TECH BULLETIN



Subject: Concentrated Floor Load Testing

Date: November 2007

Building codes have specific requirements for materials used to create floor assemblies. In residential applications, the floor system must be able to carry a uniform load of 40 psf. Commercial floor assemblies such as those found in churches, schools, banks, hotels, etc., have more stringent requirements. These include the capacity to support uniform loads greater than 40 psf and the ability to support specific concentrated loads. The concentrated load requirement for most commercial structures is 1000 or 2000 pounds over a 30" X 30" area.

Two typical R-Control SIP floor assemblies have been subjected to concentrated floor load testing. In these tests a 30" X 30" steel plate was placed over the floor system at several locations on the assembly. In each of the locations where the loaded plate was placed, the R-Control SIP floor panel assembly did not exceed the deflection limitations at a 2000 pound load. The panel assembly also performed adequately when 3 times the 2000 pound load, or 6000 pounds of pressure was applied to the steel plate.

The results from this testing demonstrate that R-Control SIP floor assemblies meet the code requirement for commercial floors of 2000 pound concentrated loads, while providing a factor of safety of three.



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