Summary of test results and allowable load

Table 1 summarizes key results from experimental testing and the resulting allowable load for design. This summary is based on the detailed test results shown in Appendix 1.

In accordance with ASTM D7147-11 Section 13, the allowable downward load is calculated as the lesser of:

(a) The lowest ultimate load per hanger divided by 3.

(b) The average, over each hanger in each specimen, load that produces a vertical deflection of 0.125 inches at the bottom of the hanger with respect to the wall.

The ultimate load measured in the test was limited by the strength of the wood joist.

Table 1 Summary of test results and allowable load

specimen	ultimate load per hanger (lbs)	load per hanger at 0.125" deflection (lbs)		allowable load per hanger (lbs)
		hanger 1	hanger 2	
1	6520	3307	3839	
2	6260	3716	3091	
3	6192	3723	2795	
	Minimum / 3 = 2064	Average = 3412		**Allowable = 2064**

Applicability of allowable load

Figure 1 and Figure 2 show the configuration and dimensions of the tested specimens. The allowable load specified above is applicable to hangers having the configuration shown in Figure 1. Project parameters are permitted to vary within the ranges stated in Table 2.

Adjustments to allowable load

For applications on projects where the project specified concrete strength ($f'_{c,\ specified}$) for the ICF wall is less than 91% of the tested concrete strength ($f'_{c,\ tested}$) stated in Table 2, the allowable load stated above shall be reduced in accordance with ASTM D7147-11 Section 13.5.9 by multiplying by:

$\sqrt{(f'_{c,\ specified} / f'_{c,\ tested})} \leq 1.0$

For applications on projects where the project specified thickness (t_{spec}) and/or tensile strength (F_{u_spec}) for the hanger sheet metal material is less than the tested hanger sheet metal thickness (t_{tested}) and/or tensile strength (F_{u_tested}) stated in Table 2, the allowable load stated above shall be reduced in accordance with ASTM D7147-11 Section 13.5.7 by multiplying by:

$(3.0/2.5)(F_{u\_spec}/F_{u\_tested})\ (t_{spec}/t_{tested}) \leq 1.0$