

## SECTION 61

### CONCRETE SIDEWALK, **AND HANDICAP RAMPS AND DETECTABLE/TACTILE WARNING SUFACES**

#### 61.1 DESCRIPTION

##### A. General

This work consists of constructing sidewalks, handicap access ramps, **detectable tactile warning surfaces**, Type "C" retaining wall/sidewalk and exposed aggregate sidewalk on a prepared subgrade.

##### B. Related Work

Section 55	Concrete Masonry
<b>Section 56</b>	<b>Concrete for Incidental Construction, Class M</b>
Section 57	Reinforcement for Concrete Masonry
Section 100	Portland Cement
Section 101	Air-Entraining Admixtures
Section 102	Chemical Admixtures for Concrete
Section 104	Water for Use in Portland Cement Concrete
Section 105	Fine Aggregate for Use in Portland Cement Concrete
Section 107	Coarse Aggregate for Use in Portland Cement Concrete
Section 108	Concrete Curing Materials
Section 113	Preformed Expansion Joint <b>Material Filler for Concrete</b>
Section 114	Concrete Joint Sealer
Section 117	Aggregates for Granular Bases and Surfacing
Section 123	Reinforcement

#### 61.2 MATERIALS

- A. Concrete for sidewalk shall conform to the requirements of Class M6 Concrete provided in Section 56. Concrete for exposed aggregate sidewalk shall meet the general requirements of Class M6 Concrete except that the large aggregate shall be clean, rounded river rock.
- B. Expansion joint filler shall conform to the requirements of Section 113.
- C. Cushion material shall consist of quarry, rock, gravel or sand, crushed or screened to eliminate material retained on a three-fourths (3/4) inch sieve. The material shall also be free from roots, sod, lumps of dirt, and other deleterious material. Not more than twenty-five percent (25%) by weight shall pass a No. 200 sieve.

- D. Curing compound shall conform to the requirements of Section 108, except that for exposed aggregate sidewalk, normal curing compound shall be deleted and the exposed aggregate surface shall be protected with a mineral solvent or petrochemical solvent based, clear, high gloss acrylic concrete sealer.
- E. Concrete joint sealer shall conform to the requirements of Section 114.
- F. Concrete reinforcing steel shall conform to the requirements of Section 57 and Section 123.
- G. Detectable/Tactile Warning Surfaces shall be Vitrified Polymer Composite (VPC) Cast-in-Place Detectable/Tactile Warning Surface Tile, Armor Tile as manufactured by Engineering Plastics, Inc., ADA Solutions, or approved equal.

Color: Yellow conforming to Federal Color No. 33538. Color shall be homogeneous throughout the tile.

### 61.3 CONSTRUCTION REQUIREMENTS

#### A. General

The foundation shall be excavated, shaped, and compacted to a firm, uniform, bearing surface conforming to the planned section and established grade. Unsuitable foundation material shall be removed and replaced as directed. The foundation shall be thoroughly moistened immediately prior to the placing of concrete.

Cushion material shall be placed under the sidewalk to a depth of two (2) inches and satisfactorily compacted.

Forms shall be made of wood not less than two (2) inches nominal thickness or of steel of equal rigidity. Flexible strips may be used on curves. The forms shall be securely held to line and grade and shall not deviate more than one-eighth (1/8) inch from an accurate template ten (10) feet in length. The forms shall remain in place for not less than twelve (12) hours after concrete placement.

Joints shall be formed at intervals equal to sidewalk width by means of a grooving tool, to a depth of at least one-fourth (1/4) the thickness of the sidewalk. Joints and edges shall be finished with an approved one-fourth (1/4) inch edging tool.

Expansion joints with bituminous sealant shall be constructed: at the rate of one joint per 100 foot of length; at the locations and of the dimensions shown on the plans; or as directed by the Engineer.

Immediately after the water sheen has disappeared, the concrete shall be brushed or broomed in a direction perpendicular to the flow of traffic to roughen the surface and

remove tool marks. Handicapped access ramps shall receive a medium tined texture in addition to the broomed finish. Such tined texture shall be placed perpendicular to the slope. (See Detailed Drawings)

Concrete sidewalk shall be protected and cured in accordance with Section 55.

After the curing period, the area adjacent to new sidewalk shall be filled to the required elevation with suitable material and the material shall be satisfactorily compacted, seeded, or sodded.

Colored or stamped concrete or similar forms of architectural concrete finish shall not be placed with in the street right of way, except as specified by the Engineer.

#### B. Testing

The Contractor shall be responsible for providing a minimum of one set of slump, air content, seven (7) and twenty-eight (28) day compressive strength quality tests for each day's pour. Additional test sets or testing may be required by the Engineer or as called for in the Detailed Specifications.

#### C. Detectable/Tactile Warning Surface

Installation of detectable/tactile warning surfaces shall be per manufacturers installation instructions.

### 61.4 METHOD OF MEASUREMENT

Concrete sidewalk and handicap access ramp will be measured to the nearest one-tenth (0.1) linear foot and the area computed to the nearest square foot.

Concrete Type "C" retaining wall will be measured to the nearest one-tenth (0.1) linear foot.

Detectable/tactile warning surfaces will be measured to the nearest square foot.

### 61.5 BASIS OF PAYMENT

Concrete sidewalk and handicap access ramp will be paid for at the contract unit price per square foot for concrete sidewalk or handicap access ramp, exclusive of sidewalk associated with Type "C" wall.

Concrete Type "C" retaining wall will be paid for at the contract unit price per linear foot of wall for each height specified. Such payment shall include the adjacent sidewalk.

Payment for this item will also be full compensation for labor, equipment, tools, backfilling, furnishing, preparing, testing, and placing materials and incidentals necessary, including disposal of excavation and discarded materials. Such payment shall include cushion material.

Detectable/tactile warning surfaces will be paid for at the contract unit price per square foot furnished and installed.

**END OF SECTION**