

SECTION 09 22 16
NON-STRUCTURAL METAL STUD FRAMING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 specification sections, apply to work in this section.
- B. Requirements of this section apply to Gypsum Plaster and Portland Cement Plaster Work.
- C. Section 06 10 00 Rough Carpentry
- D. Section 05 40 00 Cold Formed Metal Framing

1.2 SYSTEM DESCRIPTION

- A. See plans for and this document for the extent of the use of metal studs.
- B. See Section 05 40 00 Cold Formed Metal Framing, structural steel studs.

1.3 REFERENCES

- A. ASTM C645 – Standard Specification for Nonstructural Steel Framing Members
- B. ASTM C754 – Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products
- C. ASCE 7 – Minimum Design Loads for Buildings and other Structures
- D. Underwriters Laboratories (UL) - Fire Resistance Manual
- E. Gypsum Association (GA) - Fire Resistance Design Manual
- F. Florida Building Code (FBC)

1.4 SUBMITTALS

- A. Shop Drawings: Indicate prefabricated work, component details, stud layout, framed openings, anchorage to structure, type, location of fasteners, and accessories or items required of other related work.
- B. Describe method for securing studs to tracks, splicing, and for blocking and reinforcement to framing connections.
- C. Provide calculations, from Florida professional engineer, for loadings and stresses of exterior walls to meet or exceed the requirements of ASCE 7.
- D. Provide data describing standard framing member materials and finish, product criteria, load charts and limitations.
- E. Evaluation Reports: Submit evaluation reports certified under an independent third-party inspection program administered by an agency accredited by IAS to ICC-ES AC98 accreditation criteria for inspection agencies.
- F. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention.

1.5 QUALITY ASSURANCE

- A. Code-Compliance Certification of Studs and Tracks: Provide documentation that framing members are certified in accordance with the product-certification program of the Steel Framing Industry Association (SFIA) or a similar organization that provides a verifiable code-compliance program.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials and store off the floor in dry area to prevent damage due to corrosion, moisture, excessive handling.
 - 1. When evidence of moisture occurs, immediately remove water and leave members completely dry.

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- B. Installation of rusted framing members is not acceptable.

PART 2 PRODUCTS

2.1 STUD FRAMING MATERIALS

- A. Interior wall framing: Studs in interior partitions shall comply with AISI S220 and ASTM C645, Section 10.
 - 1. Web Size: 3-5/8 inches.
 - 2. Minimum Base-Steel Thickness: 0.0181 inch for 20 gauge equivalent (70 ksi) or 0.0296 inch for traditional 20 gauge.
 - a. Comply with manufacturer's limiting heights tables for proper thickness and web size.
- B. Provide 18-ga studs (min) at window and door openings.
 - 1. Standard: ClarkDietrich; RedHeader PRO. Header sections installed with Header Brackets (HDSC) or comparable products.
 - 2. Optional: conventional metal framing.
- C. Exterior wall framing:
 - 1. Load bearing (axially loaded) walls: Studs shall be minimum 16-ga (0.0538", 50 KSI Fy) galvanized steel studs conforming to ASTM C955 Section 8 and AISI 200.
 - a. Designer may specify heavier materials when needed.
 - 2. Non-load (axial) bearing walls: Studs shall be minimum 20-ga. (0.0329", 33 KSI Fy) galvanized steel material conforming to ASTM C955 Section 8 and AISI 200.
 - a. Designer may specify heavier materials when needed.
 - 3. Comply with or exceed the manufacturer's limit height tables for proper thickness and web size for all exterior framing.
- D. Floor and Ceiling Runners:
 - 1. Channel type metal runners, formed from 20-ga. galvanized steel, AISI S220.
 - 2. Provide and install extended leg retainer on ceiling runners.
 - 3. Provide same gauge runners as studs when studs exceed 20-ga. thickness.
- E. Coating:
 - 1. In contact with concrete or for exterior walls, provide CP 90: G90 (Z275).
 - 2. Not in contact with concrete or for interior walls, provide CP 40: G40 (Z140).
 - 3. A40 galvanized products are not acceptable.
 - 4. Provide a coating evaluation report to demonstrate equivalent corrosion resistance for alternate coating systems.
- F. Fasteners:
 - 1. Use Hex Washer Head Screw for framing member connections.
 - 2. Use Pan Tex Screw for framing member connections.
 - 3. Use Bugle Head Screw to attach gypsum lath to studs.
 - 4. Use Lath Tek Screw to attach metal lath to studs.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that conditions are ready to receive work.
- B. Verify field measurements are as shown on drawings.
- C. Verify that rough-in utilities are in proper location.

3.2 INSTALLATION, GENERAL

- A. Installation will comply with ASTM C754.

3.3 ERECTION

- A. Align and secure top and bottom runners at 24" o.c. with .145" diameter low-velocity power driven fasteners with 1¼" penetration.
- B. Fit runners under and above openings; secure intermediate studs at spacing of wall studs.
- C. Install studs vertically at 16" o.c. unless otherwise noted.
- D. Properly install studs in channels; bottomed out, plumbed, aligned, and securely attached top, and bottom.
- E. Stud splicing will not be permissible.
- F. Construct corners to allow for installation of wall board.
- G. Double studs at wall openings, door and window jambs, and not more than 2" each side of openings.
- H. Brace stud-framing system and make rigid.
 - 1. Provide and install bridging not to exceed 4'-3" o.c., unless using an approved engineered system.
- I. Align stud web openings.
- J. Coordinate installation of bucks, anchors, and blocking with electrical and mechanical work placed in or behind stud framing.
- K. Blocking:
 - 1. Secure metal stud blocking to studs.
 - 2. Install blocking for support of plumbing fixtures, wall cabinets, counter tops, toilet partitions and accessories, hardware, and other items as indicated.
 - 3. Provide and install, minimum 20-gage, horizontal doorstop blocking spanning 3-vertical studs at door handle height on the hinged side, starting at the doorframe.
- L. All partitions shall extend through the ceiling system and be supported from the structure above.
 - 1. See wall types shown on the drawings for exact requirements.

3.4 TOLERANCES

- A. Maximum Variation from True Position is ⅛" per 10'
- B. Maximum Variation of any Member from Plane is ⅛"

END OF SECTION