

SPECIAL SPECIFICATION

5086

Removing and Relaying Landscape Paving Units

1. **Description.** Remove and relay interlocking concrete paving units in accordance with these specifications and in conformity with dimensions, lines, grades and details shown on the plans.
2. **General.** Prior to beginning operations, a preconstruction conference between the Contractor's representative and the Department will be arranged by the Engineer. In this meeting, outline proposed work procedures, sequence of work to be followed, estimated process schedule and give plans for performing the work.

For areas that experience high pedestrian traffic, the Engineer shall have the option of requiring the Contractor to implement the contract in 2 timing phases. This decision will be made at the pre- construction conference.

During the execution of the work, exercise utmost care to prevent damage to any utilities, structures or right of way. Contact, locate and protect all underground utilities and structures. Any damage to existing utilities or structures shall be repaired at the Contractor's expense. If in the course of the work, underground utilities or structures are encountered and are in conflict with the work, contact the Engineer who shall direct the necessary adjustments. Changes of this nature are considered incidental to the work and shall not entitle the Contractor to additional compensation.

3. **Removal and Storage.** Assure that any removed paving units remain in a good reusable condition. Assure that each unit will not be broken, scarred or defaced. Safeguard the units from theft and vandalism while other phases of the contract are in progress.
4. **Materials and Replacement.** Supply all materials required in the finished product, except for reusable paving units removed on this project.
 - (a) **Base.** Furnish base in accordance with details shown on the plans. Provide flexible base, when required, in accordance with Item 247, "Flexible Base."
 - (b) **Concrete.** Class "A" concrete in accordance with Item 421, "Hydraulic Cement Concrete."
 - (c) **Pavers.** Furnish pavers meeting the requirements of ASTM C 936; made using normal-weight aggregates conforming to ASTM C 33; and conforming to the shape, color, laying pattern, and dimensions shown on the plans. Furnish certification from the manufacturer stating that the interlocking paving units have been tested and meet all the requirements of ASTM C 936. Furnish additional paving units when required for testing by the Department.

Replace the existing interlocking paving units deemed not reusable by the Engineer with paving units of the same size, shape and color as the existing interlocking paving units in this project. Color shall be approved by the Engineer prior to installation.

Supply replacement interlocking paving units from 1 of the following companies, or a comparable equal, as determined by the Engineer.

1. Alamo Concrete Tile Inc., 1008 Hoefgen, San Antonio, TX 78210.
2. Pavestone Company, P.O. Box 1868, Grapevine, TX 76051.
3. Pavex Austin Inc., P.O. Box 19015, Austin, TX 78760.
4. Valley Block and Brick, P.O. Drawer 2, Pharr, TX 78577.

If interlocking concrete paving units other than those specified or 1 listed above are used, then furnish the State with a professional laboratory test certifying that the same materials were used and their fabrication methods meet or exceed the properties of the materials herein specified.

- (d) **Bedding Sand.** Furnish fine aggregate as specified in Item 421, “Hydraulic Cement Concrete,” with the gradation given in Table 1.

**Table 1
Bedding Sand Gradation**

Sieve Size	Percent Passing
3/8"	100
No. 4	85–100
No. 100	10–30

Spread the sand at a uniform moisture content of 3% to 7%. Protect the sand against rain if it is stockpiled on-site before spreading.

- (e) **Joint-Filling Sand.** Meet the requirements for bedding sand, except with the gradation given in Table 2.

**Table 2
Joint-filling Sand Gradation**

Sieve Size	Percent Passing
No. 4	100
No. 8	90–100
No. 16	60–100
No. 30	25–70
No. 50	10–30
No. 100	2–15
No. 200	Less than 10

1. **Construction Methods.** For relaying the paving units, shape the sub-grade, foundation or pavement surface to the lines, grades and cross sections shown on the plans.

Dispose excess excavated material to a location acceptable to the Engineer.

Haul, sprinkle and compact the flexible base to the depth and grade as shown on the plans. Sprinkle and compact the material to a density comparable to adjacent materials as directed

by the Engineer. Spread the un-compacted sand bedding-course evenly over the area to be paved and then screed to a level that will produce the thickness shown on the plans when the paving units have been placed and vibrated. Once screeded and leveled to the desired elevation, do not disturb this sand bedding-course. Lay the paving units in the approved pattern as shown on the plans. Lay the paving units in such a manner that the previously existing pattern is maintained and the joints between the units are as tight as possible. For maximum interlock between units, the joints shall not exceed 1/8 in. gap.

Use string lines to hold all patterns true to the back of curb. Restrain all edges of the installed paving unit as shown on the plans. Use cast-in-place concrete beams of dimensions shown on the plans for edge restraints if specified in plans. Fill the gaps at the edge of the paver surface with standard edge units or with units cut to fit. Accomplish cutting to leave a clean edge to the traffic surface, using a masonry saw. Whenever possible, no cuts should result with a paver less than 1/3 of its original dimension.

Vibrate paving units into the sand laying course using a vibrator capable of 3,000 to 5,000 lb. compaction force with the surface clean and joints open. After vibration, spread joint-fill sand over the paving unit surface, allow it to dry, and then vibrate into joints with additional vibrator passes and brushing so as to completely fill joints. Sweep surplus material from the surface during placement of paving units to ensure complete filling of joints during initial use. Upon completing the placement of paving units as specified under this Item, clean up all work areas associated with this operation by removing all debris from the site.

Bring all manhole covers, signage poles, junction pull boxes, and drainage inlets to the finish grade of the paving units as directed by the Engineer. The Contractor shall be responsible for the final finish grades of these items.

2. **Equipment.** Supply all tools and incidentals necessary to complete the work.
3. **Measurement.** This Item will be measured by the square yard of surface area.
4. **Payment.** The work performed and material furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Removing and Relaying Landscape Paving Units", of the thickness indicated. This price shall be full compensation for removal of existing paving units, site preparation and laying of base and sub-base courses, for furnishing all materials (except for reusable paving units removed on this project), and labor used in preparing, testing, loading, unloading, storing, hauling, handling, and relaying the paving units including the sand cushion and edge restraints, for all manipulations, labor, equipment, appliances, tools, and incidentals necessary to complete the work.