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**TO: PARTIES INTERESTED IN FIBER-REINFORCED NON-AUTOCLAVED AERATED CONCRETE (FRAC) MASONRY UNITS**

**SUBJECT: Evaluation of Fiber-reinforced Non-autoclaved Aerated Concrete (FRAC) Masonry Units under the 2009 *International Building Code*<sup>®</sup> (ME/KS)**

Dear Colleague:

We are seeking your comments on evaluation of Fiber-reinforced Non-autoclaved Aerated Concrete (FRAC) masonry units to determine compliance with the 2009 *International Building Code*<sup>®</sup> (2009 IBC). To that end, we are posting this letter on the ICC-ES web site for 30 days of public comment.

Autoclaved Aerated Concrete (AAC) masonry units are defined in Section 2103.3 of the 2009 IBC. This section requires that AAC masonry units conform to ASTM C 1386. One of the requirements of this standard is shrinkage testing in accordance with Section 10 of ASTM C 1386, with an average drying shrinkage of less than 0.02 percent in accordance with Table 1 of ASTM C 1386.

Fiber-reinforced Non-autoclaved Aerated Concrete (FRAC) masonry units are similar to AAC masonry units; however, the autoclaving process is not a part of FRAC production. The particular FRAC masonry units under review also contain short polymeric fibers. It was reported to ICC-ES that FRAC units comply with all of the requirements of ASTM C 1386, except for the shrinkage measurements, which are more than 0.02 percent. Therefore, using the ASTM C 1386 standard to show building code compliance for FRAC masonry units might be possible, except for the shrinkage requirement. The ICC-ES staff is of the opinion that it would be acceptable to evaluate the FRAC masonry units under ASTM C 1386 based on the following:

- The FRAC masonry units comply with ASTM C 1386, except for shrinkage.
- The particular FRAC masonry units under review contain short polymeric fibers that show improved flexural toughness due to the role of fibers in bridging micro- and macro-cracks.
- FRAC masonry units have less moisture content as compared with AAC masonry units after the manufacturing.

The ICC-ES staff seeks public input in regard to evaluation of FRAC masonry units in accordance with ASTM C 1386, with the exception of shrinkage requirements to determine compliance with the 2009 IBC due to the reasons stated above.

To submit your comments, please use the form on the web site and attach any letters or other materials. If you would like an explanation of the “alternate criteria process,” under which we are soliciting comments, this too is available on the ICC-ES web site.

This request for comments does not involve the Evaluation Committee. Please do not try to communicate directly with any Evaluation Committee member about the question under consideration, as committee members cannot accept such communications.

Thank you for your interest and your contributions. If you have any questions, please contact me at (800) 423-6587, extension 3721, or Kurt Stochlia, Vice President, at extension 3260. You may also reach us by e-mail at [es@icc-es.org](mailto:es@icc-es.org).

Yours very truly,

A handwritten signature in black ink, appearing to read 'M. Ekenel', with a long horizontal flourish extending to the right.

Mahmut Ekenel, Ph.D., P.E.  
Staff Engineer

ME/KS/raf

cc: Evaluation Committee