

Item No. 434S
P.C. Concrete Medians and Islands

434S.1 Description

This item shall govern construction of Portland cement concrete traffic islands and medians in accordance with these specifications and in conformity to the lines, grades, sections and details indicated on the Drawings or as established by the Engineer or designated representative.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text, the inch-pound units are given preference followed by SI units shown within parentheses.

434S.2 Submittals

The submittal requirements of this specification item include:

- A. Class A p.c. concrete mix design,
- B. Type of Installation (i.e. Median or Island) and construction details (i.e. cushion layer, base, reinforcing steel, joints, curing membrane),

434S.3 Materials

- A. Portland Cement (p.c.) Concrete

The p.c. concrete shall conform to Class A Concrete, Section 403S.7 (Table 4) of Standard Specification Item No. 403S, "Concrete for Structures".

- B. Reinforcing Steel

Reinforcing steel and welded wire fabric shall conform to Standard Specification Item No. 406S, "Reinforcing Steel".

- C. Expansion Joint Materials

Preformed expansion joint materials shall conform to Standard Specification Item No. 408S, Expansion Joint Materials".

- D. Membrane Curing Compound

Membrane curing compound shall conform to Standard Specification Item No. 409S, "Membrane Curing".

- E. Admixtures

Admixtures shall conform to Standard Specification Item No. 405S, "Concrete Admixtures".

- F. Aggregate Cushion

Cushion layer shall consist of crusher screening, gravel, sand, crushed stone or "Flexible Base" materials (Standard Specification Item No. 210S) approved by the Engineer or designated representative.

434S.4 Construction Methods

All forms and forming, placement of reinforcement, placement of concrete, form removal, finishing and curing shall conform to Standard Specification Item No. 410S, "Concrete Structures".

A. PCC Mix Design

The p.c. concrete shall conform to an approved design mix for a Class A p.c. concrete on file with the City or proposed Class A mix designs with the necessary test data may be submitted for approval by the Engineer or designated representative.

High range water reducing admixtures conforming to Standard Specification Item No. 360, "Concrete Pavements" may be used when approved by the Engineer or designated representative.

B. Subgrade and Base Preparation

The subgrade shall be excavated, prepared and shaped to the lines, grades and cross section indicated on the Drawings or as directed by the Engineer or designated representative, and shall be thoroughly compacted conforming to Standard Specification Item No. 201S, "Subgrade Preparation". A cushion layer, 2 inches (50 mm) minimum thickness, shall be spread, wetted thoroughly, tamped and leveled. The cushion shall be moist at the time the p.c. concrete is placed.

C. Forms

Forms shall be of metal, well-seasoned wood or other approved material. The length of the forms shall be a minimum of 10 feet (3 meters). Flexible or curved forms shall be used for curves of 100-foot (30-meter) radius or less. Wood forms for straight sections shall be not less than 2 inches (50 mm) in thickness. Forms shall be a section, that is satisfactory to the Engineer or designated representative, and shall be clean, free from warp, and of a depth equal to the finished work. All forms shall be securely staked to line and grade and maintained in a true position during the placement of the p.c. concrete and, if required, forms shall be thoroughly oiled with a light form oil prior to p.c. concrete placement. If the adjacent existing asphalt pavement is damaged during construction, it shall be restored to its original condition.

D. Reinforcement

Reinforcement shall conform to the details indicated on the Drawings or the directions of the Engineer or designated representative. All reinforcement shall be accurately placed at slab mid-depth, equidistant from the top and bottom of the p.c. concrete, and held firmly in place by means of bar supports of adequate strength and number that will prevent displacement and keep the reinforcement in its proper position during the placement of the p.c. concrete. In no instance shall the steel be placed directly on the subgrade or sand cushion layer.

Prior to placement of the concrete, the reinforcement installation shall be inspected by the Engineer or designated representative to insure conformance with the drawings, specifications and this item. In addition care shall be exercised to keep all steel in its proper position during placement of the p.c. concrete. If during placement of the concrete, the reinforcement is observed to loose bar support, float upward or move in any direction, the placement shall be stopped until corrective action is taken.

E. Joints

Joints shall be of the type and spacing shown on the Drawings. Expansion joint material, 3/4 inch (19 mm) in thickness, shall be placed as indicated on the Drawings with a maximum spacing of 40 feet (12 meters) or as directed by the Engineer or designated representative. Expansion joints shall be placed on the same alignment when adjacent to a Portland Cement concrete pavement. Weakened plane joints shall be made 3/4 inch (19 mm) deep and equally spaced, normally at 5 foot (1.5 meters) on centers or as directed by the Engineer or designated representative. Expansion joints shall be required between the curb and median p.c. concrete.

F. P.C. Concrete Placement and Finishing

The p.c. concrete shall be placed in the forms to the depth indicated on the Drawings, and properly consolidated and until mortar entirely covers the surface and forms a monolithic finish. If a vibrator is used, care shall be taken not to leave it in one location long enough to induce segregation. The top surface shall be floated and troweled to a uniform smooth surface, then finished with a camel hairbrush or wood float to a gritty texture. The outer edges shall be rounded with approved tools to the radii indicated on the Drawings.

When the ambient air temperature is above 85°F (30°C), an approved retarding agent will be required in all p.c. concrete. The maximum temperature of all p.c. concrete placed shall not exceed 95°F (35°C), unless High Range Water Reducer Admixtures are used.

G. Curing

Immediately after finishing the p.c. concrete median or island, the pcc surface shall be protected by a membrane-compound curing agent conforming with Standard Specification Item No. 409S, "Membrane Curing". The curing procedures shall be acceptable to the Engineer or designated representative.

434S.5 Measurement

Accepted work as prescribed by this item will be measured by the square foot (square meter: 1 square meter equals 10.764 square feet) of surface area of p.c concrete medians and/or p.c. concrete island, complete in place.

434S.6 Payment

The work performed as prescribed by this item will be paid for at the unit bid price per square foot for "P.C. Concrete Medians and Islands". The unit bid price shall include full compensation for preparation of the subgrade; finishing and placing all materials, including all reinforcing steel, welded wire fabric; bar supports and any other materials, manipulation, labor, tools, equipment and incidentals necessary to complete the work.

Payment will be made under:

Pay Item No. 434S: ___Inch P.C. Concrete Medians and Islands Per Square Foot.

End

<i>SPECIFIC</i> CROSS REFERENCE MATERIALS
Specification Item No. 434S, "P.C. Concrete Medians and Islands"

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 201S	Subgrade Preparation
Item No. 210S	Flexible Base
Item No. 403S	Concrete for Structures
Section 403S.7: Item No. 403S	Table 4: Classes of Concrete
Item No. 405S	Concrete Admixtures
Item No. 406S	Reinforcing Steel
Item No. 408S	Expansion Joint Materials
Item No. 409S	Membrane Curing
Item No. 410S	Concrete Structures

<u>RELATED</u> CROSS REFERENCE MATERIALS

Specification Item No. 434S, "P.C. Concrete Medians and Islands"

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 360	Concrete Pavement
Item No. 430S	P.C. Concrete Curb and Gutter
Item No. 431S	Machine Laid PCC Curb and Gutter
Item No. 432S	P.C. Concrete Sidewalks
Item No. 433S	P. C. Concrete Driveways
Item No. 434S	P.C. Concrete Medians and Islands
Item No. 436S	P.C. Concrete Valley Gutters
Item No. 470S	Curb Cuts for Sidewalk Ramps and Driveways