

## SECTION 05400

### COLD-FORMED METAL FRAMING

#### PART 1 GENERAL

##### 1.01 DIVISION OF RESPONSIBILITIES TERMINOLOGY: **NOT USED**

1.02 SUMMARY: The Contractor shall provide cold-formed metal framing and accessories at exterior and interior metal framed assemblies where shown on the drawings, as specified in this Section, and as needed for a complete and proper installation.

1.03 RELATED WORK: Section 09260- Gypsum Wallboard & Partition System

1.04 SUBMITTAL: No product submittal is required for the work of this Section IF provided per the construction documents. Any Request for Product Substitution must be submitted per Section 01340- Submittals.

#### PART 2 PRODUCTS

2.01 All framing stud and joist members shall be of the type, size and gauge shown on the drawings, and shall be equal to products manufactured by Dietrich Industries Inc., Pittsburgh PA (412/ 281-2805).

2.02 Framing studs and joists shall be formed from steel conforming to ASTM A446; Grade D for 14 GA and 16 GA; Grade B for 18 GA and 20 GA; and galvanized per ASTM A 653. Structural calculations should be prepared utilizing one of the following:

SQ	Grade 22	minimum yield strength 33
SQ	Grade 40	minimum yield strength 40
SQ	Grade 50	minimum yield strength 50

2.03 All galvanized 18 and 20 gauge framing studs and joists, and all galvanized track, bridging, end closures and accessories shall be formed from steel conforming to ASTM A653, SQ Grade 33, with a minimum yield of 33,000 psi.

#### PART 3 EXECUTION

3.01 SURFACE CONDITIONS: The Contractor shall examine the areas and conditions under which work of this section will be provided, shall correct conditions detrimental to the timely and proper completion of the work, and shall NOT proceed until unsatisfactory conditions are corrected.

##### 3.02 ERECTION:

- A. Tracks shall be securely anchored to the supporting structure. Axially loaded studs shall be installed in a manner which will assure that ends of the studs are positioned in the track with a minimum gap, prior to stud and track attachment.
- B. At track butt joints, abutting pieces of track shall be securely anchored to a common structural element, or they shall be butt-welded or spliced together.
- C. Studs shall be plumbed, aligned and securely attached to the flanges or webs of both upper and lower tracks.
- D. Jack studs or cripples shall be installed below windowsills, above window and door heads, at free standing stair rails, and elsewhere to furnish support, and shall be securely attached to supporting members.

- E. Wall stud bridging shall be attached in a manner to prevent stud rotation. Bridging rows shall be spaced for walls up to 10'-0" height, with one row at mid-height; and for walls exceeding 10'-0" height, with bridging rows spaced not to exceed 5'-0" on-center.
- F. Provisions for structure vertical movement shall be provided where indicated on the drawings using a manufactured Vertical Slide Clip system or other means per the manufacturer's recommendations.

### 3.03 ERECTION (AXIAL LOAD-BEARING):

- A. Tracks shall be securely anchored to the supporting structure.
- B. Complete uniform and level bearing support shall be provided for the bottom track. At track butt joints, abutting pieces of track shall be securely anchored to a common structural element, or they shall be butt welded or spliced together.
- C. Jack studs shall be installed below windowsills, above window and door heads and at freestanding stair rails, and shall be securely attached to supporting members.
- D. Wall stud bridging shall be installed in a manner to provide resistance to both minor axis bending and rotation. Bridging rows shall be equally spaced not to exceed 5'-0" on-center for wind loading only, or 4'-0" on-center for axial loading.

### 3.04 ERECTION OF COLD-FORMED STEEL JOISTS:

- A. Joists shall be located directly over bearing studs or a load distribution member shall be provided at the top track.
- B. Provide web stiffeners at reaction points; and joist bridging, where indicated on the drawings.
- C. Provide an additional joist under parallel partitions when the partition length exceeds one-half the joist span and around all floor and roof openings that interrupt one or more spanning members unless otherwise noted.
- D. End blocking shall be provided where joist ends are not otherwise restrained from rotation.

END OF SECTION