

## Basis of Design

This section applies to the design and installation of Cold-Formed Steel Framing utilized for structural members.

### Design Criteria

- Use most recent version of the International Building Code (IBC) with local municipality amendments. Referenced standards include the American Iron and Steel Institute North American Specification for the Design of Cold-Formed Steel Structural Members (AISI-NASPEC) and The AISC Standard for Cold-Formed Steel Framing.
- Specify members using the latest product identification code per The Steel Stud Manufacturers Association (SSMA). For example, “600S162-54” indicates a 6” deep stud member with a 1 5/8” flange and is 54 mils thick.
- Gypsum board is not allowed to be used as shear wall sheathing.
- Design and detail lateral bracing of members when the members are not adequately held in line with sheathing. Locations where this may occur include: at stud walls above a ceiling line, or on ceiling joists where no sheathing is applied on the top flange.
- Engineer of Record shall design and detail the framing and connections on the construction drawings. An acceptable alternate is to specify as a design-build submittal. If the design-build submittal is utilized, a Washington State PE shall stamp and sign the shop drawings as well as the structural calculations.
- Cold formed metal framing shall not be used as a backup wall to support masonry veneer weight or lateral loads.

## Design Evaluation

The following information is required to evaluate the design:

- Schematic Design Phase: Provide schematic plan indicating typical cold-formed steel framing. Outline specifications.
- Design Development Phase: Provide framing plans, typical connection details. Draft specifications.
- Construction Document Phase: Complete design and specifications.

## Construction Submittals

- Shop drawings and calculations for all members that are part of a design-build submittal
- Product data and certificates for members.

## Quality Assurance

- Inspection of framing and connections to verify compliance with the approved construction documents by an independent testing lab.

### **Related Sections**

- Facilities Services Design Guide - General Requirements - Structural
- Facilities Services Design Guide - Interior Partitions
- Facilities Services Design Guide - Metal Walls

### **Products, Material and Equipment**

- Provide a G60 minimum coating on all members.
- Manufacture shall be a member of The Steel Stud Manufacturers Association (SSMA).

### **Installation, Fabrication and Construction**

- Studs are to be installed tight-fit into stud wall tracks.
- Locate joists directly above studs below unless a load distribution member is designed to distribute the joist reactions to the studs below.

END OF DESIGN GUIDE SECTION