



# BBS MEMO

Ohio Board of Building Standards

May 28, 2014

6606 Tussing Road, P.O. Box 4009, Reynoldsburg, Ohio 43068-9009

## Deck Lateral Load Connection

There has been some confusion regarding the application of RCO section 502.2. This BBS Memo is intended to give building officials some clarification and describe the intent of the code. RCO Section 502.2.2.3 reads:

**502.2.2.3 Deck lateral load connection.** The lateral load connection required by Section 502.2.2 shall be permitted to be in accordance with Figure 502.2.2.3. Hold-down tension devices shall be installed in not less than two locations per deck, and each device shall have an allowable stress design capacity of not less than 1500 pounds (6672 N).

Building departments should not require this connection as a mandatory compliance method. The code language is permissive. It states that the lateral load connection between a deck and the framing of a house “shall be **permitted** to be in accordance with Figure 502.2.2.3.” This wording means that if the owner chooses to use this connection method it is permitted to be used. This language in no way indicates that this is a required detail, especially given the background and origin of this section and its related figure.

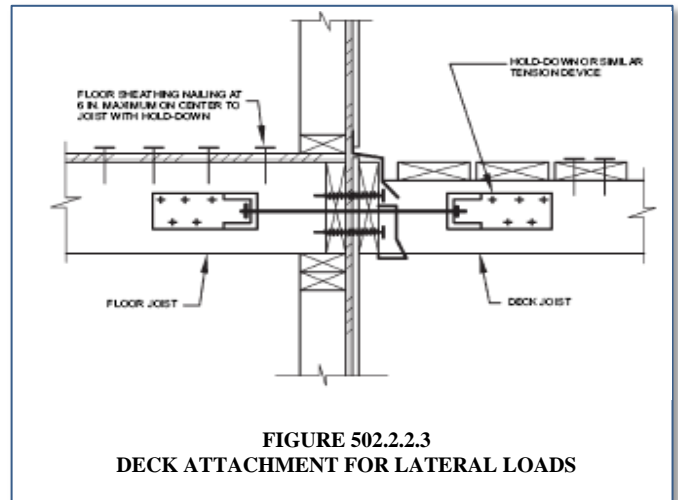


FIGURE 502.2.2.3  
DECK ATTACHMENT FOR LATERAL LOADS

Of substantial importance is the knowledge that this detail originated in Chapter 7 of a Federal Emergency Management Agency publication, FEMA 232, as a figure illustrating anchorage of decks for earthquake loads. This FEMA document titled *Homebuilders' Guide to Earthquake-Resistant Design and Construction* gives above-code techniques for improving earthquake performance. The manual also uses the results of recent loss investigations as well as current research and analysis results to identify a number of specific **above-code** measures for improved earthquake performance along with their associated costs.

Chapter one of this FEMA document inform the user that the “discussion and examples presented in this guide focus on houses located in SDCs C, D<sub>1</sub>, and D<sub>2</sub>.” RCO Chapter 3, Table 301.2(1), and Figure 301.2(2) clearly state that Ohio is in Seismic Design Categories A or B.

Future updates to the RCO will further clarify the application of this language in the RCO. RCO Section 502.2.2 already makes it clear that “decks shall be positively anchored to the primary structure and designed for both vertical and lateral loads as applicable.” There are many solutions that are acceptable and that can be provided rather than requiring the use of a Seismic Design Category C, D<sub>1</sub>, and D<sub>2</sub> connection detail in a state in Seismic Design Categories A or B.

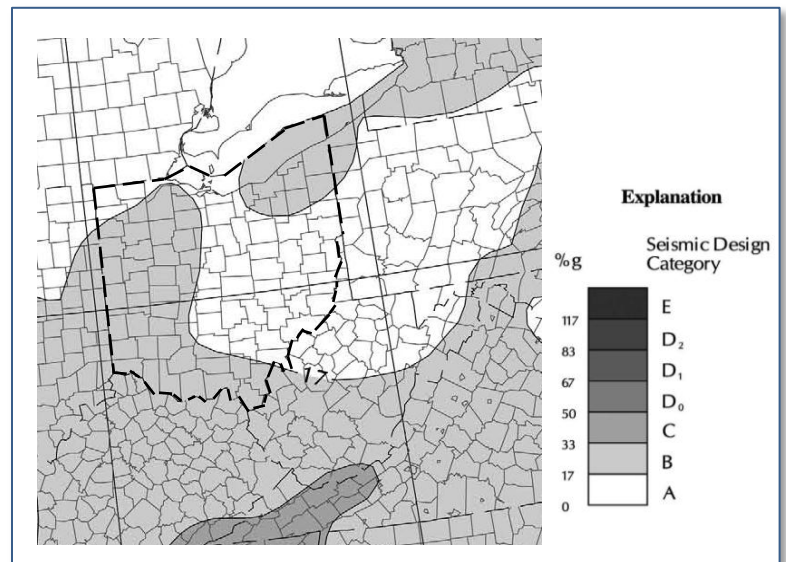


FIGURE 301.2(2)  
SEISMIC DESIGN CATEGORIES—SITE CLASS D