SECTION 072600 - VAPOR RETARDERS

Spec Note: Verify and retain required measurement unit required for project.

New York State Building Construction Code Section 1911 requires a vapor retarder under most slabs on grade. A vapor retarder is especially needed where slabs are to receive flooring or floor covering. Drawings must show locations of vapor retarders, and be labeled “vapor retarder’, not “vapor barrier”.

1. GENERAL
   * + 1. RELATED DOCUMENTS

Retain or delete this article in all Sections of Project Manual.

* + - * 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
      1. SUMMARY
         1. Section Includes:

Vapor retarders.

* + - 1. REFERENCE STANDARDS
         1. ASTM D 882 Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
         2. ASTM D 1709 Standard Test Methods of Impact Resistance of Plastic Film by the Free-Falling Dart Method.
         3. ASTM E 96 Standard Test Methods for Water Vapor Transmission of Materials.
         4. ASTM E 154 Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs.
         5. ASTM E 1643 Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.
         6. ASTM E 1745 Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil Or Granular Fill Under Concrete Slabs.
      2. SUBMITTALS
         1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
         2. Manufacturer’s installation instructions shall be provided along with product data.
         3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
         4. Product Data: For each type of product.
         5. Samples:

Vapor Retarder Material: 12 inches square.

Pressure-Sensitive Tape: 36 inches long piece minimum.

* + - * 1. Product Test Reports: For each product, for tests performed by a qualified testing agency.

1. PRODUCTS
   * + 1. POLYETHYLENE VAPOR RETARDERS

Review and verify that Products listed below are available. Update as necessary.

Select 10-mil for standard applications and 15-mil for high traffic areas that require higher puncture resistance.

* + - * 1. Vapor Retarders: ASTM D4397, 10-mil-thick sheet, with maximum permeance rating of 0.1 perm.

Products: Subject to compliance with requirements, provide one of the following:

Henry Company; Moistop Ultra 10.

Raven Industries, Inc.; VaporBlock 10 (VB10).

Stego Industries, LLC.; Stego Wrap 10-Mil Class A Vapor Retarder.

W. R. Meadows, Inc.; Perminator 10 Mil Underslab Vapor Barrier.

Approved equivalent.

* + - * 1. Vapor Retarders: ASTM D4397, 15-mil-thick sheet, with maximum permeance rating of 0.1 perm.

Products: Subject to compliance with requirements, provide one of the following:

Henry Company; Moistop Ultra 15.

Raven Industries, Inc.; VaporBlock 15 (VB15).

Stego Industries, LLC.; Stego Wrap 15-Mil Class A Vapor Retarder.

W. R. Meadows, Inc.; Perminator 15 Mil Underslab Vapor Barrier.

Approved equivalent.

* + - 1. ACCESSORIES
         1. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.
         2. Adhesive for Vapor Retarders: Product recommended by vapor-retarder manufacturer and has demonstrated capability to bond vapor retarders securely to substrates indicated.
         3. Vapor-Retarder Fasteners: Pancake-head, self-tapping steel drill screws; with fender washers
         4. Pipe Boots: Vapor retarder manufacturer’s standard pipe boots, or construct pipe boots from vapor retarder material, pressure-sensitive tape and/or adhesive, in accordance with vapor retarder manufacturer’s instructions

1. EXECUTION
   * + 1. PREPARATION
          1. Rake, trim, and tamp surfaces over which vapor retarder is to be installed to true planes.
          2. Clean substrates of substances that are harmful to vapor retarders, including removing projections capable of puncturing vapor retarders.
       2. INSTALLATION OF VAPOR RETARDERS
          1. Install vapor retarder in accordance with manufacturer’s printed instructions and ASTM E 1643.
          2. Install vapor retarders over prepared grade. Lap joints a minimum of 12 inches and seal with manufacturer's recommended tape. Install second layer over pathways to equipment.
          3. Extend vapor retarder over footings and seal to foundation wall or grade beam with manufacturer's recommended tape.

Typical minimum extension for the vapor retarder is 16 inches. Confirm with design team.

Extend vapor retarder vertically minimum [16 inches] [24 inches] <Insert dimension> above top of footing.

* + - * 1. Seal around penetrations such as utilities and columns in order to create a monolithic, airtight membrane at grade surface, perimeter, and all vertical penetrations.
      1. PROTECTION
         1. Protect vapor retarders from damage until concealed by permanent construction.
         2. Repair tears and punctures with a piece of vapor retarder material, overlapping the tear or puncture a minimum of six inches on all sides, and completely seal edges with pressure-sensitive tape or adhesive.

END OF SECTION 072600