

SECTION 040523.26 – THERMAL BRICK SUPPORT SYSTEM

TIPS:

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Revise this Section by adding, changing, and deleting text to meet Project-specific requirements.

DISCLAIMER:

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

- 1. Thermal brick support system and accessories.

B. Related Requirements:

- 1. Section 033000 "Cast-in-Place Concrete" for mounting channels, inserts and anchoring devices in concrete.
- 2. Section 042000 "Unit Masonry" for mounting channels, inserts and anchoring devices in masonry.
- 3. Section 051200 "Structural Steel Framing" for attachment plates and other structural-steel preparations for fastening thermal brick support systems.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at **[Project site]** <**Insert location**>.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For the following:
 - 1. Indicate component profiles, sizes, and configurations.
 - 2. Show locations and details of anchors, connection attachments, size and type of fasteners, reinforcing, and accessories.
 - 3. Indicate welded connections using standard welding symbols. Indicate net weld lengths.
- C. Design Data: Submit manufacturer's design data and structural calculations, signed and sealed by qualified Professional Engineer.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For **[Installer]** **[and]** **[professional engineer]**.
- B. Welding certificates.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A firm or individual experienced in installing assemblies similar in material, design, and extent to that indicated for this Project, whose work has a record of successful in-service performance.
- B. Designer Qualifications: Professional Engineer experienced in design of assemblies similar to that required for this Project and licensed in the State in which the Project is located.
- C. Welding Qualifications: Qualify procedures and personnel according to **[AWS D1.1/D1.1M, "Structural Welding Code - Steel]** **[AWS D1.2/D1.2M, "Structural Welding Code - Aluminum]** **[AWS D1.3/D1.3M, "Structural Welding Code - Sheet Steel]** **[and]** **[AWS D1.6/D1.6M, "Structural Welding Code - Stainless Steel]."**

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store materials on elevated platforms in a dry location. If units are not stored in an enclosed location, cover with waterproof sheeting, securely tied.
- B. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.
- C. Deliver materials to Project site in original factory packaging labeled with manufacturer's name, product name and designation.

1.8 COORDINATION

- A. Coordinate installation of components that are to be embedded in concrete or masonry so as not to interfere with anchors or reinforcement.
- B. Furnish setting drawings, templates, and directions for installing anchorages, including concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide the following system as manufactured by Hohmann & Barnard:
 - 1. TBS-F Thermal Brick Support System.
 - 2. TBS-B Thermal Brick Support System Bracket.
- B. Substitution Limitations: **[Not permitted.] [Comply with provisions of Division 01 Section for "SUBSTITUTION PROCEDURES."]**

2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Division 01 Section for "Quality Requirements," to design the thermal brick support system.
- B. Structural Performance: Concealed lintel assembly shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
 - 1. Wind Loads: As indicated.
- C. Seismic Performance: Concealed lintel assembly shall withstand the effects of earthquake motions determined according to [ASCE/SEI 7] <Insert requirement>.
 - 1. Component Importance Factor: [1.5] [1.0].
- D. Limit deflection in each assembly caused by indicated loads and thermal movements, acting singly or in combination with one another, to not more than [1/600] <Insert ratio> of assembly's clear span or the following, whichever is smaller:
 - 1. 1/16 inch (1.5 mm), measured in plane of wall.
 - 2. 1/4 inch (6 mm), measured perpendicular to wall.
- E. Corrosion and Staining Control: Prevent galvanic and other forms of corrosion as well as staining by isolating metals and other materials from direct contact with incompatible materials. Materials shall not stain exposed surfaces of stone and joint materials.

2.3 MATERIALS

- A. Thermal Brick Support System: Fabricate components from **[hot-dip galvanized]** **[Type 304 stainless]** **[Type 316 stainless]** steel.
1. Bracket Depth: **[As indicated in Drawings]** **[3 inches (75 mm)]** <Insert value>.
 2. Bracket Length: **[As indicated in Drawings]** <Insert value>.
 3. Projecting Leg Depth: **[As indicated in Drawings]** **[4 inches (100 mm)]** <Insert value>.

2.4 FASTENERS

- A. General: Select fasteners of type, grade, and class required to produce connections suitable for anchoring brick support system to other types of construction indicated **[and capable of withstanding design loads]**.
- B. Fastener Materials: Fabricate fasteners and anchors from stainless steel, ASTM A 240/A 240M or ASTM A 666, **[Type 304]** **[Type 316]**; temper as required to support loads imposed without exceeding allowable design stresses.

2.5 FABRICATION

- A. Fabricate components to comply with performance requirements with allowances for field adjustments.
- B. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately **1/32 inch (1 mm)** unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Weld shop connections to comply with applicable provisions of AWS D1.1/D1.1M.

2.6 FINISHES

- A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A 153/A 153M for steel hardware and with ASTM A 123/A 123M for other steel products.
1. Hot-dip galvanize after fabrication to comply with ASTM A 123/A 123M.
- B. Stainless Steel: Mill-produced finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
 - 1. Verify dimensions, tolerances, and method of attachment to other work.
 - 2. Verify that substrates are ready to receive the work of this Section.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Provide items to be **[cast into concrete]** **[attached to substrate]** with setting templates.

3.3 INSTALLATION

- A. Install thermal brick support system in accordance with manufacturer's written instructions and approved shop drawings.
- B. Provide anchorage devices and fasteners as indicated in approved shop drawings.
- C. Install components level, plumb, and true to line.
- D. Field Welding: Comply with the following requirements:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. Finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- E. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780/A 780M.

3.4 INSTALLATION TOLERANCES

- A. Variation from Plumb: For vertical lines and surfaces of walls, do not exceed **1/8 inch in 10 feet (3 mm in 3 m)**, **1/4 inch in 20 feet (6 mm in 6 m)**, or **3/8 inch in 40 feet (10 mm in 12 m)** or more.
- B. Variation from Level: For lintels, do not exceed **1/8 inch in 10 feet (3 mm in 3 m)**, **1/4 inch in 20 feet (6 mm in 6 m)**, or **3/8 inch (10 mm)** maximum.

3.5 CLEANING

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780/A 780M.

END OF SECTION 040523.26