

SECTION 02518  
SOLID CONCRETE INTERLOCKING PAVERS

Part 1-General

1.01 WORK INCLUDED:

- A. Furnish and place sand-laying course.
- B. Furnish and install interlocking concrete pavers in the quality, shape, thickness and color as specified.
- C. Furnish and install base course materials - see Section ( ).

1.02 RELATED WORK:

- A. Preparation of sub-base – see section ( ).
- B. Furnish and install base course materials - see Section ( ).

1.03 REFERENCES:

- A. ASTM C936 – "Standard Specification for SOLID CONCRETE INTERLOCKING PAVING UNITS".
- B. NCMA-TEK, TEK 87 – "Construction of Concrete Masonry Pavements".

1.04 SUBMITTALS:

- A. Manufacturer's product data.
- B. Documentation of installer's experience.
- C. Manufacturer's installation instructions.

1.05 QUALITY ASSURANCE:

A. Manufacturer. Company specializing in the manufacturing of solid concrete interlocking pavers for a period of 50 years.

B. Installer. Company specializing in the installation of solid concrete interlocking pavers with 3 ( ) Years experience (and accredited by the manufacturer in relation to the paver type and project requirements).

#### 1.06 MOCK-UPS:

A. Provide mock-up of pavers under the provisions of Section (01400.) (01405.)

B. Size of mock-up shall be determined based on extent of pattern to be adequately shown.

#### 1.07 DELIVERY, STORAGE AND HANDLING:

A. Deliver pavers in such a manner that no damage occurs during shipping, handling, unloading and storage.

#### 1.08 PROJECT CONDITIONS:

A. Install pavers only under conditions stipulated in manufacturer's instructions.

#### 1.09 SEQUENCING AND SCHEDULING:

A. Coordinate installation of pavers with work specified in Section 0.

#### 1.10 WARRANTY:

A. Installation:

1. Installer shall provide a one- (1) year written guarantee.

B. Manufacturer shall provide a one- (1) year written warranty.

## Part 2 - Products

### 2.01 MANUFACTURER:

A. Acker-Stone Industries Inc., 13296 Temescal Canyon Road, Corona, CA. 92883.

1. Style: Serpentine, Holland Stone, Kobble Stone, etc.
2. Thickness: 2 3/8" (6cm) 3 1/8" (8cm).
3. Color: Antique Red, Antique Brown, Old Town Blend, Charcoal, Red, Terra Cotta, Light Brown, Dark Brown, Pewter (natural), etc.

### 2.02 MATERIALS:

A. Pavers:

1. Cementitious Materials:

- A. Portland Cements shall conform to ASTM Specification C-150.
2. Aggregates shall conform to ASTM Specifications C-33 for normal weight Concrete Aggregate (no expanded shale or lightweight aggregates) except that grading requirements shall not necessarily apply.
3. Other materials:

A. Coloring Pigments, air integral agents, integral water repellents, finely ground silica, etc., shall conform to ASTM standards where applicable, or shall be previously established as suitable for use in concrete

B. Sand Laying Course:

1. The sand laying course shall be a well-graded, clean, washed sand with 100% passing a 3/8" sieve size and a maximum of 3% passing a No. 200 sieve size.
2. Use concrete sand, limestone screening, or similar. Do not use mason R4 sand.
3. The sand-laying course is the responsibility of the paving stone installer.

C. Edge Restraint:

1. All edges of the installed pavers shall be restrained. The type of edge restraint shall be approved at locations and to details noted on plans.
2. Edge restraint can be:
  - A. Curb (precast)
  - B. Buildings

- C. Concrete curb or sidewalk (cast in place)
- D. Concrete Toe
- E. Other suitable methods of preventing movement of edge pavers.

## 2.03 PHYSICAL REQUIREMENTS:

### A. Compression Strength

1. At the time of delivery to the work site, the average compressive strength shall not be less than 8,000 psi with no individual unit strength less than 7,200 psi, with testing procedures in accordance with ASTM Standard c-140.

### B. Absorption:

1. The average absorption shall not be greater than 5% with no individual unit absorption greater than 7%.

### C. Proven Field Performance:

1. Satisfying field performance is indicated when paving units similar in composition, and made with the same manufacturing equipment as those to be supplied to the owner, do not exhibit excessive deterioration after at least one (1) year.

## 2.04 VISUAL INSPECTION:

A. All units shall be sound and free of defects that would interfere with the proper placing of the unit or impair the strength or permanence of the construction.

B. Minor cracks incidental to the usual methods of manufacture, or chipping resulting from customary methods of handling in shipment and delivery, shall not be deemed grounds for rejection.

## 2.05 SAMPLING AND TESTING:

A. The owner or his authorized representative shall be accorded proper facilities to inspect and sample the units at the place of manufacture from lots ready for delivery.

B. Sample and test units in accordance with ASTM Method C-140.

## 2.06 REJECTION:

A. In the event the shipment fails to conform to the specified requirements, the manufacturer may sort it, and new test units shall be selected at random by the owner from the retained lot and tested at the expense of the manufacturer. If the second set of test units fails to conform to the specified requirements, the entire lot shall be rejected.

## 2.07 EXPENSE OF TESTS:

A. The expenses of inspection and testing shall be borne by the owner unless otherwise agreed.

## Part 3 - Execution

### 3.01 PREPARATION:

A. A suitable base shall be prepared as specified in related sections of this specification.

B. The base course shall be shaped to grade and cross section with an allowable tolerance of  $\frac{1}{8}$ " (5mm) (relative to specified dimensions below finish design elevation).

C. The compacted base shall be  $3\frac{3}{8}$ " (86mm) below final grade for  $2\frac{3}{8}$ " (6cm) pavers and  $4\frac{1}{8}$ " (105mm) below final grade for  $3\frac{1}{8}$ " (8cm) pavers.

### 3.02 SAND LAYING COURSE:

A. Contractor shall inspect and approve the finished base course prior to placement of the sand laying course.

B. Spread the sand evenly over the area to be paved.

C. Screed the sand to a level that will produce a 1" (25mm) thickness when the paving stones have been placed and vibrated.

D. In addition, provide the proper level of sand such that the final elevation of paving stones will nominally  $\frac{1}{8}$ " to  $\frac{3}{8}$ " higher than the adjacent curb, gutters, other paving, etc., to allow for free drainage from chamfers on block edges.

E. Do not disturb this sand-laying course once screening and leveling to the desired elevation is achieved.

### 3.03 PLACEMENT:

A. The pavers shall be placed in the approved pattern as noted or shown on the drawings. (Note: common laying patterns are Herringbone, Running Bond and Parquet Herringbone pattern is recommended for vehicular traffic).

B. The pavers shall be placed in such a manner that the desired pattern is maintained and the joints between the pavers are normally  $\frac{1}{8}$ " with no individual gap exceeding  $\frac{1}{8}$ ".

C. Use string lines to hold all patterns true.

D. The gaps at the edge of the paver surface shall be filled with standard pavers or with pavers cut to fit.

E. The cutting of pavers, using a double-headed breaker or a masonry saw, shall leave a clean edge to the traffic surface.

F. When cutting precision designed areas, a masonry saw shall be used.

G. Pavers to be alternately selected from at least three (3) pallets, working from top to bottom in each pallet stack.

H. Pavers shall be vibrated into the sand laying course using a vibrator capable of 3,000 to 5,000 pounds compaction force with the surface clean and the joints open.

I. After vibration, clean masonry type sand containing at least 30% of  $\frac{1}{8}$ " (3mm) particles shall be spread over the paving stone surface, allowed to dry, and vibrated into the joints with additional vibrator passes and brushing so as to completely fill the joints.

J. Surplus material shall be swept from the surface. (Or left on the surface during construction to insure complete filing of the joints during initial use. This sand may also provides surface protection from construction debris).

K. Upon completion of work covered in this section, the Contractor shall clean up all work areas by removing all debris, surplus material and equipment from the site.