09 2216
Non-Structural Metal Framing

Last Update: January 5, 2017

A. General:

1. Metal framing specified under this section includes non-load bearing cold-formed metal framing for interior walls and anchors, non-load-bearing walls, and ceiling framing.
2. Load-bearing cold-formed metal framing are specified Division 05.

B. Design Criteria:

1. Design cold-formed metal framing, anchors, supports, and reinforcement to resist erection loads and dead loads plus additional live loads without exceeding the working stresses permitted for the materials by State and Municipal Codes.
   a. Comply with ASCE 8 and requirements of Chapter 16 of the Indiana Building Code (IBC).
      1) Design shall include member dead loads, superimposed loads as indicated on the Construction Documents, seismic and lateral loads.
   b. Select members and spacing according to manufacturer provided load and span tables, selected not to exceed the deflection limits specified. The minimum horizontal load on interior partitions shall be 5 PSF.
   c. All loads shall be applied to each member and shall transfer through supporting elements to the structure of the building. Walls that do not extend to the ceiling shall, at the minimum, be designed and installed to resist the horizontal loads required for guardrails.
      1) Where necessary to resist design loads, provide suitable steel reinforcement anchored to the floor slab or structure to provide required load resistance.
   d. Anchorage: Provide fasteners or anchors of sufficient size and spacing to resist shear loads imposed on the framing.
2. Deflection limit:
   a. Interior Studs, unless otherwise indicated: L/240 over the full height of studs, L/360 over the height of gypsum board and plaster surfaces.
   b. Interior studs scheduled to be finished with porcelain tile, 12 inch or greater dimension: L/360.

C. Submittals:

1. Shop Drawings, Metal Framing: Provide manufacturer's or AISI standard details for each construction condition.

a. Provide elevations indicating anchorage locations, stud sizes, sills and lintels.

b. Provide details including anchorages, splices, boxed members, bracing, and other framing and fabrication details necessary to fully describe construction.

2. Product Data: Provide manufacturer's load and span tables, with selected products indicated, indicating compliance of stud selection with design criteria specified.

D. Acceptable Products:

1. Metal framing members: United States manufacturers may be used as long as the following conditions are met:

a. SSMA member company.

b. Moment of inertia and section modulus meet or exceed the item specified.

c. Modulus of elasticity and yield point meet or exceed the item specified.

d. The submitted items functionally perform as well as the item specified.

e. No adjustment in section depth is required to meet design criteria.

2. Deflection Track: Provide at all floor-to-deck walls and where otherwise required, to allow for deflection of the structural framing. Provide a system capable of accommodating 2 times the calculated deflection without imposing a vertical load on the studs.

3. Stud Gages:

a. Structural Studs: Minimum 0.0451 inch (18 gage, 43 mil)

b. Wall framing: Minimum 0.0329 inch (20 gage, 33 mil)

4. Lateral Bracing: Provide lateral bracing of type and at spacing required to develop full load capacity at designated deflection in cold-formed members.

E. Installation:

1. Install metal framing in accordance with ASTM C754.

2. In general, erect all stud walls to deck. Confer with Owner.

3. Provide full-height structural studs at all corners

4. Provide full-height structural studs at jambs of all door frames and windows. Extend studs and anchor to the structure.

5. Provide deflection track at walls to deck and at slabs or beams to allow for vertical movement.

6. Install lateral bracing where required.

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a. Where walls are indicated to receive sheathing only on one side, or where otherwise required, install metal strapping horizontally across the unsheathed side of studs or select stud depth and gage for single-sided panel installation.

b. Fasten strapping to each stud with 2 screws, minimum.

END OF SECTION