



August 18, 2008

Woods McRoy, P.E.
Senior Staff Engineer
ICC Evaluation Service
5360 Workman Mill Road
Whittier, CA 90601

RE: Proposed Revisions to the Acceptance Criteria for Metal Roof Coverings,
Subject AC 166-0808-R1 (WM/MO)

Dear Mr. McRoy,

Thank you for the opportunity to comment on the proposed revisions to AC166. Our staff has reviewed the proposed criteria and we are concerned with the construction details described in Attachment "B" for the "ASTM E 455 Test Program".

Specifically we have the following concerns:

- 1) The proposed testing allows two different wood species: Douglas fir or Spruce-Pine-Fir. The results will differ based on which species is chosen. A requirement needs to be added stating that species will be consistent throughout the testing program.
- 2) The quality of the framing material needs to be consistent between the large and small scale tests. Specific gravity and moisture content need to be recorded for each, and adjustments made if these vary appreciatively.
- 3) The framing, chords, and connection details need to be designed to focus the test failure in the sheathing-to-framing connection if we are truly going to compare the relative performance of the sheathing/roofing materials. Section 6.1.2 of ASTM E 455 requires the frame to have a stiffness equal to or less than 2% of the total diaphragm assembly. Testing without the sheathing is required to confirm this condition.
- 4) The minimum rafter depth required for a 24' span is a 2x10 per 2006 IRC Table 802.5.1(1), page 250. (2x10 No. 2, Douglas fir-Larch spans 25'-8").
- 5) The proposal states that panels are to be attached to the rafters only, however, the IRC requires solid blocking to brace the ends of the rafter (R802.8 and R802.8.1.) and above braced wall panels (R602.10.8). Additional nailing should be required where blocking is likely to be present.
- 6) The testing needs to simulate actual installations. If these materials are allowed to be applied over existing roofing, and/or spaced sheathing, the fastener penetration length will be reduced. The testing program needs to be expanded to address this condition if this installation detail is allowed.

If you have any questions regarding these comments please don't hesitate to contact me at 208-429-3715 or at Daniel.Cheney2@Weyerhaeuser.com

Sincerely,

Daniel W. Cheney (sent via e-mail)

Daniel W. Cheney, P.E.
Manager of Product Acceptance