

Steel Joist Institute Recommended Minimum Bearing Seat Welds for Joist with Net Uplift

With the release of the 43rd edition Standard Specifications for steel joists and Joist Girders, Vulcraft would like to point out an important change regarding the required end anchorage for uplift conditions.

Welded Anchorage

As in the past, it is the responsibility of the specifying professional to specify the wind uplift forces and the attachment of the joist or Joist Girder seat to the supporting element.

SJI COSP Section 6.1 (b) has been modified to be more definitive:

The adequacy of the end anchorage connection (bolted or welded) between the joist or Joist Girder bearing seat and the supporting structure is the responsibility of the specifying profession. The contract documents shall clearly illustrate the end anchorage connection.

In turn, it is the responsibility of the joist manufacturer to design and manufacture the seat to adequately meet the loading, welding and/or bolting requirements specified by the Engineer of Record and shown in the contract drawings.

New Minimum Attachment Requirement

When uplift conditions occur it is suggested that the minimum weld lengths be increased by one inch. Sufficient bearing must also be in place to provide this additional weld. See Table 1 below (ref. 43rd SJI p. 12). Additional weld may be required, see the contract documents.

TABLE 1

JOIST SERIES and SECTION NUMBER	MINIMUM FILLET WELD	SUGGESTED INCREASED WELD LENGTH
K-Series	(2) 1/8" x 2"	(2) 1/8" x 3" *
LH-Series, 02-06	(2) 3/16" x 2"	(2) 3/16" x 3"
LH/DLH-Series, 07-17	(2) 1/4" x 2"	(2) 1/4" x 3"
DLH-Series, 18-25	(2) 1/4" x 4"	
*The minimum bearing length on steel for K-Series joists is 2 1/2", so weld length should be increased only where bearing length is available.		