
SECTION 03100 - CONCRETE FORMWORK (SUREROUND PIERVOID)

This section includes corrugated paper void form materials to create a temporary support for the placement of structural concrete over expansive soils. SureRound PierVoid properly creates void space adjacent to the upper portion of drilled piers at the intersection of a slab (including dropped-head applications), under pier caps, pilasters, or at a transition in pier diameter. It is designed to be used in conjunction with SlabVoid forms that allow expansive soils to swell without damage to structural concrete slabs.

Information contained herein is intended to be included as a supplement to Section 03100 - Concrete Formwork.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Corrugated paper void form materials to create a temporary support for the placement of structural concrete over expansive soils that are adjacent to the upper portion of drilled piers at the intersection of a slab, under pier caps, pilasters, or at a transition in pier diameter.

1.2 SUBMITTALS

- A. Submit product data and manufacturer's installation instructions under provisions of Section 01300 for corrugated paper formwork and accessories.

PART 2 PRODUCTS

Edit the following descriptive specifications to identify project requirements:

All SureRound PierVoid products are custom manufactured to meet designer's specifications with regard to strength, shape and size, and are shipped fully assembled. They are available with circular, square or rectangular exterior shapes in virtually any required dimension (multi-piece units available for oversized areas). They have sealed, circular, interior cutouts to completely surround drilled piers and create a proper void in those difficult areas. SureRound PierVoid eliminates the problems associated with cutting and sealing modular pieces in the field. Custom tapered perimeter designs can accommodate dropped-head applications.

SureRound PierVoid products can be designed to offer an approximate response to moisture by specifying the interior components' makeup as follows:

1. Extra Fast – Non-wax impregnated, plain kraft paper and a water-soluble adhesive
2. Fast – Non-wax impregnated, plain kraft paper and a moisture-resistant adhesive
3. Moderate – Plain kraft paper with a wax impregnated medium, but non-wax impregnated liners and a moisture-resistant adhesive
4. Slow – Plain kraft paper with wax impregnated medium / liners and a moisture-resistant adhesive
5. Extra Slow – Wet-strength paper with wax impregnated medium / liners and a moisture-resistant adhesive

The standard strengths of SureRound PierVoid are designed for any average working load ranging from approx. 800 p.s.f. – 2,000 p.s.f. in increments of about 200 lbs. Custom strengths up to 7,000 p.s.f. are available upon request. Available void depths range from 1" to 18" inches and can be stacked to achieve greater depths.

Types Available:

1. Circular – for cylindrical pier caps or at a transition in pier diameter.
2. Square – for square pier caps, pilasters, or under slabs.
3. Rectangular – for pier caps or pilasters with irregular dimensions, or under slabs where a proper fit is better achieved. Hole location is frequently offset.

Related Products:

1. WallVoid□ – used to create void space directly under grade beams or walls.
2. SlabVoid□ – used to create void space directly under structural concrete slabs.
3. ArcVoid□ – used to properly create void space around the upper portion of drilled piers at the intersection with grade beams.
4. SureTops□ – used to properly form and contain the upper portion of concrete piers.
5. Column Wrap□ – used to surround and isolate telepost columns from the slab.
6. Pipe Guard□ – used to surround and isolate typical diameter pipes that are protruding from the slab.
7. Pipe Wrap□ – used to surround and isolate all sizes of pipes protruding from the slab.
8. Angle Expansion Strip□ – used to reduce damage caused by vertical movement around the slab perimeter adjacent to grade beams.
9. SureRetainer□ by Motzblock□ – used to help deter rapid moisture loss around the perimeter of the slab and prevent the migration of backfill material into the voided area, while allowing compaction equipment to operate directly adjacent to slab, walls, or grade beams.
10. SureCover Board□ – used to distribute working load, bridge small gaps, and protect void material from puncture and other damage during concrete placement.

Where brackets are indicated [], a choice needs to be made by design engineer. Remove options not needed for a particular project.

2.1 PREFABRICATED FORMS

A. Pier Void Forms:

1. Function: used to properly create void space adjacent to the upper portion of drilled piers at the intersection of the slab, under pier caps, or at a transition in pier diameter.
2. Composition: corrugated paper with a moisture resistant exterior and having an interior fabrication of a uniform, cellular configuration, composed of [Extra Fast] [Fast] [Moderate] [Slow] [Extra Slow] moisture response components.
3. Depth: [(_____) inches deep] [depth as indicated on drawings].
4. Exterior Profile: [circular with (_____) inches outside diameter] [square with (_____) inches outside dimension] [rectangular with (_____) x (_____) inches outside dimensions] [dimensions as indicated on drawings].
5. Cross-section Profile: [standard – rectangular] [dropped-head – tapered perimeter as indicated on drawings].
6. Interior Profile: pre-manufactured, non-field cut, sealed unit with curved, radial, vertical edge adjacent to pier, each having [(_____) inch interior diameter] [interior diameter as indicated on drawings]. Pier location in relation to exterior dimensions is [on center] [offset as indicated on drawings].
7. Strength: Capable of sustaining a working load [of (_____) p.s.f.] [for slab thickness of (_____) inches based on manufacturer’s recommendations] [for pier cap or pilaster height of (_____) feet based on manufacturer’s recommendations].
8. Accessories:
 - a. Drilled Pier Forms – properly form and contain the upper portion of concrete piers.
 - b. Backfill Retainer (impact-resistant, high-density, polyethylene (HDPE) plastic) – allows compaction equipment to operate directly adjacent to pier cap. It is designed to prevent the migration of backfill material into the voided area. Retainer should extend at least 4” above the top of the void form. Sizes available: [14” x 36”] [20” x 48”] [26” x 48”]. Refer to manufacturer’s recommendations for installation instructions.

- c. Protective Cover Board ([275-C fully wax impregnated paper] [1/8" hardboard] [1/4" hardboard] [(_____) inch plywood]) – distributes working load, bridges small gaps, and protects void material from puncture and other damage during concrete placement.
- 9. Acceptable Products / Manufacturer: SureRound PierVoid□, SureTops□, SureRetainer□ by Motzblock□, and SureCover Board□ as manufactured by SureVoid Products, Inc., Englewood, CO (800) 458-5444 or Fort Worth, TX (888) 803-VOID

PART 3 EXECUTION

3.1 INSTALLATION

- A. Pier Void Forms:
 - 1. Store void forms and accessories in accordance with manufacturer's recommendations.
 - 2. Prepare ground surface on an even plane. There should be no capillary break below the void form unless otherwise directed by the designing engineer or architect.
 - 3. Install pier void forms and accessories in accordance with manufacturer's recommendations.
 - 4. Place a layer of protective cover board over void forms to distribute working load, bridge small gaps, and protect them from puncture and other damage during concrete placement.
 - 5. Protect void forms from moisture, and replace wet or damaged pieces before placing concrete.
 - 6. Immediately protect pier cap perimeter after forms have been stripped with an HDPE retainer. This will keep backfill material from migrating into the voided area. The retainer should be installed per the manufacturer's recommendations.

END OF SECTION