by multiplying all values of $\sqrt{f'_c}$ affecting N_n and V_n by 0.60. In addition, it is Simpson Strong-Tie's opinion that the value of N_p should also be multiplied by 0.60 for installations into sand-lightweight concrete.
2. Post-installed mechanical anchor installations into all-lightweight concrete are beyond the scope of the ICC-ES AC193 evaluation reports and ACI 318, Appendix D.

Exception: These recommendations are not applicable to post-installed mechanical anchors installed in the soffit of lightweight concrete fill over metal deck when data for such a condition is listed in an ICC-ES evaluation report based on tests according to ICC-ES AC193.

We expect that existing ICC-ES evaluation reports for all post-installed mechanical anchors tested in accordance with ICC-ES AC193 will be modified to reflect this guidance in the near future and we recommend that designers implement these recommendations immediately. Post-installed mechanical anchorages into sand-lightweight or all-lightweight concrete that were designed using the provisions of ACI 318 Section D.3.4 should be re-evaluated by the designer.

The information in this letter is valid until **1/1/2008** when it will be superseded by the 2008 Simpson Strong-Tie *Anchoring & Fastening Systems* catalog. Please see the current 2007 *Anchoring & Fastening Systems* catalog for other pertinent information. If you have questions or need further assistance regarding this matter, please contact our engineering department.

Sincerely,

SIMPSON STRONG-TIE ANCHOR SYSTEMS

rb:rv/mc

¹ Lightweight concrete in which all fine aggregate consists of normal weight sand.

² Lightweight concrete without natural sand.