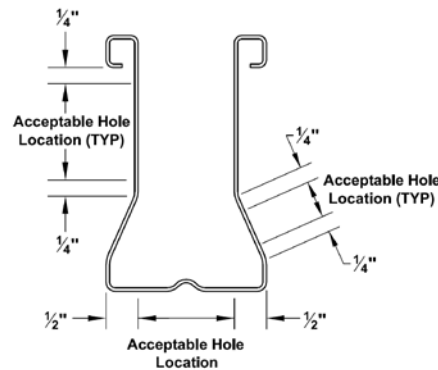


## Attachment of Mechanical Systems to TrusSteel Trusses

For many projects, mechanical systems such as sprinkler piping must be attached to TrusSteel trusses. The TS049 through TS049L Standard Detail series addresses the installation and use of sprinkler pipe hanger supports, however, there are other aspects of the truss system that must be considered as well. The trusses must be loaded adequately for the mechanical system being applied, and the structural capacity of the trusses must not be diminished due to the attachment of the mechanical system. Below is a list of guidelines that must be followed when attaching mechanical systems to TrusSteel trusses to preserve the structural integrity of the trusses.

- ▲ Do not attach, hang, or support mechanical systems from any web members without prior approval from a TrusSteel engineer.
- ▲ Attachments to chord members that create holes with a diameter of 1/4" or less are acceptable anywhere in the cross section when the hole spacing is a minimum of 3 times the hole diameter.
- ▲ Attachments to chord members that create holes greater than 1/4" up to 7/16" in diameter are acceptable provided the following four requirements are met:
  1. Only one hole is allowed at any given chord cross section.
  2. Hole is to be placed in any portion of the area labeled "**Acceptable Hole Location**" as shown in Figure 1.
  3. Spacing of holes shall be 24" O.C. minimum along length of member.
  4. Holes cannot be located closer than 6" to a panel point.



**Figure 1**

- ▲ Attachments to chord members that create holes larger than 7/16" in diameter are not allowed unless approved by a TrusSteel engineer.
- ▲ Connectors or hangers attached to only one side of a chord's cross section are allowed provided the supported load does not exceed 100 pounds. No more than (1) one-sided connection is allowed per panel.
- ▲ It is preferable to support the hanger concentric with the chord, as in Standard Details TS049 and TS049L, to eliminate eccentric connections.
- ▲ The building designer must verify that the building design loads have accounted for the mechanical system loads.

### Revisions

- This bulletin was created on 9/20/07.
- Revised 1/18/08
- Revised 3/30/10
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