

## SECTION 04080

### MASONRY REINFORCEMENT SYSTEMS

#### PART GENERAL

##### SECTION INCLUDES

Adjustable Reinforcement System.

Masonry Veneer Reinforcement System.

##### RELATED SECTIONS

Section 04810 - Unit Masonry Assemblies.

Section 05400 - Cold Formed Metal Framing.

##### REFERENCES

ASCE/ACI 530.1 - Specifications for Masonry Structures.

ASTM A 82 - Standard Specification for Cold-Drawn Steel Wire for Concrete Reinforcement.

ASTM A 153 - Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware.

ASTM A 167 - Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.

ASTM A 366 - Standard Specification for Steel Sheet, Carbon, Cold-Rolled, Commercial Quality.

ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanealed) by the Hot-Dip Process.

ASTM A 569 - Standard Specification for Steel, Carbon (0.15 Maximum Percent), Hot-Rolled Sheet and Strip Commercial Quality.

ASTM A 580 - Standard Specification for Stainless and Heat-Resisting Steel Wire.

ASTM A 641 - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.

ASTM D 412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers--Tension.

ASTM E 96 - Standard Test Methods for Water Vapor Transmission of Materials.

#### SYSTEM DESCRIPTION

System tested and evaluated for Seismic Zones 3 and 4 in accordance with ICBO guidelines and ICBO Evaluation Service, Inc. Evaluation Report No. 4882.

#### SUBMITTALS

Submit under provisions of Section 01300.

Product Data: Manufacturer's standard descriptive literature and printed installation instructions for each specified component.

Verification Samples: Three samples of each specified component; for linear components, submit three samples, each one foot long.

#### PART PRODUCTS

##### MANUFACTURERS

Acceptable manufacturer: Hohmann & Barnard, Inc.; 30 Rasons Court, P.O. Box 5270, Hauppauge, N.Y. 11788-0270; Telephone 516-234-0600, FAX 516-234-0683.

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

Substitutions: Not permitted.

##### ADJUSTABLE REINFORCEMENT SYSTEM

Acceptable product: #180 S.I.S. Dub'l Loop-Lok Truss Seismicclip Interlock System.

Acceptable product: #280 S.I.S. Dub'l Loop-Lok Ladder Seismicclip Interlock System.

Components:

Truss-type horizontal joint reinforcement for concrete masonry unit walls:

Acceptable product: #180 Dub'l Loop-Lok Truss.

Ladder-type horizontal joint reinforcement for concrete masonry unit walls:

Acceptable product: #280 Dub'l Loop-Lok Ladder.

Side rods: 9 gage.

Side rods: 3/16 inch diameter.

Cross rods: 9 gage.

Cross rods: 3/16 inch diameter.

Side rod spacing: 2 inches less than nominal concrete masonry unit width.

Cross rod spacing: Truss type full width of side rod spacing, butt-welded to side rods at each contact point.

Cross rod spacing: 16 inches on center, butt-welded to side rods at each contact point.

Double 3/16 inch diameter welded wire loops, spaced at 16 inches on center; inside loop dimension to provide 1-1/4 inches vertical adjustment of masonry anchor.

Wire: Stainless steel, ASTM A 580, Type 304.

Wire: Steel, ASTM A 82, hot-dip galvanized after fabrication in accordance with ASTM A 153, Class B2.

Masonry wall tie:

Acceptable product: Box Byna-tie.

Rectangular-shape brick anchor, 3/16 inch diameter wire, fitting into wire loops of horizontal joint reinforcement.

Wire: Stainless steel, ASTM A 580, Type 304.

Wire: Stainless steel, ASTM A 580, Type 316.

Wire: Steel, ASTM A 82, hot-dip galvanized after fabrication in accordance with ASTM A 153, Class B2.

Length: Required for indicated wall cavity dimension.

Deform wall tie to provide cavity drip at center of tie length.

Masonry wall tie:

Acceptable product: Bent-Box Byna-tie.

Rectangular-shape brick anchor, 3/16 inch diameter wire, fitting into wire loops of horizontal joint reinforcement, bent to form 1 inch offset, providing additional 1 inch of vertical coursing adjustment.

Projection: Required for indicated wall cavity dimension.

Deform wall tie to provide cavity drip.

Wire: Stainless steel, ASTM A 580, Type 304.

Wire: Steel, ASTM A 82, hot-dip galvanized after fabrication in accordance with ASTM A 153, Class B2.

Reinforcement retaining clip:

Acceptable product: #187-A Seismiclip.

Extruded rigid polyvinyl chloride (PVC), with one retaining ridge to secure 9 gage wire, and three retaining ridges to secure 3/16 inch diameter wire, grooved base for improved mortar bond.

Joint reinforcement wire:

Wire size: 9 gage.

Wire size: 3/16 inch diameter.

Wire: Stainless steel, ASTM A 580, Type 304.

Wire: Steel, ASTM A 82, hot-dip galvanized after fabrication in accordance with ASTM A 153, Class B2.

Wire: Steel, ASTM A 82, mill galvanized in accordance with ASTM A 641, Class 3.

Length: 10 feet minimum continuous piece length.

Rigid insulation retainer:

Acceptable product: Loop-Lok Washer.

Polyvinyl chloride (PVC) clip-type retainer for rigid board insulation; attaches to loop wires on horizontal joint reinforcement.

## ADJUSTABLE REINFORCEMENT SYSTEM

Acceptable product: #175 S.I.S. Dub'l Eye-Lok Truss Seismicclip Interlock System.

Acceptable product: #275 S.I.S. Dub'l Eye-Lok Ladder Seismicclip Interlock System.

Components:

Truss-type horizontal joint reinforcement for concrete masonry unit walls:

Acceptable product: #175 Dub'l Eye-Lok Truss.

Ladder-type horizontal joint reinforcement for concrete masonry unit walls:

Acceptable product: #275 Dub'l Eye-Lok Ladder.

Side rods: 9 gage.

Side rods: 3/16 inch diameter.

Cross rods: 9 gage.

Cross rods: 3/16 inch diameter.

Side rod spacing: 2 inches less than nominal concrete masonry unit width.

Cross rod spacing: Truss type full width of side rod spacing, butt-welded to side rods at each contact point.

Cross rod spacing: 16 inches on center, butt-welded to side rods at each contact point.

Double 3/16 inch diameter welded wire eyes, spaced at

16 inches on center.

Wire: Stainless steel, ASTM A 580, Type 304.

Wire: Steel, ASTM A 82, hot-dip galvanized after fabrication in accordance with ASTM A 153, Class B2.

Masonry wall tie:

Acceptable product: Box Byna-tie.

Rectangular-shape brick anchor, 3/16 inch diameter wire, fitting into wire eyes of horizontal joint reinforcement.

Wire: Stainless steel, ASTM A 580, Type 304.

Wire: Steel, ASTM A 82, hot-dip galvanized after fabrication in accordance with ASTM A 153, Class B2.

Length: Required for indicated wall cavity dimension.

Deform wall tie to provide cavity drip.

Reinforcement retaining clip:

Acceptable product: #187-A Seismicclip.

Extruded rigid polyvinyl chloride (PVC), with one retaining ridge to secure 9 gage wire, and three retaining ridges to secure 3/16 inch diameter wire, grooved base for improved mortar bond.

Joint reinforcement wire:

Wire size: 9 gage.

Wire size: 3/16 inch diameter.

Wire: Stainless steel, ASTM A 580, Type 304.

Wire: Steel, ASTM A 82, hot-dip galvanized after fabrication in accordance with ASTM A 153, Class B2.

Wire: Steel, ASTM A 82, mill galvanized in accordance with ASTM A 641, Class 3.

Length: 10 feet minimum continuous piece length.

Rigid insulation retainer:

Acceptable product: Loop-Lok Washer.

Polyvinyl chloride (PVC) clip-type retainer for rigid board insulation; attaches to eye wires on horizontal joint reinforcement.

## MASONRY VENEER REINFORCEMENT SYSTEM

Acceptable product: DW-10-X Seismicclip Interlock System.

Components:

Formed metal veneer anchor having double-pointed legs to penetrate rigid insulation and sheathing for direct contact with steel stud framing, formed vertical slot for adjustable masonry wire ties, screw hole at top and at bottom of anchor for screw attachment to framing.

Acceptable product: DW-10-X Veneer Anchor.

Metal: Stainless steel sheet, ASTM A 167, Type 304, finish

2B.

Metal: Cold-rolled steel sheet, ASTM A 366, hot-dip galvanized after fabrication in accordance with ASTM A 153, Class B2.

Metal: Cold-rolled steel sheet, ASTM A 366, mill galvanized in accordance with ASTM A 653/A 653M, Class G60.

Metal thickness: 14 gage.

Metal thickness: 12 gage.

Screw hole size: 1/4 inch diameter.

Screw hole size: 5/16 inch diameter.

Leg lengths: Sizes for indicated sheathing and insulation thicknesses.

Masonry wall tie:

Acceptable product: Byna-tie.

Trapezoid-shape brick tie, fitting into vertical slot of veneer anchor.

Wire size: 3/16 inch diameter.

Wire size: 1/4 inch diameter.

Wire: Stainless steel, ASTM A 580, Type 304.

Wire: Steel, ASTM A 82, hot-dip galvanized after fabrication in accordance with ASTM A 153, Class B2.

Wire: Steel, ASTM A 82, mill galvanized in accordance with ASTM A 641.

Length: Required for indicated wall cavity dimension.

Deform wall tie to provide cavity drip.

Reinforcement retaining clip:

Acceptable product: #187 Seismicclip.

Extruded rigid polyvinyl chloride (PVC), with one retaining ridge to secure 9 gage continuous wire and three retaining ridges to secure alternate 3/16 inch diameter continuous wire and 3/16 inch diameter Byna-tie, grooved base for improved mortar bond.

Reinforcement retaining clip:

Acceptable product: #250 Seismicclip.

Extruded rigid polyvinyl chloride (PVC), with one retaining ridge to secure 9 gage continuous wire, one retaining ridge to secure alternate 3/16 inch continuous wire, and two retaining ridges to secure 1/4 inch diameter Byna-tie, grooved base for improved mortar bond.

Joint reinforcement wire:

Wire size: 9 gage.

Wire size: 3/16 inch diameter.

Wire: Stainless steel, ASTM A 580, Type 304.

Wire: Steel, ASTM A 82, hot-dip galvanized after fabrication in accordance with ASTM A 153, Class B2.

Wire: Steel, ASTM A 82, mill galvanized in accordance with ASTM A 641, Class 3.

Length: 10 feet minimum continuous piece length.

Sealing tape:

Acceptable product: Textroseal.

Meet requirements of ASTM D 412, and ASTM E 96.

40 mil thick multi-ply polyethylene/polymer modified asphalt, self-sealing; adhesive backed, 2-1/2 inches wide, 50 feet roll length.

Fasteners:

Self-drilling self-tapping screws; hex washer head, size #10 - 16, lengths required for indicated insulation and sheathing thicknesses.

Metal: Zinc-coated steel.

Metal: Polymer-coated steel.

Metal: Stainless steel, Type 410.

Fasteners:

Self-drilling self-tapping screws; hex washer head, size #12, lengths required for indicated insulation and sheathing thicknesses.

Acceptable product: SX Fastener stainless steel Type 300, manufactured by SFS Stadler.

Metal: Stainless steel shank, carbon steel point.

Provide neoprene sealing washers.

## PART EXECUTION

### EXAMINATION

Examine project conditions before beginning installation of masonry reinforcement systems components

Do not proceed with installation of vinyl products until unacceptable conditions have been corrected.

### INSTALLATION

Concrete unit masonry installation is specified in Section 04810.

Brick masonry installation is specified in Section 04810.

Install masonry reinforcement system components in accordance with manufacturer's printed installation instructions.

Adjustable Reinforcement System:

Install horizontal joint reinforcement for concrete unit masonry

walls at 16 inches OC vertically, and at masonry course above headers of openings, extending reinforcement minimum 8 inches past opening at each jamb.

Secure rigid insulation in place with rigid insulation retainer at each masonry wall tie connector location on horizontal joint reinforcement.

Install masonry wall tie at each masonry wall tie connector location on horizontal joint reinforcement; install ties as exterior wythe of masonry construction progresses.

Set reinforcement retaining clip in full mortar bed at each masonry wall tie location; secure tie wires in correct size ridges.

Secure continuous masonry joint reinforcement wire in correct size ridge in reinforcement retaining clip.

#### Masonry Veneer Reinforcement System:

Install sealing tape at stud locations to receive veneer anchors; install tape vertically, continuous full stud length.

Install veneer anchors at stud locations; 16 inches OC vertically, 16 inches OC horizontally.

Screw-attach veneer anchor to stud face; ensure full contact of veneer anchor legs with stud face.

Install masonry wall tie at each veneer anchor location; install ties as exterior wythe of masonry construction progresses.

Set reinforcement retaining clip in full mortar bed at each masonry wall tie location; secure tie wires in correct size ridges.

Secure continuous masonry joint reinforcement wire in correct size ridge in reinforcement retaining clip.

END OF SECTION