

Item No. 436S
P.C. Concrete Valley Gutters

436S.1 Description

This item shall govern the construction of Portland cement (p. c.) concrete valley gutters on an approved subgrade in conformity to the lines, grades, Standard Detail No. 436S-2 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.

436S.2 Submittals

The submittal requirements of this specification item include:

- A. Class A p. c. concrete mix design,
- B. Construction details (i.e., reinforcing steel, curing membrane, etc.),

436S.3 Materials

- A. Portland Cement Concrete

The Portland cement concrete shall be 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

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".

436S.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. Subgrade Preparation

Where a stabilized subbase is not provided, the subgrade shall be excavated in accordance with Standard Specification Index No. 111S, "Excavation" to remove all unstable or otherwise objectionable material and all holes, ruts and depressions shall be filled with approved material.

Rolling shall be performed in accordance with Standard Specification Item No. 230S or 232S, to the extent indicated on the Drawings or directed by the Engineer or designated representative. The roadbed shall be completed to the plane of the typical sections indicated on the Drawings and the lines and/or grades established by the Engineer or designated representative. All work shall conform to Standard Specification Item No. 201S, "Subgrade Preparation".

If the subgrade is dry, the valley gutter area shall be sprinkled lightly immediately before the Portland cement concrete is placed.

Unless otherwise specified on the Drawings, all necessary excavation, filling and grading of the subgrade will be considered incidental work pertaining to this item, and will not be paid for directly.

B. Forms

Forms shall be of metal, well-seasoned wood or other approved material. Wood forms for straight sections shall be not less than 2 inches (50 mm) nominal thickness. Forms shall be a section satisfactory to the Engineer or designated representative and clean, straight, free from warp and of a depth equal to the thickness of the finished work. All forms shall be securely staked to line and grade and maintained in a true position during the placement of concrete and, if necessary, forms shall be oiled with a light form oil, prior to placement of p.c. concrete.

C. Reinforcing Steel

Reinforcement for Portland cement concrete valley gutters shall conform to Standard Detail No. 436S-2; details indicated on the Drawings or as directed by the Engineer or designated representative. Care shall be exercised to keep the reinforcement in its proper position during the placement of Portland cement concrete.

D. Joints

Joints shall be of the type and spacing shown on the Drawings. Expansion joint material 3/4 inch (19 mm) thick shall be provided as indicated on the Drawings or as directed by the Engineer or designated representative. The expansion joint material shall be placed vertically and shall extend the full depth of the Portland cement concrete. Weakened plane joints shall be provided on 10 foot (3 meter) centers or as directed by the Engineer or designated representative. Normal dimensions of the weakened plane joints shall be 1/4 inch (6.3 mm) wide and 3/4 inch (19 mm) deep.

E. Placement and Finishing

The Portland cement concrete shall be placed in the forms and properly consolidated until it entirely covers the surface and has a monolithic finish. The top surface shall be screeded and floated to a uniform smooth surface, then finished with a wood float to a gritty texture. The outer edges shall be rounded with approved tools to a 1/4-inch (6.3 mm) radius.

F. Curing

At the proper time after finishing, the surface shall be protected by a membrane-curing compound conforming to Standard Specification Item No. 409S, "Membrane Curing" or by wetting cotton or burlap mats. Either method shall be subject to approval by the Engineer or designated representative. Traffic shall be securely barricaded from using the Portland cement concrete valley gutter for a minimum of 4 days after initial placement and may be opened to traffic only with the approval of the Engineer or designated representative.

436S.5 Measurement

Accepted work performed 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 Portland cement concrete placed. The square foot measurement shall include the reinforced monolithic curb placed at the ends of the valley gutter.

436S.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 Valley Gutters". The unit bid price shall include full compensation for preparation the subgrade; furnishing and placing all materials, including reinforcing steel and expansion joint materials; any other materials, manipulations, labor, tools, equipment, barricading and all incidentals necessary to complete the work.

Payment will be made under:

Pay Item No. 436S: P. C. Concrete Valley Gutters Per Square Foot.

End

<u>SPECIFIC</u> CROSS REFERENCE MATERIALS
Specification Item No. 436S, "P.C. Concrete Valley Gutters"

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 111S	Excavation
Item No. 201S	Subgrade Preparation
Item No. 230S	Rolling (Flat Wheel)
Item No. 232S	Rolling (Pneumatic)
Item No. 403S	Concrete for Structures
Section 403S.7; Item No. 403S	Table 4: Classes of Concrete
Item No. 406S	Reinforcing Steel
Item No. 408S	Expansion Joint Materials
Item No. 409S	Membrane Curing
Item No. 410S	Concrete Structures

City of Austin Standard Details

<u>Designation</u>	<u>Description</u>
436S-2	P. C. Concrete Valley Gutter

<u>RELATED</u> CROSS REFERENCE MATERIALS
Specification Item No. 436S, "P.C. Concrete Valley Gutters"

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 110S	Street Excavation
Item No. 130S	Borrow
Item No. 236S	Proof Rolling
Item No. 360	Concrete Pavement
Item No. 405S	Concrete Admixtures
Item No. 430S	P.C. Concrete Curb and Gutter
Item No. 431S	Machine Laid PCC Curb and Gutter