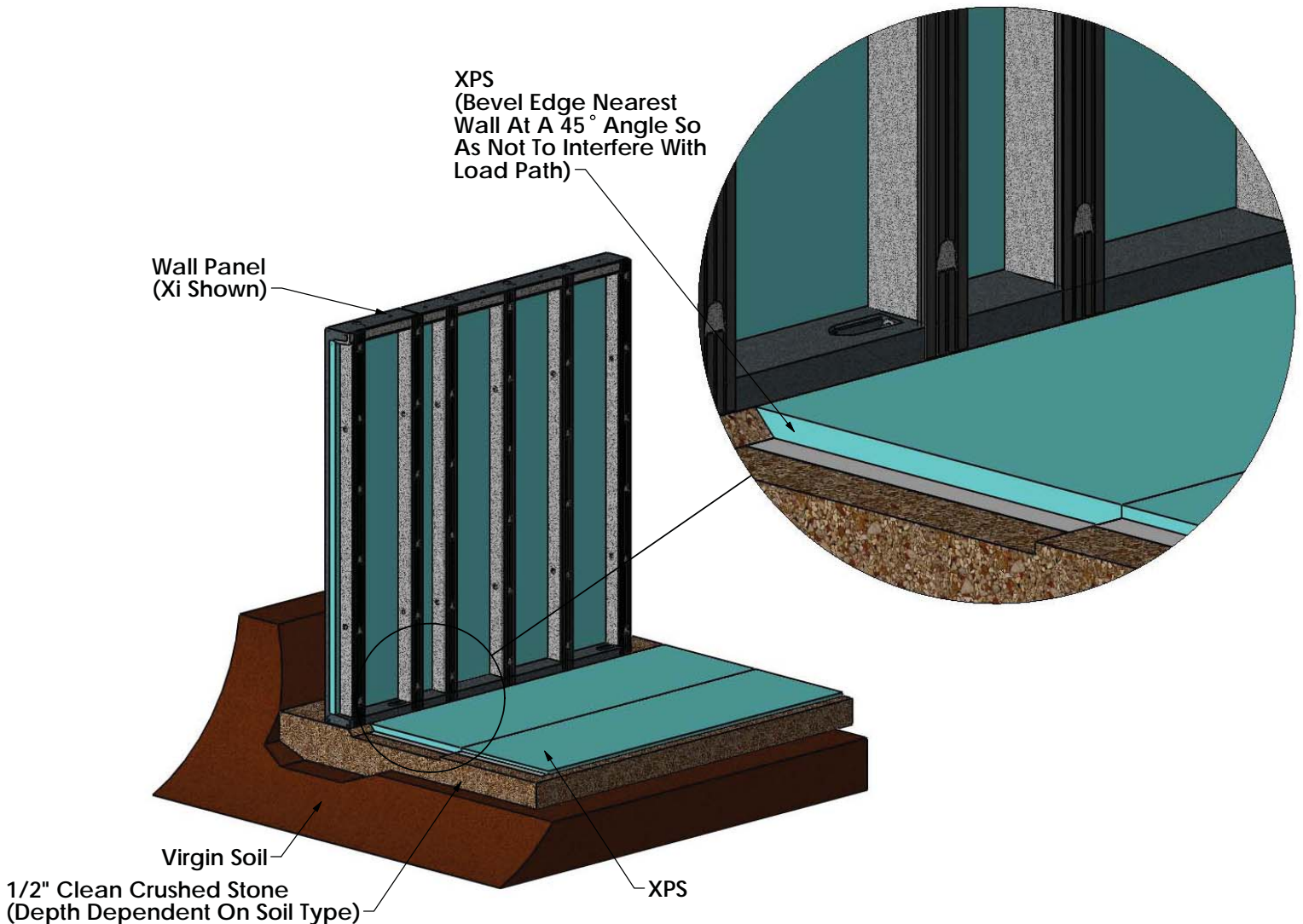# Superior Walls® w/ RADIANT FLOOR HEATING

The following instructions provide a method for utilizing radiant floor heating with Superior Walls® Xi and R-5 wall systems. Other methods may be used to thermally isolate the floor slab from the foundation wall and to insulate the floor slab. However, if other methods are used, those methods need to adequately support the Superior Walls panels laterally and the vertical load transfer path to the soil cannot be compromised.

> **CAUTION:**
> - **A minimum of 2500 psi concrete must be used for the floor slab, per 2009 IRC R402.2.**
> - **Backfill must not exceed 60 pounds per cubic foot (PCF) equivalent fluid pressure (45 PCF equivalent fluid pressure for 10' R-5 walls).**
> - **Refer to all applicable codes and manufacturer specifications for extruded (XPS) foam requirements.**

1. Insulate beneath the entire floor slab area per the specifications of the heating contractor, cutting a 45˚ bevel along the edge of any foam that touches the footer beam of the Superior Walls panels.

XPS
(Bevel Edge Nearest Wall At A 45˚ Angle So As Not To Interfere With Load Path)

Wall Panel
(Xi Shown)

Virgin Soil

1/2" Clean Crushed Stone
(Depth Dependent On Soil Type)

XPS

2. Place one (1) 5,000 psi 4" x 4" x 1/4" plastic shim against the footer beam, as shown below, at each panel joint and as required to maintain a maximum spacing of one (1) shim per every 12'. Adhesive may be used to secure the shim to the footer beam.

> CAUTION: One shim MUST be placed and centered at each panel joint. The MAXIMUM shim spacing is 12' on center from one shim to the next.

3. Cut a 45˚ bevel on a 2" (min.) thick rip of foam, at a height equal to the desired depth of concrete.

> NOTE: Foam rip may need to be protected with a termite shield. Alternative materials may be substituted for the foam rip as required. Additionally, slab edge insulation may not be required in certain jurisdictions designated by the code official as having a very heavy termite infestation (see 2009 IRC section N1102.2.8).

4. Place rip of foam vertically against the footer beam, as shown below, between the plastic shims.

5000 psi Plastic Shim
4" X 4" X 1/4"
(Locate At Every Joint With A Max. Distance Of 12' O.C. Between Any Given 2)

XPS
(Bevel Top Edge At A 45˚ Angle As Shown)

Wall Panel (Xi Shown)

Slab Thickness

Panel Joint

Virgin Soil

1/2" Clean Crushed Stone (Depth Dependent On Soil Type)

XPS

Center Shim Over Panel Joint

5. Pour concrete slab up to the vertical rip of foam.

Wall Panel
(Xi Shown)

Interior And Floor Finishings

XPS

Radiant Floor Heating System