PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Cellular polyurethane bearing blocks for steel columns.

B. Related Sections: Section(s) related to this section include:

1. Concrete Footings: Division 03 Concrete Sections.
2. Steel Columns: Division 05 Structural Metal Framing Sections.

1.2 REFERENCES

A. General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to the extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.

B. ASTM International:


1.3 SUBMITTALS

A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 01 Submittal Procedures Section.

B. Product Data: Submit product data, including manufacturer’s product information sheet, for specified products.

C. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage and accessories.
D. Samples: Submit selection and verification samples.

E. Quality Assurance Submittals: Submit the following:

1. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria, and physical requirements.

2. Manufacturer’s Instructions: Manufacturer’s installation instructions and/or product information sheet.

3. Manufacturer’s certificate for that the products comply with Section 1605 (Buy American clause) of the American Recovery and Reinvestment Act (ARRA).

F. Closeout Submittals: Submit the following:

Warranty document specified herein.

1.4 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. Regulatory Requirements:

1. Building Code: Verify with Manufacturer for approval by applicable code bodies and industry entities. Design, use and installation must comply with the requirements of all applicable codes and is the responsibility of a qualified design professional. Product code acceptance is determined by the local authority having jurisdiction.

2. Approvals: Verify applicable standards with regulatory agencies including block manufacturer’s requirements.

C. Mock-Ups: Install at project site, a job mock-up using acceptable products and manufacturer approved installation methods. Obtain Owner’s and Architect’s acceptance of finish color, texture, pattern and workmanship standards.

1. Mock-Up Size: Verify with architect and contractor prior to submission of sample to determine appropriate scope and location of mock-up.

2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.

3. Incorporation: Mock-up may be incorporated into final construction upon Owner’s approval.

D. Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer’s installation instructions and manufacturer’s warranty requirements.
1.5 DELIVERY, STORAGE & HANDLING

A. General: Comply with Product Requirements Sections of the specifications.

B. Ordering: Comply with manufacturer’s ordering instructions and lead time requirements to avoid construction delays.

C. Delivery: Deliver materials in manufacturer’s original, unopened, undamaged containers with identification labels intact.

D. Storage and Protection: Store materials protected from exposure to harmful weather conditions, at temperature and humidity conditions recommended by manufacturer.

1.6 PROJECT CONDITIONS

A. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Ensure manufacturer has minimum 50 years experience in manufacturing low temperature insulation components, such as high compressive strength insulation products below concrete floor, or exceeding requirements of project.

2.2 PROPRIETARY PRODUCTS/SYSTEMS

A. Manufacturer: The Dow Chemical Company.

B. Contact: 1605 Joseph Dr., Midland, MI, 48674; Telephone: 1-800-232-2436; website: www.dowbuildingsolutions.com; www.dowlowtempsolutions.com

C. Proprietary Product(s)/System(s): STYROFOAM™ LT1000, LT1500, LT1800 Column Bearing Blocks.

2.3 DESCRIPTION

A. Performance Requirements: Provide column bearing blocks that have been manufactured and installed to withstand loads from [Specify code/standard reference.] and to maintain [Specify performance criteria.] performance criteria stated by manufacturer without defects, or damage.

1. Type: Specify type of column bearing block and allowable bearing capacity from the following list of products based on the manufacturer’s design data for the specific project under consideration.
April 2011
Short Form Guide Spec for Special Foundations and Load-Bearing Elements
STYROFOAM™ LT 1000, 1500 and 1800

a. Allowable Load Capacity (allowable stress at 2% deformation), ASTM D1621 - Standard Test Method for Compressive Properties Of Rigid Cellular Plastics:

1) LT-1000: 30 pcf (481 kg/m3).
   a) Allowable Load Capacity: 1000 psi (6.9 MPa).

2) LT-1500: 35 pcf (561 kg/m3).
   a) Allowable Load Capacity: 1500 psi (10.3 MPa).

3) LT-1800: 40 pcf (641 kg/m3).
   a) Allowable Load Capacity: 1800 psi (12.4 MPa).

b. Thermal Performance: ASTM C518 at 75 degrees F (24 degrees C) mean temperature.

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2. Material Standard:

2.4 PRODUCT SUBSTITUTIONS
   A. Substitutions: No substitutions permitted.

2.5 RELATED MATERIALS
   A. Related Materials: Refer to other sections listed in Related Sections paragraph herein for related materials.

2.6 SOURCE QUALITY
   A. Source Quality: Obtain column bearing blocks from a single manufacturer.
PART 3 - EXECUTION

3.1 MANUFACTURER’S INSTRUCTIONS

A. Compliance: Comply with manufacturer’s product data, including product technical bulletins, and product installation instructions.

3.2 EXAMINATION

A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer’s instructions.

3.3 PREPARATION

A. Surface Preparation: Specify applicable product preparation requirements per manufacturer’s recommendations and standards appropriate for the specific conditions.

3.4 INSTALLATION

A. Column Bearing Block Installation:

1. Install blocks on clean, smooth, dry surfaces. If surfaces are wet, wipe or air dry surfaces to remove moisture before block installation. Do not allow blocks to “bridge” over voids or gaps, or rest on surface projections over 0.125 inch (3.2 mm) high. Use fast-setting cementitious leveling grout between LT column bearing block and mating structure.

2. Oversize predrilled anchor holes approximately 0.375 inch (9.5 mm) to allow for variation in anchor bolt locations.

3. Do not use broken blocks. Comply with installation recommendations from block manufacturer.

B. Related Products Installation: Refer to other sections listed in Related Sections paragraph herein for related products installation.

3.5 FIELD QUALITY REQUIREMENTS

A. Site Tests: As per manufacturer’s recommendations.

B. Inspection: To be determined by manufacturer’s representative and verified with architect and contractor.
3.6 CLEANING

A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace products that have been installed and are damaged. Clean installed products in accordance with manufacturer’s instructions prior to Owner’s acceptance. Remove construction debris from project site and legally dispose of debris.

3.7 PROTECTION

A. Protection: Protect installed product and finish surfaces from damage during construction.

END OF SECTION

NOTICE: Design, use and installation must comply with the requirements of all applicable codes and is the responsibility of a qualified design professional. Product code acceptance is determined by the local authority having jurisdiction.

NOTICE: No freedom from any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer’s use and for ensuring that Customer’s workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographical areas where Dow is represented. The claims made may not have been approved for use in all countries or regions. Dow assumes no obligation or liability for the information in this document. References to “Dow” or the “Company” mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO EXPRESS WARRANTIES ARE GIVEN EXCEPT FOR ANY APPLICABLE WRITTEN WARRANTIES SPECIFICALLY PROVIDED BY DOW. ALL IMPLIED WARRANTIES INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.