

1-25-2013

## 321443 - Porous Unit Paving

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### Recommended Citation

Hickey, Sandra, "321443 - Porous Unit Paving" (2013). *Division 32 – Exterior Improvements*. 11.  
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## SECTION 32 1443 - POROUS UNIT PAVING

### 1.1 SUMMARY

#### A. Section Includes:

1. Porous paving consisting of concrete pavers set in aggregate setting beds.
2. Edge restraints.
3. Precast concrete curbs.
4. Granite curbs.
5. Refer to Chapter 5, Division 32, Section 321216 Attachment A for UNHSC Design Specifications for Porous Asphalt Pavement and Infiltration Beds.

### 1.2 ACTION SUBMITTALS

#### A. LEED Submittals:

1. Product Certificates for Credit MR 5: For products and materials required to comply with requirements for regional materials, certificates indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating distance to Project, cost for each regional material, and fraction by weight that is considered regional.

### 1.3 CONCRETE UNIT PAVERS

- #### A. Regional Materials: Pavers shall be manufactured within 500 miles (800 km) of Project site from aggregates and cement that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site.
- #### B. Solid Concrete Pavers for Porous Paving: Solid interlocking paving units of shapes that provide openings between units, complying with ASTM C 936, resistant to freezing and thawing when tested according to ASTM C 67, and made from normal-weight aggregates.
1. Thickness: 2-3/8 inches (60 mm).
  2. Color: As selected by University from manufacturer's full range.

### 1.4 ACCESSORIES

- #### A. Plastic Edge Restraints: Triangular PVC extrusions, 1-3/4 inches (45 mm) high by 3-1/2 inches (90 mm) wide OR 3-1/8 inches (80 mm) high by 9-1/2 inches (240 mm) wide, designed to serve as edge restraints for unit pavers; rigid type for straight edges and flexible type for curved edges, with pipe connectors and 3/8-inch- (9.5-mm-) diameter by 12-inch- (300-mm-) long steel spikes.
1. Manufacturers:

- a. BrickStop Corporation.
  - b. Cambridge Pavers, Inc.
  - c. Dimex Corporation.
  - d. Oly-Ola Edgings, Inc.
  - e. Pave Tech Inc.
- B. Steel Edge Restraints: Painted steel edging, 3/16 inch (4.8 mm) thick by 4 inches (100 mm) high OR 1/4 inch (6.4 mm) thick by 5 inches (125 mm) high, with loops pressed from or welded to face to receive stakes at 36 inches (900 mm) o.c., and with steel stakes 15 inches (380 mm) long for each loop.
1. Manufacturers:
    - a. Border Concepts, Inc.
    - b. Collier Metal Specialties, Inc.
    - c. Russell, J. D., Company (The).
    - d. Sure-loc Edging Corporation.
  2. Color: As selected by University from manufacturer's full range.
- C. Aluminum Edge Restraints: Straight, 1/8 inch (3.2 mm) thick by 4 inches (100 mm) high OR Straight, 3/16 inch (4.8 mm) thick by 4 inches (100 mm) high OR L-shaped, 1/8 inch (3.2 mm) thick by 1-3/8 inches (35 mm) high OR L-shaped, 3/16 inch (4.8 mm) thick by 2-1/4 inches (57 mm) high extruded-aluminum edging, with loops pressed from face to receive stakes at 12 inches (300 mm) o.c., and with aluminum stakes 12 inches (300 mm) long for each loop.
1. Manufacturers:
    - a. BrickStop Corporation.
    - b. Curv-Rite, Inc.
    - c. Permaloc Corporation.
    - d. Sure-loc Edging Corporation.

## 1.5 AGGREGATE SETTING-BED MATERIALS

- A. Regional Materials: Aggregate and soil shall be extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site.
- B. Graded Aggregate for Subbase: Sound crushed stone or gravel.
- C. Graded Aggregate for Base Course: Sound crushed stone or gravel.
- D. Sand for Leveling Course: Sound, sharp, washed, natural sand or crushed stone complying with gradation requirements in ASTM C 33 for fine aggregate.
- E. Soil Mix for Leveling Course: Sound, sharp, washed, natural sand or crushed stone complying with gradation requirements in ASTM C 33 for fine aggregate blended with planting soil mix.

- F. Graded Aggregate for Leveling Course: Sound crushed stone or gravel.
  
- G. Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured according to test methods referenced:
  - 1. Survivability: Class 2; AASHTO M 288.
  - 2. Apparent Opening Size: No. 40 (0.425-mm) sieve, maximum; ASTM D 4751.
  - 3. Permittivity: 0.5 per second, minimum; ASTM D 4491.

#### 1.6 CLEANING

- A. All porous pavements requires cleaning (vacuuming) twice a year.

END OF SECTION 32 1443