

**DEPARTMENT OF TRANSPORTATION**

**STATE OF GEORGIA**

**SPECIAL PROVISION**

**ATLANTA BELTLINE**

**NORTHEAST TRAIL SEGMENT 2, PHASE 2**

**Section 900-Granite Pavers**

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*Add the following:*

**900.1 General Description**

This Work includes construction of granite pavers as shown on plans, and shall include, but is not limited to, the following components:

- A. Granite Pavers
- B. Bedding Course
- C. Joints
- D. Sub-base

**900.1.01 Definitions**

General Provisions 101 through 150.

**900.1.02 Related References**

**A. Standard Specifications**

- 1. Section 430- Portland cement concrete pavement
- 2. Section 833- Joint fillers and sealers
- 3. Section 853- Reinforcement and tensioning steel.

**B. Referenced Documents**

- 1. ACI 530.1
- 2. ANSI A108.10
- 3. ANSI A118.7
- 4. ASCE 6
- 5. ASTM C 67
- 6. ASTM C 144
- 7. ASTM C 150
- 8. ASTM C 615
- 9. ASTM D 1056
- 10. TMS 602

**900.1.03 Submittals**

## Section 900 – Granite Pavers

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### A. Product Data

1. For materials, other than water and aggregates.

### B. Samples for unit pavers and joint materials.

#### 900.1.04 Project Conditions

##### A. Samples

1. Weather Limitations for Mortar and Grout:
  - a. Cold-Weather Requirements: Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
  - b. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602. Do not apply mortar to substrates with temperatures of 100 deg F and higher.
  - c.

#### 900.1.05 Quality Assurance

##### A. Shop Drawings

1. Where granite pavers are cut to fit a condition such as a location that follows the radius of the trail, indicate exact face size of pavers, and degree of angle for non-parallel sides.

##### B. Mockups

1. Build mockups of granite paving condition sufficient to demonstrate typical joints; surface color, pattern, and texture; and standard of workmanship.

##### C. Preinstallation Conference

1. Conduct conference at Project site.

## 900.2 Materials

### A. Granite Pavers and Stair Treads: Square pavers made from granite complying with ASTM C 615.

1. Product: Subject to compliance with requirements, provide the following:
  - a. Color and Grain: Elberton Granite with medium grain, or approved equal.
  - b. Finish: Thermal on all sides
  - c. Thickness: 4 inches unless otherwise indicated.
  - d. Face Size: 2' x 2' or as indicated on Drawings
  - e. Radial Cuts: In locations where pavers have one or more sides that follow the radius of the trail, cut pavers to the radius or angle and size indicated on Drawings.

### B. Accessories

1. Compressed Foam Filler: Preformed strips complying with ASTM D 1056. Grade 2A1.

### C. Mortar Setting-Bed Materials

1. Portland Cement: ASTM C 150, Type I or Type II.
2. Sand: ASTM C 144.
3. Latex Additive: Manufacturer's standard water emulsion, serving as replacement for part or all of gaging water, of type specifically recommended by latex-additive manufacturer for use with field-mixed Portland cement and aggregate mortar bed, and not containing a retarder.
4. Water: Potable.

### D. Grout Materials

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1. Polymer-Modified Tile Grout
  - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following or an approved equal:
    1. Bostik, Inc.
    2. Custom Building Products.
    3. Laticrete International, Inc.
    4. MAPEI Corporation.
    5. Prospec.
    6. Southern Grouts & Mortars, Inc.
    7. Summitville Tiles, Inc.
    8. TEC, Specialty Construction Brands, Inc.
2. Grout Colors: As selected by Owners Representative from Manufacturer's full range.
3. Water: Potable.

### E. Mortar and Grout Mixes

1. General: Comply with referenced standards and with manufacturers' written instructions. Discard mortars and grout if they have reached their initial set before being used.
2. Mortar-Bed Bond Coat: Mix neat cement and latex additive to a creamy consistency.
3. Latex-Modified, Portland Cement Setting-Bed Mortar: Comply with written instructions of latex-additive manufacturer and as necessary to produce stiff mixture with a moist surface when bed is ready to receive pavers.
4. Latex-Modified, Portland Cement Bond Coat: Proportion and mix Portland cement, aggregate, and liquid latex for bond coat to comply with written instructions of liquid-latex manufacturer.
5. Packaged Grout Mix: Proportion and mix grout ingredients according to grout manufacturer's written instructions.

### A. Bedding Course

1. Type: Mortar Setting Bed
  - a. Depth: 1" Thickness below pavers

### C. Joints

1. 3/8" Mortar Joints

### D. Sub-base

1. Per Construction Plans

*Add the following:*

## 900.3 Construction Requirements

### 900.3.01 Construction

#### A. Installation, General

1. Mix pavers from several pallets or cubes, as they are placed, to produce uniform blend of colors and textures.
2. Cut unit pavers with motor-driven stone saw equipment to provide pattern indicated and to fit adjoining work neatly. Use full units without cutting where possible.
3. Joint pattern: As indicated on Drawings.
4. Tolerances: Do not exceed 1/16 inch unit-to-unit offset from flush (lippage) nor 1/8 inch in 24 inches and 1/4 inch in 10 feet from level, or indicated slope, for finished surface of paving.

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5. Expansion and Control Joints: Provide for sealant-filled joints at locations and of widths indicated. Provide compressible foam filler as backing for sealant-filled joints unless otherwise indicated; where unfilled joints are indicated, provide temporary filler until paver installation is complete. Install joint filler before setting pavers. Sealant materials and installation are specified in Section 833 “Joint Fillers and Sealers”.

### B. Mortar Setting-Bed Applications

2. Saturate concrete subbase with clean water several hours before placing setting bed. Remove surface water about one hour before placing setting bed.
3. Apply mortar-bed bond coat over surface of concrete subbase about 15 minutes before placing mortar bed. Limit area of bond coat to avoid its drying out before placing setting bed. Do not exceed 1/16-inch thickness for bond coat.
4. Apply mortar-bed over bond coat; spread and screed mortar bed to uniform thickness at subgrade elevations required for accurate setting of pavers to finished grades indicated.
5. Mix and place only that amount of mortar bed that can be covered with pavers before initial set. Before placing pavers, cut back, beveled edge, and remove and discard setting-bed material that has reached initial set.
6. Wet stone pavers before laying if the initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested according to ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.
7. Place pavers before initial set of cement occurs. Immediately before placing pavers on mortar bed, apply uniform 1/16-inch-thick bond coat to mortar bed or to back of each paver with a flat trowel.
8. Tamp or beat pavers with a wooden block or rubber mallet to obtain full contact with setting bed and to bring finished surfaces within indicated tolerances. Set each paver in a single operation before initial set of mortar; do not return to areas already set or disturb pavers for purposes of realigning finished surfaces or adjusting joints.
9. Spaced Joint Widths: Provide ¼-inch nominal joint width with variations not exceeding plus or minus 1/16 inch.
10. Grouted Joints: Grout paver joints complying with ANSI A108.10.
11. Grout joints as soon as possible after initial set of setting bed.
  - a. Force grout into joints, taking care not to smear grout on adjoining surfaces.
  - b. Tool exposed joints slightly concave when thumbprint hard.
12. Cure grout by maintaining in a damp condition for seven days unless otherwise recommended by grout or liquid-latex manufacturer.

### 900.3.06 Cleaning

Remove excess grout from exposed paver surfaces; wash and scrub clean.

### 900.3.07 Contractor

Contractor Warranty and Maintenance - General Provisions 101 - 150.

### 900.4 Measurement

Granite pavers complete, in place and accepted, is measured for payment by the square foot. The unit cost includes all components of the concrete subbase, mortar setting beds, joints, and all materials required for complete installation.

### 900.5 Payment

Granite pavers completed and accepted will be paid for at the full contract unit price per square foot. The payment is full compensation for all excavation, construction and installation of all pavers, including preparation of base materials and polymeric joint sand, disposal of excavated materials, and the cost of furnishing all tools, safety devices, labor, equipment and all other necessary items to complete the work.

Payment will be made under:

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Item No. 900	Granite Pavers	SF
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End of Section 900