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SECTION 02780 - UNIT PAVERS

This Section uses the term "Architect." Change this term to match that used to identify the design professional as defined in the General and Supplementary Conditions.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:

Adjust list below to suit Project.

1. Brick pavers set in [**aggregate**] [**bituminous**] [**and**] [**mortar**] setting beds.
2. Concrete pavers set in [**aggregate**] [**bituminous**] [**and**] [**mortar**] setting beds.
3. Asphalt-block pavers set in bituminous setting beds.
4. Rough-stone pavers set in [**aggregate**] [**and**] [**mortar**] setting beds.
5. [**Plastic**] [**Steel**] [**Aluminum**] edge restraints.

1.2 SUBMITTALS

- A. Product Data: For materials other than water and aggregates.
- B. Samples for [**unit pavers**] [**joint materials**] [**and**] [**edge restraints**].

1.3 QUALITY ASSURANCE

- A. Mockups: Build mockups for each form and pattern of unit paver.

Retain subparagraph below if mockups are erected as part of building; otherwise, Division 1 requires that mockups be removed when directed.

1. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.4 PROJECT CONDITIONS

- A. Cold-Weather Protection: Do not use frozen materials or build on frozen subgrade or setting beds.
- B. Weather Limitations for Bituminous Setting Bed: Install bituminous setting bed only when ambient temperature is above 40 deg F (4 deg C) and when base is dry.
- C. Cold-Weather Requirements for Mortar and Grout: Heat materials to provide mortar and grout temperatures between 40 and 120 deg F (4 and 49 deg C). Protect unit paver work against freezing for 24 hours after installation.

PART 2 - PRODUCTS

2.1 BRICK PAVERS

See Editing Instruction No. 1 in the Evaluations for cautions about naming manufacturers and products.

If retaining paragraph below, select one weather class, traffic type, and application. Class SX is for exposure to freezing weather, and Class MX is for exterior uses that do not expose brick to freezing. Type I is for locations such as sidewalks and driveways in public spaces; Type II is for locations such as heavily traveled residential walkways and driveways; Type III is for locations such as floors and patios in single-family homes. Application PS is normal tolerance for installation with grouted joints; Application PX is close tolerance for ungrouted joints; Application PA is non-uniform sized for decorative effect. If Application PA is retained, specify tolerances.

- A. Brick Pavers: Light-traffic paving brick; ASTM C 902, Class [SX] [MX], Type [I] [II] [III], Application [PS] [PX] [PA]. Provide brick without frogs or cores in surfaces exposed to view in the completed Work.

If naming manufacturers, retain one of three subparagraphs and lists below. Refer to Division 1 Section "Product Requirements." Refer to BIA's Web site for names of brick paver manufacturers.

1. Basis-of-Design Product: The design for brick pavers is based on **<Insert manufacturer's name and product>**. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:
 - a. **<Insert, in separate subparagraphs, manufacturer's name.>**
2. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
3. Products: Subject to compliance with requirements, provide one of the following:

Retain list below with either of last two subparagraphs above.

- a. **<Insert, in separate subparagraphs, manufacturer's name; product name or designation.>**

Select size requirements from options in two subparagraphs below.

4. Thickness: [1-1/4 inches (32 mm)] [1-1/2 inches (38 mm)] [1-5/8 inches (41 mm)] [2-1/4 inches (57 mm)] [2-5/8 inches (67 mm)] [As indicated] <Insert dimension>.
5. Face Size: [3-5/8 by 7-5/8 inches (92 by 194 mm)] [3-5/8 by 11-5/8 inches (92 by 295 mm)] [7-5/8 by 7-5/8 inches (194 by 194 mm)] [As indicated] <Insert dimensions>.

Subparagraph below may be deleted if manufacturer's product designation is used and specifies color.

6. Color: [As indicated by manufacturer's designations] [Match Architect's sample] [As selected by Architect from manufacturer's full range] <Insert color>.

Consider retaining paragraph below if latex-modified mortar or grout is used.

- B. Temporary Protective Coating: Precoat exposed surfaces of brick pavers with a temporary protective coating that is compatible with brick, mortar, and grout products.

2.2 CONCRETE PAVERS

Revise paragraph below if units made from lightweight aggregate are required.

- A. Concrete Pavers: Solid interlocking paving units complying with ASTM C 936[**and resistant to freezing and thawing when tested according to ASTM C 67**], made from normal-weight aggregates.

If naming manufacturers, retain one of three subparagraphs and lists below. Refer to Division 1 Section "Product Requirements." Refer to ICPI's and NCMA's Web sites for names of concrete paver manufacturers.

1. Basis-of-Design Product: The design for concrete pavers is based on <Insert **manufacturer's name and product**>. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:
 - a. <Insert, in separate subparagraphs, manufacturer's name.>
2. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
3. Products: Subject to compliance with requirements, provide one of the following:

Retain list below with either of last two subparagraphs above.

- a. <Insert, in separate subparagraphs, manufacturer's name; product name or designation.>

Select one thickness from options in subparagraph below. Standard-duty interlocking concrete pavers are usually 2-3/8 inches (60 mm) thick; heavy-duty units are usually 3-1/8 inches (80 mm) thick.

4. Thickness: [2-3/8 inches (60 mm)] [3-1/8 inches (80 mm)] <Insert dimension>.

Retain and edit one of first three subparagraphs below to specify face size and shape.

5. Face Size and Shape: [3-7/8 inches (98 mm) square] [4-7/16 inches (113 mm) square].
 6. Face Size and Shape: [3-7/8-by-7-7/8 inch (98-by-200 mm)] [4-7/16-by-8-7/8 inch (113-by 225-mm)] rectangle.
 7. Face Size and Shape: [5-1/2-inch (140-mm) octagon with attached 3-1/2-inch (89-mm) square] [4-1/2-by-9 inch (114-by-229 mm) rectangle with saw-tooth edges] [As indicated] <Insert dimensions and shape>.
 8. Color: [As indicated by manufacturer's designations] [Match Architect's sample] [As selected by Architect from manufacturer's full range] <Insert color>.

2.3 ASPHALT-BLOCK PAVERS

- A. Asphalt-Block Pavers: Solid units made from asphalt cement complying with ASTM D 312, Type III; inorganic stone dust or cement filler; and coarse aggregate, consisting of clean, hard, unweathered stone crushed into angular particles varying in size up to 3/8 inch (9.5 mm).
1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

Retain subparagraph above for nonproprietary or first subparagraph below for semiproprietary specification. Refer to Division 1 Section "Product Requirements."

2. Manufacturer: Subject to compliance with requirements, provide products by one of the following:
- a. Hanover Architectural Products, Inc.
 b. <Insert manufacturer's name.>
3. Thickness: [1-1/4 inches (32 mm)] [2 inches (51 mm)] <Insert dimension>.
 4. Face Size: [4 by 6 inches (102 by 152 mm)] [6 by 6 inches (152 by 152 mm)] [8 by 8 inches (203 by 203 mm)] [8-inch- (203-mm-) wide hexagon] <Insert dimensions>.
 5. Finish: [Natural, smooth] [Ground] [Ground and sandblasted].
 6. Color: [As indicated by manufacturer's designations] [Match Architect's sample] [As selected by Architect from manufacturer's full range] <Insert color>.

2.4 ROUGH-STONE PAVERS

- A. Rough-Stone Pavers: Rectangular[**tumbled**] paving stones, with split[**or thermal-finished**] faces and edges, made from granite complying with ASTM C 615.

If naming varieties or manufacturers, retain subparagraph and list below. Refer to Division 1 Section "Product Requirements."

1. Varieties and Sources: Subject to compliance with requirements, provide[**one of**] the following:
 - a. **<Insert name of variety and producer, distributor, or importer.>**

Subparagraph below is an example only. Revise color or grain or specify a selected variety.

2. Granite Color and Grain: [**Light gray**] [**Dark gray**] [**Buff**] [**White**] [**Black**] [**Pink**] **<Insert color>** with [**medium**] [**fine**] grain.

Select one of first four options in subparagraph below for pavers made by splitting thermal-finished slabs into blocks. Usually select fifth option for pavers with rough-split faces.

3. Thickness: [**1-1/4 inches (32 mm)**] [**2 inches (51 mm)**] [**3 inches (76 mm)**] [**4 inches (102 mm)**] [**4 inches (102 mm), plus or minus 1/2 inch (13 mm)**] **<Insert dimension>**.

Select one of three options in subparagraph below or revise to suit Project.

4. Face Size: [**4 by 4 inches (100 by 100 mm), plus or minus 1/2 inch (13 mm)**] [**3 to 5 inches (75 to 125 mm) by 8 to 12 inches (200 to 300 mm)**] [**As indicated**] **<Insert dimensions>**.

2.5 ACCESSORIES

Delete this Article if no edge restraints or joint filler or if specified in other Sections. Other sizes and configurations are available besides those indicated below. See manufacturers' catalogs.

- A. Plastic Edge Restraints: Triangular PVC extrusions [**1-3/4 inches (45 mm) high by 3-1/2 inches (89 mm) wide**] [**3-1/8 inches (79 mm) high by 9-1/2 inches (241 mm) wide**]; 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. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

Retain subparagraph above for nonproprietary or subparagraph below for semiproprietary specification. Refer to Division 1 Section "Product Requirements."

2. Manufacturer: Subject to compliance with requirements, provide products by one of the following:
 - a. BRICKSTOP Corporation.
 - b. Dimex Corporation.
 - c. PAVE TECH Inc.
 - d. Ryerson, J. T. & Son, Inc.
 - e. **<Insert manufacturer's name.>**

- B. Steel Edge Restraints: Painted steel edging [**3/16 inch (4.8 mm) thick by 4 inches (100 mm) high**] [**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 steel stakes 15 inches (380 mm) long for each loop.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

Retain subparagraph above for nonproprietary or first subparagraph below for semiproprietary specification. Refer to Division 1 Section "Product Requirements."

2. Manufacturer: Subject to compliance with requirements, provide products by one of the following:
- a. Border Concepts, Inc.
 - b. Collier Metal Specialties, Inc.
 - c. J. D. Russell Company (The).
 - d. Ryerson, J. T. & Son, Inc.
 - e. Sure-Loc Edging Corporation.
 - f. **<Insert manufacturer's name.>**
3. Color: [**As indicated by manufacturer's designations**] [**Match Architect's sample**] [**As selected by Architect from manufacturer's full range**] **<Insert color>**.

- C. Aluminum Edge Restraints: [**Straight, 1/8-inch- (3.2-mm-) thick by 4-inch- (100-mm-) high**] [**Straight, 3/16-inch- (4.8-mm-) thick by 4-inch- (100-mm-) high**] [**L-shaped, 1/8-inch- (3.2-mm-) thick by 1-3/8-inch- (35-mm-) high**] [**L-shaped, 3/16-inch- (4.8-mm-) thick by 2-1/4-inch- (57-mm-) high**] extruded-aluminum edging with loops pressed from face to receive stakes at 12 inches (300 mm) o.c., and aluminum stakes 12 inches (300 mm) long for each loop.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

Retain subparagraph above for nonproprietary or subparagraph below for semiproprietary specification. Refer to Division 1 Section "Product Requirements."

2. Manufacturer: Subject to compliance with requirements, provide products by one of the following:
- a. BRICKSTOP Corporation.
 - b. Curv-Rite, Inc.
 - c. Permaloc Corporation.
 - d. Sure-Loc Edging Corporation.
 - e. **<Insert manufacturer's name.>**

- D. Cork Joint Filler: Preformed strips complying with ASTM D 1752, Type II.

Filler in paragraph below is used with sealant; filler above may be used where sealant is not required.

- E. Compressible Foam Filler: Preformed strips complying with ASTM D 1056, Grade 2A1.

2.6 AGGREGATE SETTING-BED MATERIALS

First option in first paragraph below is for light-traffic uses; second is for heavy-duty applications.

- A. Graded Aggregate for Base: Sound, crushed stone or gravel complying with [**ASTM D 448 for Size No. 8**] [**ASTM D 2940, base material**] [**requirements in Division 2 Section "Earthwork" for base course**].
- B. Sand for Leveling Course: Sound, sharp, washed, natural sand or crushed stone complying with gradation requirements in ASTM C 33 for fine aggregate.
- C. Sand for Joints: Fine, sharp, washed, natural sand or crushed stone with 100 percent passing No. 16 (1.18-mm) sieve and no more than 10 percent passing No. 200 (0.075-mm) sieve.

Retain paragraph and subparagraphs below if nonwoven geotextile is used between aggregate base and leveling course.

- D. Drainage Geotextile: Nonwoven needle-punched geotextile made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following:
 - 1. Apparent Opening Size: No. 40 (0.425-mm) sieve, maximum; ASTM D 4751.
 - 2. Permittivity: 0.5 per second, minimum; ASTM D 4491.

2.7 BITUMINOUS SETTING-BED MATERIALS

First paragraph below is used to prime bases (concrete slab or binder course) under paving for vehicular traffic. Delete if not required.

- A. Primer for Base: ASTM D 2028, cutback asphalt, grade as recommended by unit paver manufacturer.
- B. Fine Aggregate for Setting Bed: ASTM D 1073, No. 2 or No. 3.
- C. Asphalt Cement: ASTM D 3381, Viscosity Grade AC-10 or Grade AC-20.
- D. Neoprene-Modified Asphalt Adhesive: Paving manufacturer's standard adhesive consisting of oxidized asphalt combined with 2 percent neoprene and 10 percent long-fibered mineral fibers containing no asbestos.
- E. Sand for Joints: Fine, sharp, washed, natural sand or crushed stone with 100 percent passing No. 16 (1.18-mm) sieve and no more than 10 percent passing No. 200 (0.075-mm) sieve.

2.8 MORTAR SETTING-BED MATERIALS

Retain this Article if cement bed or grout applications are required.

- A. Portland Cement: ASTM C 150, Type I or II.

Delete first paragraph below if latex-modified portland cement mortar mix is specified for setting bed.

- B. Hydrated Lime: ASTM C 207, Type S.
C. Sand: ASTM C 144.

Retain first paragraph below for slurry bond coat and latex-modified portland cement mortar bed.

- D. Latex Additive: Water emulsion, serving as replacement for part or all of gaging water, of type specifically recommended by manufacturer for use with field-mixed portland cement mortar bed, and not containing a retarder.
E. Water: Potable.

2.9 GROUT MATERIALS

- A. Polymer-Modified Grout: ANSI A118.7, sanded grout; in color indicated.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering polymer-modified grouts that may be incorporated into the Work include, but are not limited to, the following:

Retain subparagraph above for nonproprietary or subparagraph below for semiproprietary specification. Refer to Division 1 Section "Product Requirements."

2. Manufacturer: Subject to compliance with requirements, provide polymer-modified grout by one of the following:
- a. Boiardi Products Corporation.
 - b. Bonsal, W. R. Company.
 - c. Bostik Findley Inc.
 - d. C-Cure.
 - e. Custom Building Products.
 - f. DAP Inc.
 - g. Jamo Inc.
 - h. Laticrete International, Inc.
 - i. MAPEI Corp.
 - j. SGM.
 - k. Summitville Tiles, Inc.
 - l. TEC Incorporated; H. B. Fuller Company.
 - m. <Insert manufacturer's name.>

Retain one of three subparagraphs below with paragraph above.

3. Product Type: Dry mix, containing ethylene vinyl acetate, in dry, redispersible form, prepackaged with other dry ingredients.
4. Product Type: Two-component mix, containing liquid-latex and prepackaged dry-grout mix.
5. Product Type: Either dry mix, containing ethylene vinyl acetate, in dry, redispersible form, prepackaged with other dry ingredients, or two-component mix, containing liquid-latex and prepackaged dry-grout mix.

- B. Grout Colors: **[As indicated by manufacturer's designations]** **[Match Architect's samples]** **[As selected by Architect from manufacturer's full range]** <Insert color>.

Retain paragraph below for prepackaged grout formulations that only require adding water.

- C. Water: Potable.

2.10 BITUMINOUS SETTING-BED MIX

- A. Mix bituminous setting-bed materials at an asphalt plant in approximate proportion, by weight, of 7 percent asphalt cement to 93 percent fine aggregate, unless otherwise indicated. Heat mixture to 300 deg F (149 deg C).

2.11 MORTAR AND GROUT MIXES

- A. General: Comply with referenced standards and with manufacturers' written instructions. Discard mortars and grout if they have reached their initial set before being used.
- B. Mortar-Bed Bond Coat: Mix neat cement or cement and sand with **[latex additive]** **[water]** to a creamy consistency.
- C. Portland Cement-Lime Setting-Bed Mortar: Type M complying with ASTM C 270, Proportion Specification.

Delete paragraph above or below. Use of latex-modified portland cement mortar can make curing times undesirably long. See Evaluations.

- D. Latex-Modified, Portland Cement Setting-Bed Mortar: Comply with written instructions of latex-additive manufacturer to produce stiff mixture with a moist surface when bed is ready to receive pavers.

Retain first paragraph below with either latex-modified, portland cement-lime mortar or unmodified portland cement mortar.

- E. Latex-Modified, Portland Cement Slurry Bond Coat: Mix portland cement, sand, and latex additive to comply with written instructions of latex-additive manufacturer.
- F. Polymer-Modified Grout Mix: Proportion and mix grout ingredients according to grout manufacturer's written instructions.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Mix pavers from several pallets or cubes, as they are placed, to produce uniform blend of colors and textures.
- B. Cut unit pavers with motor-driven masonry saw equipment to provide pattern indicated and to fit adjoining work neatly. Use full units without cutting where possible.
 - 1. For concrete pavers, a block splitter may be used.

Select one of five options in first paragraph below or revise to suit Project.

- C. Joint Pattern: [**Running bond**] [**Herringbone**] [**Basket weave**] [**As indicated**] [**Match and continue existing unit paver joint pattern**].
- D. Tolerances: Do not exceed 1/16-inch (1.6-mm) unit-to-unit offset from flush (lippage) nor 1/8 inch in 24 inches (3 mm in 600 mm) and 1/4 inch in 10 feet (6 mm in 3 m) from level, or indicated slope, for finished surface of paving.
- E. Expansion and Control Joints: Provide foam filler as backing for sealant-filled joints. Install joint filler before setting pavers.

Delete paragraph above or first paragraph below, or both if no joints are required. See Evaluations.

- F. Expansion and Control Joints: Provide joint filler at locations and of widths indicated. Install joint filler before setting pavers. Make top of joint filler flush with top of pavers.
- G. Provide edge restraints as indicated. Install edge restraints before placing unit pavers.

3.2 AGGREGATE SETTING-BED APPLICATIONS

Retain first paragraph below if compaction is not covered in Division 2 Section "Earthwork."

- A. Compact soil subgrade uniformly to at least [95] <Insert number> percent of [ASTM D 698] [ASTM D 1557] laboratory density.
- B. Place aggregate base, compact by tamping with plate vibrator, and screed to depth indicated.

Retain first paragraph below for open-graded base course material to prevent leveling course from washing into base course.

- C. Place drainage geotextile over compacted base course, overlapping ends and edges at least 12 inches (300 mm).

- D. Place leveling course and screed to a thickness of 1 to 1-1/2 inches (25 to 38 mm), taking care that moisture content remains constant and density is loose and constant until pavers are set and compacted.
- E. Treat leveling course with herbicide to inhibit growth of grass and weeds.
- F. Set pavers with a minimum joint width of 1/16 inch (1.5 mm) and a maximum of 1/8 inch (3 mm), being careful not to disturb leveling base. If pavers have spacer bars, place pavers hand tight against spacer bars.
- G. Vibrate pavers into leveling course with a low-amplitude plate vibrator capable of a 3500- to 5000-lbf (16- to 22-kN) compaction force at 80 to 90 Hz.
- H. Spread dry sand and fill joints immediately after vibrating pavers into leveling course. Vibrate pavers and add sand until joints are completely filled, then remove excess sand. Leave a slight surplus of sand on the surface for joint filling.

3.3 BITUMINOUS SETTING-BED APPLICATIONS

First paragraph below may be deleted if paving is not subject to vehicular traffic.

- A. Apply primer to concrete slab or binder course immediately before placing setting bed.
- B. Prepare for setting-bed placement by locating 3/4-inch- (19-mm-) deep control bars approximately 11 feet (3.3 m) apart, to serve as guides for striking board. Adjust bars for accurate setting of paving units to finished grades indicated.
- C. Place bituminous setting bed between control bars. Spread mix at a minimum temperature of 250 deg F (121 deg C). Strike setting bed smooth, firm, even, and not less than 3/4 inch (19 mm) thick. Add fresh bituminous material to low, porous spots after each pass of striking board. Carefully fill depressions that remain after removing depth-control bars.
 - 1. Roll setting bed with power roller to a nominal depth of 3/4 inch (19 mm). Adjust thickness as necessary to allow accurate setting of unit pavers to finished grades indicated. Complete rolling before mix temperature cools to 185 deg F (85 deg C).

Retain subparagraph above and first paragraph below for asphalt-block paving subject to vehicular traffic and for brick paving regardless of traffic.

- D. Apply neoprene-modified asphalt adhesive to cold setting bed by squeegeeing or troweling to a uniform thickness of 1/16 inch (1.6 mm). Proceed with setting of paving units only after adhesive is tacky and surface is dry to touch.
- E. Place pavers carefully by hand, maintaining accurate alignment and uniform top surface. Protect newly laid pavers with plywood panels on which workers can stand. If additional leveling of paving is required, and before treating joints, roll paving with power roller.
- F. Joint Treatment: Place unit pavers with hand-tight joints. Fill joints by sweeping sand over paved surface until joints are filled. Remove excess sand after joints are filled.

3.4 MORTAR SETTING-BED APPLICATIONS

- A. Saturate concrete subbase with clean water several hours before placing setting bed. Remove surface water about one hour before placing setting bed.
- B. Apply mortar-bed bond coat over surface of concrete subbase about 15 minutes before placing setting bed. Limit area of bond coat to avoid its drying out before placing setting bed. Do not exceed 1/16-inch (1.6-mm) thickness for bond coat.
- C. Apply mortar bed over bond coat immediately after applying bond coat. Spread and screed to subgrade elevations required for accurate setting of pavers to finished grades indicated.
- D. Mix and place only that amount of mortar that can be covered with pavers before initial set. Cut back and discard setting-bed material that has reached initial set before placing pavers.

Delete first paragraph below if brick pavers are not used.

- E. Wet brick pavers before laying if the initial rate of absorption exceeds 30 g/30 sq. in. (30 g/194 sq. cm) per minute when tested per ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.
- F. Place pavers before initial set of cement occurs. Immediately before placing pavers, apply uniform 1/16-inch- (1.5-mm-) thick, slurry bond coat to bed or to back of each paver.
- G. 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.

Joint widths in first paragraph below are examples only. Select tolerance to suit manufacturing tolerances of pavers; rough-stone pavers and Application PA brick pavers require large tolerances.

- H. Spaced Joint Widths: Provide [**3/8-inch (10-mm)**] [**1/2-inch (13-mm)**] [**3/4-inch (19-mm)**] nominal joint width with variations not exceeding plus or minus [**1/16 inch (1.5 mm)**] [**1/8 inch (3 mm)**] [**3/16 inch (4.5 mm)**].
- I. Grout joints as soon as possible after initial set of setting bed.
 - 1. Force grout into joints, taking care not to smear grout on adjoining surfaces.
 - 2. Tool exposed joints slightly concave when thumbprint hard.
- J. Cure grout by maintaining in a damp condition for seven days, unless otherwise recommended by grout or liquid-latex manufacturer.

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

Delete subparagraph below if not applicable for brick pavers.

1. Remove temporary protective coating from brick pavers as recommended by protective coating manufacturer and as acceptable to unit paver and grout manufacturer. Trap and remove coating to prevent it from clogging drains.

END OF SECTION 02780