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Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat, SectionFormat,* and *PageFormat,* as described in *The CSI Construction Specifications Practice Guide.*

This section must be carefully reviewed and edited by the Architect or Engineer to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all "Specifier Notes" after editing this section.

Section numbers are from *MasterFormat 2011 Update.*

SECTION 03 15 00

ANCHOR CHANNELS FOR CONCRETE

Specifier Notes: This section covers Halfen site-installed, toothed, anchor channels cast-in-place in concrete for attaching equipment, piping, ductwork, and elevator guide rails. Consult Halfen USA for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES

Specifier Notes: Edit the following for the specific application.

A. Steel channels with stud anchors for placement in concrete formwork.

1.2 RELATED REQUIREMENTS

Specifier Notes: Edit the following list of related sections as necessary. Limit the list to sections with specific information that the reader might expect to find in this section, but is specified elsewhere.

A. Section 03 10 00 – Concrete Forming and Accessories: Preparation of concrete formwork to receive work of this section.

B. Section 03 30 00 – Cast-in-Place Concrete: Channels and their respective anchors, cast into concrete.

1.3 REFERENCE STANDARDS

Specifier Notes: List standards referenced in this section, complete with designations and titles. Delete standards not included in the edited section. Including a standard in this list does not require compliance with that standard.

A. ASTM A123/A123M – Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.

B. ASTM A283/A283M – Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates.

C. ASTM A666 – Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.

D. ASTM B633 – Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel.

E. ASTM F568M – Standard Specification for Carbon and Alloy Steel Externally Threaded Metric Fasteners.

F. ASTM F738M – Standard Specification for Stainless Steel Metric Bolts, Screws, and Studs.

1.4 COORDINATION

A. Coordinate the Work with installation of concrete formwork and reinforcement.

1.5 PREINSTALLATION MEETINGS

Specifier Notes: Edit preinstallation meetings as necessary. Delete if not required.

A. Convene preinstallation meeting [1 week] [2 weeks] before start of work of this section.

B. Require attendance of parties directly affecting work of this section, including Contractor, Architect, Engineer, installer, and manufacturer’s representative.

C. Review materials, preparation, installation, tolerances, protection, and coordination with other work.

1.6 SUBMITTALS

Specifier Notes: Edit submittal requirements as necessary. Delete submittals not required.

A. Comply with Section 01 33 00 – Submittal Procedures.

B. Product Data: Submit manufacturer's product data, including installation instructions.

C. Shop Drawings:
   1. Submit manufacturer's shop drawings, indicating component profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.

D. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.

E. Test Reports: Submit manufacturer's substantiating engineering data, test results of previous test by independent laboratory which meet performance criteria, and other supportive data.

F. Warranty Documentation: Submit manufacturer's standard warranty.

1.7 QUALITY ASSURANCE

A. Manufacturer's Qualifications:
   1. Capable of providing field service representation during installation.
   2. Minimum of 5 years experience in manufacture of anchoring components.
   3. Experience in projects of similar scope.
   4. Manufacture in accordance with established quality assurance program.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Delivery and Acceptance Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage and Handling Requirements:
   1. Store and handle materials in accordance with manufacturer's instructions.
   2. Keep materials in manufacturer's original, unopened containers and packaging until installation.
   3. Store materials in clean, dry area indoors.
   4. Protect materials and finish during storage, handling, and installation to prevent damage.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Halfen USA Inc., P.O. Box 18687, San Antonio, TX 78218. Toll Free 800-423-9140. Fax 888-277-1695. www.halfenusa.com. info@halfenusa.com.

2.2 DESIGN CRITERIA

Specifier Notes: Restrict statements to describe the combined result of the components used to assemble the system. If more than one type and weight of load is anticipated, create a schedule of loads, types of anchor channels, and locations.

A. Anchor Channel Assembly:
   1. Pullout Load: _____ lbs (_____ kN).
   2. Shear Load: _____ lbs (_____ kN).
   3. Longitudinal Load: _____ lbs (_____ kN).

2.3 MATERIALS

Specifier Notes: Edit the following paragraph to suit placement in concrete formwork for casting in place using stud-type anchors.

A. Steel Channels for Placement in Concrete: Halfen “HTA” anchor channels and bolts.
   1. Channel Type: Halfen “HTA” [28/15] [38/17] [40/22] [41/22] [41/41] [49/30] [50/30] [52/34] [55/42] [72/48].
   2. Channel Material: Carbon steel, ASTM A283 or stainless steel [Type 304] [Type 316], ASTM A666.
   3. Anchors for Casting into Concrete: [Stud] [I-anchor] welded to channel, [ASTM A283] [ASTM A666].

Specifier Notes: Edit the following paragraph to suit attachment by welding or bolting to structural steel.

B. Bolts, Nuts, and Washers:
   1. Bolt-Type Fasteners: T-head, in contact with channel slot faces, [carbon steel, ASTM F568M] [stainless steel, ASTM F738M].
   2. Bolt Diameter: [1/2] [5/8] [3/4] [_____] inch ([12] [16] [20] [_____] mm).
   3. Bolt Length: _____ inches (_____ mm).
   4. Finish for Carbon Steel T-bolts: [Hot-dip galvanized, ASTM A123] [Mill finish] [Zinc electroplating, ASTM B633].
   5. Nuts: [Carbon steel] [Stainless steel].
   6. Washers: [Carbon steel] [Stainless steel].

2.4 FABRICATION

A. Shop assembly items in largest practical sections for delivery to site.

B. Mechanical Fastenings: Bolts, nuts, and washers, consistent with design of components.

2.5 FINISHES

A. Unprotected Steel Anchors: Clean surfaces of rust, scale, grease, and foreign matter before finishing or galvanizing.

B. Structural Components and Anchors: Hot-dip galvanize after fabrication, ASTM A123.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine areas and formwork to receive anchor channels.

B. Verify dimensions, tolerances, and method of attachment with other work.

C. Notify Architect of conditions that would adversely affect installation.

D. Do not begin installation until unacceptable conditions are corrected.

3.2 PREPARATION

Specifier Notes: Edit the following sentence.

A. Supply items required to be cast into concrete with setting templates to appropriate sections.

3.3 INSTALLATION

A. Install anchor channels in accordance with manufacturer's instructions at locations indicated on the Drawings.

B. Install items plumb and level, accurately fitted, free from distortion or defects.

C. Placement in Concrete Forms:
   1. Fasten anchor channels to concrete forms.
   2. Verify concrete has been vibrated to assure consolidation and full bond to anchors.
   3. Remove foam strips from interior of channels after form stripping.
   4. Place fasteners and make ready for use.

D. Obtain approval from Architect and manufacturer before site cutting or making adjustments not scheduled.

3.4 TOLERANCES

Specifier Notes: Edit the following sentence.

A. Anchor Channel Maximum Variation from [Plumb] [Level]: [1/8] [1/4] [_____] inch ([3] [6] [_____] mm).

3.5 PROTECTION

A. Protect installed anchor channels from damage during construction.

END OF SECTION