

Item No. 485S
Concrete Paver Units for Sidewalk Ramps

485S.1 Description

This item shall govern furnishing and installing interlocking concrete paver units, manufactured for the construction of paved sidewalk ramps, constructed as herein specified on an approved base or subgrade in conformity to the lines, grades and details indicated on the Drawings, Standard Detail or as established by the Engineer or designated representative.

485S.2 Submittals

The submittal requirements of this specification item may include:

- A. Samples for initial selection from manufacturer color charts showing the full range of colors, textures and patterns for each type of paving unit indicated on the Drawings,
- B. Shop drawings indicating pattern orientation and cross section details,
- C. Manufacturer Certification that the Interlocking Paving Units meet or exceed all the requirements of ASTM C-936 and this specification item.

485S.3 Materials

A. Base Course

Base Course shall be constructed of either a fibrous reinforced concrete (Standard Specification Item No. 407S, Class J Portland cement concrete (Standard Specification Item No. 403S, "Concrete For Structures") or cement treated material (Standard Specification Item No. 204S, "Portland Cement Treatment for Materials In Place").

B. Concrete Paver Units

Paving units shall be modular concrete pavers conforming to ASTM Designation: C 936, Solid Concrete Interlocking Paving Units" and the requirements specified in this Item. The paver units shall be made using normal weight aggregates conforming to ASTM C-33.

C. Pigments

Pigments used in concrete paver units shall be synthetic iron oxide and shall be alkali-resistant, light fast, water insoluble, chemically inert and weather resistant.

D. Grout Mix

When required in conjunction with a bedding layer for the concrete paver units or with paver closure units, the grout mix shall be composed of one part Portland cement, one part masonry cement (or 1/4 part hydrated lime), parts of concrete sand equal to 2-1/2 to 3 times the sum of the volumes of the cement and lime used, and sufficient water to make the mixture plastic.

485S.4 Physical Requirements

The general shape of the concrete paver units shall be similar to that indicated on the Drawings. The concrete paver units shall be of the color and laid in the pattern as specified or as approved in writing by the Engineer or designated representative.

All units shall be sound and free of defects that would interfere with the appearance or proper placement of the unit or impair the strength or longevity of the final structure. Any units, that are structurally damaged during the work shall be immediately removed and replaced.

485S.5 Construction Method

A. Preparation of Subgrade, subbase and base layers

The subgrade, subbase or base course shall be shaped to the lines, grades and cross sections as indicated on the Drawings or as directed by the Engineer or designated representative and shall be thoroughly compacted. Any unsuitable material encountered in the subgrade shall be removed and replaced by a suitable material and compacted to a uniform grade. When subgrade stabilization has been specified, the subgrade shall be prepared accordingly.

If the subgrade is undercut by more than 4 inches (100 mm) or the natural ground is below "top of subgrade" by more than 4 inches (100 mm), the necessary backfill shall be made with an approved material and compacted with a mechanical tamper. Hand tamping will not be permitted.

B. Paver Unit Installation

Concrete paver units shall be bedded in a 1" (25 mm) thick mortar bed placed on top of a 3" (75-mm) minimum Class A Fibrous Concrete pad (see Standard Specification Item 407S, "Fibrous Concrete"; Standard Specification Item 403S, "Concrete for Structures") or on top of 4" (100-mm) thick layer of cement treated material (see Standard Specification Item No. 204S, "Portland Cement Treatment for Materials In Place"). The concrete paver units shall be placed in conformance with Standard Detail Series 432S to the laying pattern indicated on the Drawings. The Contractor shall exercise particular care to maintain the laying pattern throughout the job. Paving units shall be placed to achieve gaps nominally 1/8 inch (3.2 mm) wide between adjacent units to insure that all joints are correctly aligned.

The first row shall abut an edge restraint with a gap of 1/8 inch (3.2 mm) and shall be laid at a suitable angle to the edge restraint to achieve the required visual orientation of paving units in the completed sidewalk.

In each row, all full units shall be placed first. Closure units shall be cut and fitted subsequently. In no case shall a closure unit consist of less than 25 percent of a full unit. Areas with closure units less than 25 percent of a full unit shall be filled solid with mortar. Units may be cut using a mechanical or hydraulic cutter or by power sawing. A grout mix shall be used to fill larger edge spaces.

Any foot or wheelbarrow traffic during the construction shall use boards overlaying paver units to prevent disturbance of units prior to final set. No other traffic shall be allowed on the pavement at this stage of construction.

As soon as practical after placement of pavers in the mortar bed, and in any case prior to the termination of work on that day, and prior to the acceptance of construction traffic, bedding sand for joint-filling shall be spread over the sidewalk and allowed to dry. When dry, the filling sand shall be swept to fill the joints. After traffic has been allowed on the pavers, joints shall be refilled with dry sand periodically until no additional sand will be accepted in the joints.

485S.6 Measurement

Accepted work performed as prescribed by this item will be measured as indicated in Section 432S.5 of Standard Specification Item No. 432S, "P.C. Concrete Sidewalks" or Section 480S.6 of Standard Specification Item No. 480S, "Concrete Paver Units for Sidewalks".

485.7 Payment

The work performed as prescribed by this item is included in the unit price bid for either Standard Specification Item No. 432S, "P.C. Concrete Sidewalks" or Standard Specification Item No. 480S, "Concrete Paver Units for Sidewalks" and payment for the sidewalk ramps shall be made under the appropriate standard specification item.

End

<i>SPECIFIC</i> CROSS REFERENCE MATERIALS	
Specification Item 485S, "Concrete Paver Units For Sidewalk Ramps"	

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 204S	Portland Cement Treatment for Materials In Place
Item No. 403S	Concrete for Structures
Item No. 407S	Fibrous Concrete
Item No. 432S	P.C. Concrete Sidewalks
Item No. 480S	Concrete Paving Units

City of Austin Standard Details

<u>Designation</u>	<u>Description</u>
432S-2A	Detectable Warning-Paver
432S-3	Type 1 Curb Ramps-Full Intersection
432S-3A	Type 1 Curb Ramps-"T" Intersection

City of Austin Standard Details (Continued)

<u>Designation</u>	<u>Description</u>
432S-3B	Type 1A/1B Curb Ramps-Full Intersection
432S-3C	Type 1A/1B Curb Ramps-"T" Intersection
432S-3D	Combined Curb Ramps-Full Intersection

432S-3E	Combined Curb Ramps-"T" Intersection
432S-3F	Combined Sidewalk Curb Ramps with Pavers
432S-5	Type 1 Sidewalk Curb Ramp
432S-5A	Type 1A Sidewalk Curb Ramp
432S-5B	Type 1B Sidewalk Curb Ramp

American Society for Testing and Materials, ASTM

<u>Designation</u>	<u>Description</u>
ASTM C-33	Standard Specifications for Concrete Aggregates
ASTM C-936	Specifications for Solid Concrete Interlocking Paving Units

<i>RELATED</i> CROSS REFERENCE MATERIALS

Specification Item 485S, "Concrete Paver Units For Sidewalk Ramps"
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City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 201S	Subgrade Preparation

City of Austin Standard Details

<u>Designation</u>	<u>Description</u>
432S-1	Sidewalk