

SECTION 09 22 16 - NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Non-load-bearing steel framing systems for interior gypsum board assemblies.
 - 2. Suspension systems for interior gypsum ceilings, soffits, and grid systems.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

1.4 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: Submit evaluation reports certified under an independent third party inspection program administered by an agency accredited by IAS to ICC-ES AC98, IAS Accreditation Criteria for Inspection Agencies.
- B. Manufacturer's Certification: Submit manufacturer's certification of product compliance with codes and standards along with product literature and data sheets for specified products.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-load-bearing steel framing, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 119 by an independent testing agency.
- B. Design framing systems in accordance with AISI 5220, "North American Specification for the Design of Cold-Formed Steel Framing – Nonstructural Members," unless otherwise indicated.

2.2 FRAMING SYSTEMS

- A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.
 - 1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal unless otherwise indicated.

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2. Protective Coating: Comply with ASTM C 645; roll-formed from hot-dipped galvanized steel; complying with ASTM A 1003/A 1003M and ASTM A 653/A 653M G40 (Z120) or having a coating that provides equivalent corrosion resistance. A40 galvanized products are not acceptable.
- B. Studs and Runners: ASTM C 645. Use either steel studs and runners or "EQ" Equivalent Gauge steel studs and runners where required for STC indicated.
1. Steel Studs and Runners:
 - a. Minimum Base-Metal Thickness: 0.0329 inch (20 gauge).
 - b. Depth: As indicated on Drawings.
 2. Dimpled Steel Studs and Runners:
 - a. Minimum Base-Metal Thickness: 0.0269 inch (22 gauge).
 - b. Depth: As indicated on Drawings.
 3. Basis of Design: Subject to compliance with requirements, provide products based on products as manufactured by:
 - a. ClarkDietrich Building Systems.
 4. Acceptable Manufacturers: Subject to compliance with requirements, in lieu of the Basis of Design manufacturer, Contractor may provide products from another manufacturer that meet or exceed the published data of the specified Basis of Design manufacturer.
- C. Slip-Type Head Joints: Where indicated, provide the following:
1. Deflection Track: Steel sheet top runner manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection and drift of structure above; in thickness not less than indicated for studs, in width to accommodate depth of studs, and with all accessory parts required for a complete installation.
 - a. Basis of Design: Subject to compliance with requirements, Deflection Track incorporated into the project shall be based on products as follows:
 - 1) ClarkDietrich Building Systems; "Max Trak 2D."
 - b. Acceptable Manufacturers: Subject to compliance with requirements, in lieu of the Basis of Design manufacturer, Contractor may provide products from another manufacturer that meet or exceed the published data of the specified Basis of Design product.
- D. Firestop Tracks: Steel sheet top runner manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection and drift of structure above while maintaining continuity of fire-resistance-rated assembly indicated by use of an intumescent material adhered to runner; in thickness not less than indicated for studs and in width to accommodate depth of studs and with all accessory parts required.
1. Basis of Design: Subject to compliance with requirements, Firestop Track incorporated into the project, shall be based on products as follows:
 - 1) ClarkDietrich Building Systems; "Blaze Frame DSL 2" and "Blaze Frame Deck Plugs".

2. Acceptable Manufacturers: Subject to compliance with requirements, in lieu of the Basis of Design manufacturer, Contractor may provide products from another manufacturer that meet or exceed the published data of the specified Basis of Design product.
- E. Hat-Shaped, Rigid Furring Channels: ASTM C 645.
 1. Minimum Base-Metal Thickness: 0.0296 inch.
 2. Depth: As indicated on Drawings.
- F. Resilient Furring Channels: 1/2-inch- deep, steel sheet members designed to reduce sound transmission.
- G. Cold-Rolled Furring Channels: 0.053-inch uncoated-steel thickness, with minimum 1/2-inch- wide flanges.
 1. Depth: As indicated on Drawings.
 2. Furring Brackets: Adjustable, corrugated-edge type of steel sheet with minimum uncoated-steel thickness of 0.033 inch.
 3. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.062-inch- diameter wire, or double strand of 0.048-inch- diameter wire.
- H. Z-Shaped Furring: With slotted or nonslotted web, face flange of 1-1/4 inches, wall attachment flange of 7/8 inch, minimum uncoated-metal thickness of 0.018 inch, and depth required to fit insulation thickness indicated.

2.3 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards.
 1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.
- B. Isolation Strip at Exterior Walls: Provide the following:
 1. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch thick, in width to suit steel stud size.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Suspended Assemblies: Coordinate installation of suspension systems with installation of overhead structure to ensure that inserts and other provisions for anchorages to building structure have been

installed to receive hangers at spacing required to support the Work and that hangers will develop their full strength.

1. Furnish concrete inserts and other devices indicated to other trades for installation in advance of time needed for coordination and construction.

3.3 INSTALLATION, GENERAL

A. Installation Standard: ASTM C 754.

1. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.
- B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
- C. Install bracing at terminations in assemblies.
- D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.4 INSTALLING FRAMED ASSEMBLIES

A. Install framing system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.

1. Single-Layer Application: 16 inches o.c. unless otherwise indicated.
2. Multilayer Application: 16 inches o.c. unless otherwise indicated.
- B. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.
- C. Install studs so flanges within framing system point in same direction.
- D. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
 1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
 2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
 - a. Install two studs at each jamb unless otherwise indicated.
 - b. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch clearance from jamb stud to allow for installation of control joint in finished assembly.
 - c. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.
 3. Other Framed Openings: Frame openings other than door openings the same as required for door openings unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.

4. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.
 - a. Firestop Track: Where indicated, install to maintain continuity of fire-resistance-rated assembly indicated.
- E. Direct Furring:
 1. Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.
- F. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

END OF SECTION 09 22 16