DIETRICH
METAL FRAMING
A Worthington Industries Company

SECTION 09110

NON-STRUCTURAL METAL FRAMING

For Display hidden notes to specifier by using "Tools"/ "Options" / "View" / "Hidden Text".

**** NOTE TO SPECIFIER ** Dietrich Metal Framing; non-load-bearing metal studs, runner track, and other components for partitions, shaftwall, stairwalls, and area separation walls.**

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This section is based on the products of Dietrich Metal Framing, which is located at:

200 Old Wilson Bridge Road
Columbus, OH 43085
Tel: (614) 840-4350
Fax: (614) 840-4351
E-mail: askforhelp@dietrichindustries.com
Web: www.dietrichmetalframing.com.

[Click Here] for additional product data and info.

Dietrich Metal Framing, a Worthington Industries Company, is the leading manufacturer of light-gauge framing and finishing products for commercial and residential construction. Dietrich Metal Framing provides a wide selection of light-gauge framing and finishing products including drywall and structural framing, floor joists, metal lath, fire-rated assemblies, numerous deflection systems and an extensive line of metal, vinyl, veneer, paper-faced, plaster and stucco beads and trims. Dietrich Metal Framing companies and divisions - include Dietrich Design Group, Vinyl Corp., Dietrich Metal Framing Canada; operates manufacturing and service locations throughout North America and Canada.

Dietrich Metal Framing also provides total light-gauge design services through its design services group, Dietrich Design Group. DDG is the largest group of design engineers devoted solely to light-gauge steel framing design. They can provide shop drawings, technical recommendations, and member sizing, DDG is licensed in all 50 states and now operates in three locations; Hammond, IN; McDonough, GA and Carlsbad, CA.

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Non-structural metal studs for wall assemblies.

1.2 RELATED SECTIONS

**** NOTE TO SPECIFIER ** Delete any sections below not relevant to this project; add others as required.**

A. Section 05400 - Cold-Formed Metal Framing.

B. Section 06100 – Rough Carpentry.

C. Section 07210 - Thermal Insulation.

D. Section 07840 – Firestopping.

E. Section 09260 - Gypsum Board Assemblies.

1.3 REFERENCES

**** NOTE TO SPECIFIER ** Delete references from the list below that are not actually required by the text of the edited section.**

A. ASTM A 780 - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.

B. ASTM A 1003 - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members.

C. ASTM B 633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel.

D. ASTM C 645 - Standard Specification for Nonstructural Steel Framing Members, 2008.

E. ASTM C 754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products, 2008.

F. ASTM C 847 – Standard Specification for Metal Lath.

G. ASTM C 1063 – Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster (Plaster and Stucco Accessories).

H. ASTM C 1396 – Standard Specification for Gypsum Board.

I. ASTM C 1513 - Standard Specification for Steel Tapping Screws for Cold-Formed Steel Framing Connections.

J. AISI North American Specification for the Design of Cold-Formed Steel Structural Members.

K. AISI - Standard for Cold-Formed Steel Framing General Provisions.

1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

B. [Product Data]: Manufacturer's data sheets on each product specified, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

B. Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, and manufacturer's installation instructions.

C. Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-structural steel framing, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency. Products used in the assembly shall carry a classification label from a testing laboratory acceptable to authority having jurisdiction.

Retain paragraph below where framing is part of STC-rated assemblies. Indicated design designations of specific assemblies on Drawings.

D. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect and store products in manufacturer's unopened packaging until ready for installation per requirements of AISI's "Code of Standard Practice".

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Dietrich Metal Framing; 200 Old Wilson Bridge Road, Columbus, OH 43085. ASD. Tel: (614) 840-4350. Fax: (614) 840-4351. E-mail: askforhelp@dietrichindustries.com. Web: www.dietrichmetalframing.com .
   1. Dietrich Metal Framing; 8911 Bethlehem Blvd., Baltimore, MD (410) 477-8700.
   2. Dietrich Metal Framing; 4200 Cedar Blvd., Baytown, TX (281) 383-1617.
   3. Dietrich Metal Framing; 100 Fulton Street, Boonton, NJ (973) 335-3240.
   4. Dietrich Metal Framing; 2001 Cooley Drive, Colton, CA (909) 824-9717.
   5. Dietrich Metal Framing; 6700 Franklin Street, Denver, CO (303) 289-4092.
   6. Dietrich Metal Framing; 1435 165 th Street, Hammond, IN (219) 931-3741.

7. Dietrich Metal Framing; 91-300 Hanua Street, Kapolei, HI (808) 682-5747.
8. Dietrich Metal Framing; 1012 W. Wintergreen Rd; Hutchins, TX (972) 225-1100.
9. Dietrich Metal Framing; 3901 Olympic Blvd., Joliet, IL (815) 207-0110.
10. Dietrich Metal Framing; 15546 West 108 th Street, Lenexa, KS (913) 599-2026.
11. Dietrich Metal Framing; 330 Greenwood Place, McDonough, GA (678) 304-5500.
12. Dietrich Metal Framing; 3505 NW 123rd Street Miami, FL (305) 652-5423.
13. Dietrich Metal Framing; 420 South 53 rd Avenue, Phoenix, AZ (602) 447-0204.
14. Dietrich Metal Framing; 2525 South Airport Way, Stockton, CA (209) 547-9066.
15. Dietrich Metal Framing; 1300 Phoenix Road NE, Warren, OH (330) 372-4014.

**** NOTE TO SPECIFIER ** Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.**

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 COMPONENTS

**** NOTE TO SPECIFIER ** Review Dietrich Metal Framing Metal Framing and Finishing Catalog and Technical Design Guide. Lateral and axial load carrying applications, including fixtures, cabinetry and other equipment in interior uses, are design dependent, and all designs should be reviewed by a competent design professional familiar with the system and the requirements of the specific project. Custom sizes and lengths are available along with the standard sizes and lengths. Maximum product length is limited only by practical handling limitations.**

A. Studs: Hot-dipped galvanized steel C-channel, meeting requirements of ASTM C645; complying with ASTM A1003 and ASTM A653 G40 or equivalent corrosion resistance coating; Dietrich UltraSTEEL drywall studs. Note: A40 galvannealed products are unacceptable as per ASTM C645.

**** NOTE TO SPECIFIER ** Select the designation and criteria information based upon the shape and size component required for the project. If more than one, identify the application or location where used or verify the designation and size is indicated on the drawings.**

1. Designation and size as indicated on the drawings.
2. Designation: USTE-20 gauge-equivalent, drywall stud.

**** NOTE TO SPECIFIER ** Delete two of the following three options. Also coordinate with Par. 3.2.**

a. UltraSTEEL fire-rated partitions to be installed in accordance with UL V450.
b. UltraSTEEL fire-rated partitions to be installed in accordance with UL V438.
c. UltraSTEEL fire-rated partitions to be installed in accordance with UL U419.

3. Designation: USTN-25 gauge-equivalent drywall stud.

**** NOTE TO SPECIFIER ** Delete two of the following three options. Also coordinate with Par. 3.2.**

a. UltraSTEEL fire-rated partitions to be installed in accordance with UL V450.

b. UltraSTEEL fire-rated partitions to be installed in accordance with UL V438.
c. UltraSTEEL fire-rated partitions to be installed in accordance with UL U419.

4. Minimum Delivered Thickness: 0.0179 inches (0.45 mm) or members that can show certified third party testing or in accordance with ICC-ES-AC86 that meets ASTM C645-08 Section 9.2.

5. Minimum Delivered Thickness: 0.0296 inches (0.75 mm) or members that can show certified third party testing or in accordance with ICC-ES-AC86 that meets ASTM C645-08 Section 9.2.
6. Members that can show certified third party testing in accordance with ICC-ES-AC86 and conform to the limiting height values listed in C 754 (need not meet the minimum thickness set forth in 4.3 or the minimum section properties set forth in 8.1).
7. Web Sizes: As indicated on drawings.
8. Web Size: 1-5/8 inches (42 mm).
9. Web Size: 2-1/2 inches (64 mm).
10. Web Size: 3-5/8 inches (92 mm).
11. Web Size: 4 inches (102 mm).
12. Web Size: 6 inches (152 mm).
13. Flanges: Equal lengths 1-1/4 inches (0.32 mm).
14. Section Properties: Manufacturer's standard section properties.

B. Runner Track: Hot-dipped galvanized steel, meeting requirements of ASTM C645; complying with ASTM A1003 and ASTM A653 G40 or equivalent corrosion resistance coating; Dietrich UltraSTEEL drywall runner track.
1. Thickness equal to stud thickness minimum or heavier per design requirements.

**** NOTE TO SPECIFIER ** SLP-TRK® Systems – Provides a positive attachment for overall strength and allows for vertical movement caused by normal head-of-wall and floor extension or compression. Select the designation and criteria information based upon the shape and size component required for the project. If more than one, identify the application or location where used or verify the designation and size is indicated on the drawings.**

C. SLP-TRK Systems Deflection Track: Cold-formed galvanized steel in conformance with AISI's Specifications for Design of Cold-formed Steel Members.
1. Designation and size as indicated on the drawings.
2. Minimum Delivered Thickness: 25 gauge, 0.0179 inches (0.45 mm).
3. Minimum Delivered Thickness: 20 gauge, 0.0329 inches (0.84 mm).
4. Minimum Delivered Thickness: 18 gauge, 0.0428 inches (1.09 mm).
5. Minimum Delivered Thickness: 16 gauge, 0.0538 inches (1.37 mm).
6. Minimum Delivered Thickness: 14 gauge, 0.0677 inches (1.72 mm).
7. Standard leg 2-1/2 inches (64 mm).
8. Standard Vertical Slot of 1-1/2 inches (38 mm) in leg.
9. Product available within 2-1/4 inches (57 mm) drift, slots in web "special order."
10. Minimum yield strength of 50 ksi in 16 gauge (1.37 mm) and heavier and minimum yield strength of 33 ksi in 18 gauge (1.09 mm) and lighter.

D. Furring Channel: Cold-formed galvanized steel in conformance with AISI's North American Specifications for Design of Cold-formed Steel Structural Members; Dietrich Metal Framing furring channel:

**** NOTE TO SPECIFIER ** Select the designation and criteria information based upon the**

shape and size component required for the project. If more than one, identify the application or location where used or verify the designation is indicated on the drawings.

1. Designation and size as indicated on the drawings.
2. Designation: FCN, 25 gauge, 0.0179 inches (0.45 mm) thick, 7/8 inches (22 mm) height, 2-11/16 inches (68 mm) width.
3. Designation: FCE, 20 gauge, 0.0296 inches (0.75 mm) sheet thickness, 7/8 inches (22 mm) height, 2-11/16 inches (68 mm) width.
4. Designation: FCND, 25 gauge, 0.0179 inches (0.45 mm) sheet thickness, 1-1/2 inches (38 mm) height, 2 7/8 inches (73 mm) width.
5. Designation: FCED, 20 gauge, 0.0296 inches (0.75 mm) sheet thickness, 1-1/2 inches (38 mm) height, 2-7/8 inches (73 mm) width.

E. U Channel: Cold-formed galvanized steel; Dietrich Metal Framing U channel:

**** NOTE TO SPECIFIER ** Select the designation and criteria information based upon the shape and size component required for the project. If more than one, identify the application or location where used or verify the designation is indicated on the drawings.**

1. Designation and size as indicated on the drawings.
2. Designation: CHN1, galvanized, 16 gauge, 0.0538 inches (1.52 mm) steel thickness, 3/4 inches (19.1 mm) size.
3. Designation: CHN2, galvanized, 16 gauge, 0.0538 inches (1.52 mm) steel thickness, 1 1/2 inches (38 mm) size.
4. Designation: CHN3, galvanized, 16 gauge, 0.0538 inches (1.52 mm) steel thickness, 2 inches (51 mm) size.

**** NOTE TO SPECIFIER ** H Studs and Track are used in the construction of area separation walls. Select the designation and criteria information based upon the shape and size component required for the project. If more than one, identify the application or location where used or verify the designation is indicated on the drawings.**

F. H Studs and Track: Cold-formed galvanized steel, approved for the use intended based on ICC's current Research Report; Dietrich Metal Framing H studs and track:

1. Designation and size as indicated on the drawings.
2. Designation: Unhemmed H stud; 2 inches (51 mm), 10-foot (3 m) length, 25 gauge, 0.0179 inches (0.45 mm) .
3. Designation: Hemmed H stud; 2 inches (51 mm), 10-foot (3 m) length, 25 gauge, 0.0179 inches (0.45 mm).
4. Deflection Limitation at 10-foot (3000 mm): L/240.

**** NOTE TO SPECIFIER ** C-T Studs and J Track are used in the construction of shaftwalls and stairwalls. Select the designation and criteria information based upon the shape and size component required for the project. If more than one, identify the application or location where used or verify the designation is indicated on the drawings.**

G. C-T Studs and Tabbed J Track: Cold-formed galvanized steel, approved for the use intended based on a current National Evaluation Service Report; Dietrich Metal Framing C-T Studs and J-Tabbed Track.

1. Designation and size as indicated on the drawings.
2. Designation: C-T stud with J track, 2-1/4 inches (57 mm) leg.
3. Designation: C-T stud with J track, 3 inches (76 mm) leg.
4. Size: 2-1/2 inches (64 mm).
5. Size: 4 inches (102 mm).
6. Size: 6 inches (152 mm).
7. Sheet Thickness: 25 gauge.
8. Sheet Thickness: 20 gauge.
9. Deflection Limitation: L/120.
10. Deflection Limitation: L/180.
11. Deflection Limitation: L/240.

12. Deflection Limitation: L/360.

H. Metal Trims: Cold-formed galvanized steel.

**** NOTE TO SPECIFIER ** Select the designation and criteria information based upon the shape and size component required for the project. If more than one, identify the application or location where used or verify the designation is indicated on the drawings.**

1. Type and Size as indicated on the drawings.
2. Type: J Trim.
   a. Designation: M400, 3/8 inches (9.5 mm) size, 1-1/4 inches (32 mm) leg.
   b. Designation: M401, 1/2 inches (12.7 mm) size, 1-1/4 inches (32 mm) leg.
   c. Designation: M402, 5/8 inches (15.9 mm) size, 1-1/4 inches (32 mm) leg.
3. Type: U Trim.
   a. Designation: M20A, 1/2 inches (12.7 mm) size, 1 inch (25.4 mm) leg.
   b. Designation: M20A, 5/8 inches (15.9 mm) size, 1 inch (25.4 mm) leg.
4. Type: L Trim.
   a. Designation: M20B, 1/2 inches (12.7 mm) size, 1 inch (25.4 mm) leg.
   b. Designation: M20B, 5/8 inches (15.9 mm) size, 1 inch (25.4 mm) leg.

I. Drywall Corner Bead: Cold-formed galvanized steel sheet.
1. Type: 103 Deluxe.
2. Flange Length: 1-1/4 inches (32 mm).

J. Flat Strap and Backing Plate: Sheet for blocking and bracing in length and width indicated.
1. Galvanized Sheet Steel:
   a. Minimum Base-Metal Thickness: As indicated on Drawings.
   b. Minimum Base-Metal Thickness: 0.0179 inch (0.45 mm).
   c. Minimum Base-Metal Thickness: 0.0296 inch (0.75 mm).
2. Subject to compliance with requirements, provide:
   a. Dietrich Metal Framing Danback Fire Treated Wood Backing Plate D16F.
   b. Dietrich Metal Framing Danback Fire Treated Wood Backing Plate D24F.

K. Channel Bridging: 0.0538-inch (1.37-mm) bare metal thickness, with minimum 1/2-inch-(12.7 mm) wide flanges.
1. Subject to compliance with requirements, provide Dietrich Metal Framing; Spazzer 9200 Bridging and Spacing Bar [SPZD].
2. Assembly: U-Channel assembly.
   a. Depth: As indicated on Drawings.
   b. Depth: 3/4 inch (19.1 mm).
   c. Depth: 1-1/2 inches (38.1 mm).
   d. Depth: 2 inches (50.8 mm).
   e. Clip Angle: Subject to compliance with requirements, provide Dietrich Metal Framing; EasyClip U-Series Clip Angle or not less than 1-1/2 by 1-1/2 inches (38.1 by 38.1 mm), 0.068 inch (1.73 mm) thick, galvanized steel.
      1) Clip Angle: U543.
      2) Clip Angle: U545.
      3) Clip Angle: U547.

L. Resilient Furring Channels: 1/2-inch (12.7 mm) deep, steel sheet members

designed to reduce sound transmissions:
1. Provide Dietrich Metal Framing; Resilient Channel [RCSD].
2. Provide Dietrich Metal Framing; Resilient Channel [RCUR].

M. Radius Framing: Steel sheet runner for non-structural curves, bends, variable radii and arches. Designed to provide higher strength capacity than conventional lighter gauge material by using a work-hardened steel base strip.
1. Provide Dietrich Metal Framing; UltraSTEEL Framing Contour Track [CNTB].
2. Minimum Base-Metal Thickness: As indicated on Drawings.
3. Minimum Base-Metal Thickness: 0.0179 inch (0.45 mm).
4. Minimum Base-Metal Thickness: 0.0296 inch (0.75 mm).
5. Size: 2-1/2 inches.
6. Size: 3-5/8 inches.
7. Size: 6 inches.
8. Size: As indicated on Drawings.

N. Framing Component Accessories: Provide the following accessories as required for a complete system.
1. EasyClip Clip Angle.
2. Angles.
3. Backing Strip.

O. Fasteners: Self-drilling, self-tapping screws; steel, complying with ASTM C 1513; galvanized coating, plated or oil-phosphate coated complying with ASTM B 633 as needed for required corrosion resistance.

**** NOTE TO SPECIFIER ** Include the following paragraph if welded connections are specified.**

P. Touch-Up Paint: Zinc rich, containing 95-percent metallic zinc, ZRC 350 as manufactured by ZRC Worldwide, Marshfield, MA.

Q. Non-Hardening, Flexible Sealant: Latex acrylic.

2.3 MATERIALS

A. Cold-Formed Steel: Complying with ASTM A 1003/A 1003M; unless indicated otherwise.

B. Galvanized Coating: Meeting requirements of ASTM C645; roll-formed from hot-dipped galvanized steel; complying with ASTM A1003 and ASTM A653 G40 or equivalent corrosion resistant coating.

2.4 FABRICATION

A. General: Framing components may be preassembled into panels prior to erecting.

B. Fabricate panels square, with components attached in a manner so as to prevent racking or distortion.

C. Cut all framing components squarely for attachment to perpendicular members, or as required for an angular fit against abutting members. Hold members positively in place until properly fastened.

D. Fasteners: Fasten components using self-tapping screws or welding.

PART 3 EXECUTION

3.1 EXAMINATION

A. Prior to installation, inspect previous work of all other trades. Verify that all work is complete and accurate to the point where this installation may properly proceed in strict accordance with framing shop drawings.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 ERECTION

A. Install cold-formed framing in accordance with requirements of ASTM C 754.

**** NOTE TO SPECIFIER ** Delete two of the following three options. Also coordinate with Par. 2.2A.**

1. UltraSTEEL fire-rated partitions to be installed in accordance with UL V450.
2. UltraSTEEL fire-rated partitions to be installed in accordance with UL V438.
3. UltraSTEEL fire-rated partitions to be installed in accordance with UL U419.

**** NOTE TO SPECIFIER ** Delete references to welding connections when framing components are lighter than 16 gauge.**

B. Framing Installation:
1. Erect framing and panels plumb, level and square in strict accordance with approved drawings.
2. Handle and lift prefabricated panels in a manner to not cause distortion in any member.
3. Anchor runner track securely to the supporting structure. Install concrete anchors only after full compressive strength has been achieved.
4. Butt all track joints. Securely anchor abutting pieces of track to a common structural element, or splice them together.
5. Align and plumb studs, and securely attach to the flanges or webs of both upper and lower tracks.
6. Attach wall stud bridging when required in a manner to prevent stud rotation. Space bridging rows according to manufacturer's recommendations.
7. Provided temporary bracing until erection is completed.
8. Where indicated in the drawings, provide for structural vertical movement using means in accordance with manufacturer's recommendations.

**** NOTE TO SPECIFIER ** Provide the following for shaft wall construction.**

C. Shaftwall Framing Installation:
1. Lay out as shown in construction drawings. Secure J Track as perimeter framing and plumb to ceiling, floor and sides. Attach with suitable fasteners, spaced not more than 24 inches (610 mm) on centers. Apply a bead of sealant to the perimeter.
2. Preplan the stud layout 24 inches (610 mm) on center and adjust the spacing at either end so the end studs will not fall closer than 12 inches (305 mm) from the end.
3. Erect the first 1-inch (25.4 mm) shaft wall liner panel, cut 3/4 inch (19.0) less than the total height of the framed section. Plumb the panel against the web of the J Track and bend out tabs in J Track to secure panels in place.
4. Insert C-T Stud, cut 1/2 inch (19.1 mm) less than the overall height, into the top and bottom J Tracks and fit tightly over the previously installed 1 inch (25.4 mm) panel. Allow equal clearance between top and bottom J Track.
5. Install the next 1-inch (25.4 mm) shaft wall liner panel inside the J Tracks and within the tabs of the CT stud.

6. Progressively install succeeding studs and panels as described above until the wall section is enclosed. The final panel section may be secured with tabs from the J Track at 12 inches (305 mm) on center.
7. Where wall heights exceed the standard or available length of shaft wall liner panels, the gypsum panels may be cut and stacked with joints occurring within the top or bottom third points of the wall. Joints of adjacent panels should be alternately staggered to prevent a continuous horizontal joint.
8. For doors, ducts or other large penetrations or openings, install J Track as perimeter framing. Use 20 gauge, 0.0329 inches (0.83 mm) track with a 3 inches (76 mm) back leg for elevator doors and block cavity with 12 inches (305 mm) wide gypsum filler strips for doors exceeding 7-foot (2 m) height.

3.3 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION