



Standard Operating Procedure Installation of the Vapor Pin® Sampling Device Insert

January 28, 2021

Scope:

This standard operating procedure describes the installation the Vapor Pin® sampling device Insert (Figure 1).

Purpose:

The purpose of this procedure is to assure good quality control in field operations and uniformity between field personnel in the use of the Vapor Pin® sampling device Insert. The Vapor Pin® sampling device Insert is used to facilitate the collection of soil gas samples and pressure measurements beneath engineered vapor intrusion barriers (e.g., Geo-Seal®), or vapor mitigation coatings (e.g., Retro-Coat™).

Equipment Needed:

- Vapor Pin® sampling device Insert;
- Vapor Pin® sampling device Insert Cap;
- Hacksaw (optional);
- Power drill and small diameter bits (optional);
- Threaded rod (1/2" x 13); and
- Dead blow hammer.

Installation Procedure New Construction:

- 1) Check for buried obstacles (pipes, electrical lines, etc.) prior to proceeding.
- 2) Locate the desired position (horizontally and vertically) of the top of the Vapor Pin® sampling device Insert.
- 3) Pierce the barrier with a threaded rod of sufficient length to extend slightly above the elevation of the finished floor and into the subgrade a sufficient depth to provide support for the Vapor Pin® sampling device Insert. Make sure the rod is perpendicular to the proposed floor surface. Avoid bending the rod, as it may inhibit its removal after the concrete has cured. Also avoid damaging the threads on the rod.
- 4) Dry fit the Vapor Pin® sampling device Insert and trim, or extend the length. Extend the length by sliding the Insert into a length of 1.5 inch diameter schedule 40 PVC pipe. The insert and pipe can be joined using PVC cement or similar material. Allow sufficient time for the adhesive to cure prior to sampling. Vent holes may be added at the bottom of the Insert or PVC extension to promote air flow.
- 5) Assemble the Vapor Pin® sampling device Insert and Cap by pressing the Cap into the top of the Insert. Position the assembly on the threaded rod so that the top of the Cap lies flush with the elevation of the finished floor. It is important that the position of the Insert be perpendicular to the slab so that the Vapor Pin® sampling device Secure Cover meets uniformly with the floor.
- 6) Marry the barrier to the Insert per the manufacture's specification prior to pouring the concrete slab.

VAPOR PIN® sampling device protected under US Patent # 8,220,347 B2 and other US and International Patents

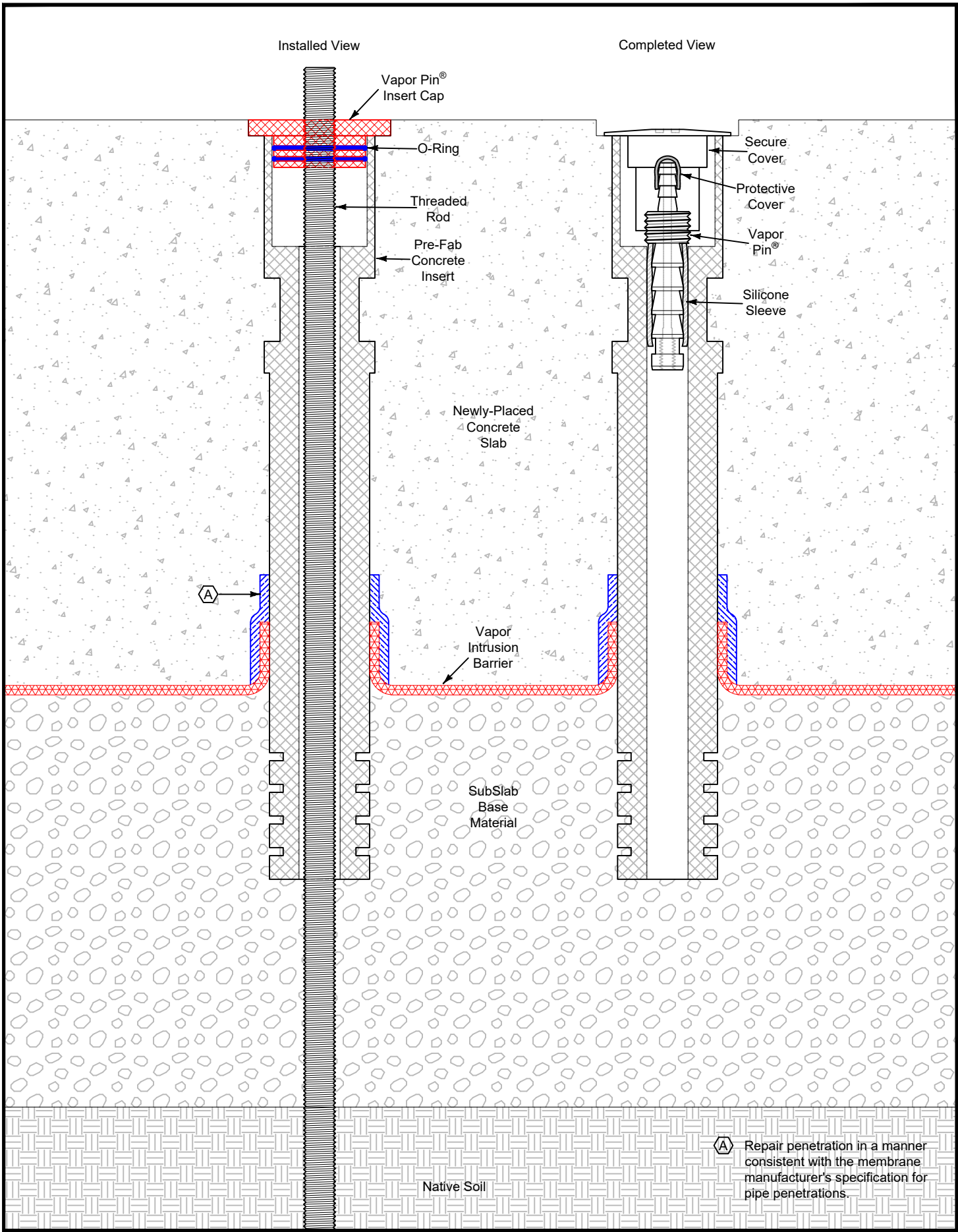
7) After the concrete has set, remove the threaded rod and Cap and install the Vapor Pin® or FLX-VP Vapor Pin® sampling device product in the Insert.

Installation Procedure Existing Construction:

- 1) Check for buried obstacles (pipes, electrical lines, etc.) prior to proceeding.
- 2) Prior to installation in an existing slab, a large diameter hole must be cored through the slab to either expose the barrier, or provide access to the base beneath the slab prior to the application of a vapor mitigation coating. Contact the vendor of the barrier or coating about the desired diameter of the hole, the procedures used to expose the seal, and the methods and materials used to marry the seal or coating to the Insert prior to proceeding.
- 3) Locate the desired position (horizontally and vertically) of the top of the Vapor Pin® sampling device Insert.
- 4) Pierce the barrier (if applicable) with a threaded rod of sufficient length to extend slightly above the elevation of the finished floor and into the subgrade a sufficient depth to provide support for the Vapor Pin® sampling device Insert. Make sure the rod is perpendicular to the proposed floor surface. Avoid bending the rod, as it may inhibit its removal after the concrete has cured. Also avoid damaging the threads on the rod.

5) Dry fit the Vapor Pin® sampling device Insert and trim, or extend the length. Extend the length by sliding the Insert into a length of 1.5 inch diameter schedule 40 PVC pipe. The Insert and pipe can be joined using PVC cement or similar material. Allow sufficient time for the adhesive to cure prior to sampling. Vent holes may be added at the bottom of the Insert or PVC extension to promote air flow.

- 6) Assemble the Vapor Pin® sampling device Insert and Cap by pressing the Cap into the top of the Insert. Position the assembly on the threaded rod so that the top of the Cap lies flush with the elevation of the finished floor. It is important that the position of the Insert be perpendicular to the slab so that the Vapor Pin® sampling device Secure Cover meets uniformly with the floor.
- 7) If the Insert is used in conjunction with a vapor intrusion barrier, marry the barrier to the Insert per the barrier manufacturer's specification prior to pouring the concrete slab.
- 8) After the concrete has set, remove the threaded rod and Cap and install the Vapor Pin® sampling device or FLX-VP Vapor Pin® sampling device product in the Insert.



Vapor Pin® Insert with Cap,
Vapor Pin Enterprises, Inc.

Figure
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