SECTION 07 26 00 - UNDER-SLAB VAPOR RETARDER

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Products Supplied Under This Section

B. Vapor Retarder, seam tape, mastic, pipe boots for installation under concrete slabs.

1.2 RELATED REQUIREMENTS

A. Section 03 30 00 - Cast-in-place Concrete

B. Section 03 20 00 - Concrete Forming and Accessories

C. Section 31 23 11 - Earthwork for Building Construction

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM), latest versions:

1. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials
2. ASTM E154/E154M - Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs
3. ASTM E1643 - Standard Practice for Selection, Design, Installation and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs
4. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs

B. American Concrete Institute (ACI), latest versions:

1. ACI 302.2R - Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials

1.4 SUBMITTALS

A. Quality Control / Assurance

1. Comply with Section 01 33 00 – Submittal Procedures.
2. Independent laboratory test results showing compliance with ASTM & ACI Standards.
3. Manufacturer’s samples, literature
4. Manufacturer’s installation instructions for placement, seaming and pipe

boot installation

B. Delivery, Storage, and Handling

1. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
2. Store materials in a clean dry area in accordance with manufacturer's instructions.
3. Stack membrane on smooth ground or wood platform to eliminate warping.
4. Protect materials during handling and application to prevent damage or contamination.
5. Ensure membrane is stamped with manufacturer’s name, product name and membrane thickness at intervals of no more than 85” (220 cm).

C. Environmental requirements

1. Product not intended for uses subject to abuse or permanent exposure to the elements.
2. Do not apply on frozen ground.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Vapor Retarder (Performance-Based Specifications)

1. Vapor Retarder must have the following qualities at minimum and meet floor finish manufacturer’s warranty requirements.
   a. Water Vapor Retarder ASTM E1745: Meets or exceeds Class A
   b. Maximum Permeance ASTM E96: 0.01 Perms or as required to meet Flooring Manufacturer’s Warranties.
   c. Tensile Strength ASTM E154, Section 9: not less than 45 LBS. Force/Inch
   d. Puncture Resistance, ASTM D1709, Method B.
   e. Thickness of Retarder (plastic) ACI 302.1R: Not less than 15 mils
   f. Material: Virgin Polyethylene or Polyolefin
   g. Vapor Retarder: Shall be Stego Wrap Vapor Barrier (no substitutions), ASTM E 1745 Class A; not less than 15 mils thick as Manufactured by Stego Industries. Strictly follow manufacturer’s installation requirements.
   h. Stego Industries, http://www.stegoindustries.com
   i. W.R. Meadows, http://www.wrmeadows.com
   j. Raven Industries, http://www.vaporblock.com
   k. Reef Industries, http://www.reefindustries.com
   l. Insulation Solutions, http://www.insulationsolution.com

2.2 ACCESSORIES

A. Seam Tape

1. Tape must have the following qualities:
   a. Water Vapor Transmission Rate ASTM E 96 0.3 perms or lower

B. Vapor Proofing Mastic

1. Mastic must have the following qualities:
   a. Water Vapor Transmission Rate ASTM E 96 0.3 perms or lower

C. Pipe Boots

1. Construct pipe boots from vapor Retarder material, pressure sensitive tape and/or mastic per manufacturer’s instructions.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces to receive membrane. Ensure compaction requirements have been completed, and geotechnical firm has confirmed compaction requirements have been met. Notify Architect if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

3.2 SURFACE PREPARATION

A. Prepare surfaces in accordance with manufacturer’s instructions.

3.3 INSTALLATION

A. Install Vapor Retarder:

1. Installation shall be in accordance with ASTM E 1643 and manufacturer’s written instructions.
2. Install vapor retarder with longest dimension parallel with direction of concrete pour.
3. All Switch Campus’s except for LAS, vapor barrier shall be placed directly below concrete slab, above gravel base.
4. Switch LAS Campus, vapor barrier shall be placed below the gravel base.
5. Face laps away from exposed direction of concrete pour.
6. Lap vapor retarder over footings and grade beams not less than 6 inches, sealing vapor retarder to concrete.
7. Lap joints 6 inches and seal with manufacturer's recommended tape.
8. Terminate vapor retarder at the top of floor slabs, grade beams, and pile caps, sealing entire perimeter to floor slabs, grade beams, foundation

walls, or pile caps.

9. Seal penetrations in accordance with vapor retarder manufacturer's instructions.
10. Protect vapor retarder during placement of reinforcement and concrete.
11. Repair damaged areas by patching with vapor retarder material, overlapping damages area by 6 inches on all sides and sealing to vapor retarder.
12. Plastic vapor retarder for concrete floor slab shall be 15-mile multi-layer plastic extrusion with only high-grade prime, virgin, polyolefin resins. Seal vapor retarder completely around all pipes and conduits. Inspect vapor retarder thoroughly and repair all punctures and tears immediately prior to placing concrete.
13. All laps shall be 6 inches minimum and sealed with a completely continuous pressure sensitive tape using Stego Tape. Seal continuously to existing perimeter slab or stem wall using Stego Crete Claw Tape and/or to perimeter wall with Stegotack Tape.
14. Follow Stego recommended procedures for all penetration and repairs.

3.4 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to furnish replacement sheet vapor

B. retarder/termite barrier material and accessories for sheet vapor retarder/ termite barrier and accessories that do not comply with requirements or that fail to resist penetration by termites within specified warranty period.

1. Warranty Period: 10 years from date of Substantial Completion.

END OF SECTION 07 26 00