

SECTION 32 16 00

CURBS, GUTTERS, SIDEWALK, AND DRIVEWAY

PART 1 GENERAL

1.01 WORK INCLUDED

- A. CURBS, GUTTERS, SIDEWALK, AND DRIVEWAY consists of furnishing transportation, labor, materials, and equipment to perform construction of concrete curbs, sidewalks, gutter depressions, island paving, curb ramps (wheelchair ramps), and driveways.

1.02 RELATED REQUIREMENTS

- A. City Technical Specifications **Section 02 00 01- Basic Site Materials and Methods**
- B. City Standard Detail Drawings:
 - ST-01 Curb and Gutter**
 - ST-02 Sidewalk**
 - ST-03 Undercurb Drain**
 - ST-04 Residential Driveway**
 - ST-05 Commercial Driveway**

1.03 MEASUREMENT AND PAYMENT

- A. Remove and Replace Concrete Sidewalk (4-inches thick)
Quantities of "Remove and Replace Concrete Sidewalk (4-inches thick)" will be measured and paid for by square feet of concrete sidewalk removed, disposed, and replaced, including removal and restore of any conflicting fence to the correct properly line as directed by the Engineer. See Appendix A of the bid documents for list of some of the concrete repair and replacement locations. Quantities of "Remove and Replace Concrete Sidewalk (4-inches thick)" will be paid for at the contract price per measured quantity, and shall include full compensation for furnishing transportation, labor, materials, tools, equipment, and incidental costs. All work be completed and in place as accordance with project plans, specifications, and permits.
- B. Remove and Replace Concrete Driveway Approach (6-inches thick)
Quantities of "Remove and Replace Concrete Driveway Approach (6-inches thick)" will be measured and paid for by square feet of concrete sidewalk removed, disposed, and replaced, including removal and restore of any conflicting fence to the correct properly line as directed by the Engineer. Quantities of "Remove and Replace Concrete Driveway Approach (6-inches thick)" will be paid for at the contract price per measured quantity, and shall include full compensation for furnishing transportation, labor, materials, tools, equipment, and incidental costs. All work be completed and in place as accordance with project plans, specifications, and permits.

- C. Remove and Replace Concrete Curb and Gutter (including min. 1-foot of asphalt concrete)
Quantities of “Remove and Replace Concrete Curb and Gutter (including min. 1-foot of asphalt concrete)” will be measured and paid for by linear feet of concrete curb and gutter removed, disposed, and replaced, and including construction of 1-foot of asphalt concrete 3 inches deep along the installed curb and gutter. Quantities of “Remove and Replace Concrete Curb and Gutter (including min. 1-foot of asphalt concrete)” will be paid for at the contract price per measured quantity, and shall include full compensation for furnishing transportation, labor, materials, tools, equipment, and incidental costs. All work be completed and in place as accordance with project plans, specifications, and permits.
- D. Installation of ADA Curb Ramp (including 1-foot of asphalt concrete along ramp)
Quantities of “Installation of ADA Curb Ramp (including 1-foot of asphalt concrete along ramp)” will be measured and paid for by each ADA Curb Ramp installed, including removal and disposal existing concrete, installation of curb dome, construction of 1-foot of asphalt concrete 3 inches deep along the installed curb ramp, removal and restore of any conflicting fence to the correct properly line as directed by the Engineer. Each ADA curb ramp is estimated to be 175 square feet. Quantities of “Installation of ADA Curb Ramp (including 1-foot of asphalt concrete along ramp)” will be paid for each ADA curb ramp installed, and shall include full compensation for furnishing transportation, labor, materials, tools, equipment, and incidental costs. Payment for installed ADA curb ramp exceeding the estimated square footage shall be prorated based on item unit price for 175 square feet. See Appendix B of the bid documents for list of proposed locations for ADA curb ramps. All work be completed and in place as accordance with project plans, specifications, and permits.
- E. Remove and Replace Concrete Sidewalk (4-inches thick) – On-Call
Quantities of “Remove and Replace Concrete Sidewalk (4-inches thick) – On-Call” will be measured and paid for by square feet of concrete sidewalk removed, disposed, and replaced, including removal and restore of any conflicting fence to the correct properly line within 48 hours of Engineer’s direction. Quantities of “Remove and Replace Concrete Sidewalk (4-inches thick) – On-Call” will be paid for at the contract price per measured quantity, and shall include full compensation for furnishing transportation, labor, materials, tools, equipment, and incidental costs. All work be completed and in place as accordance with project plans, specifications, and permits.
- F. Remove and Replace Concrete Curb and Gutter – On-Call (including min. 1-foot of asphalt concrete)
Quantities of “Remove and Replace Concrete Curb and Gutter – On-Call (including min. 1-foot of asphalt concrete)” will be measured and paid for by linear feet of concrete curb and gutter removed, disposed, and replaced, and including construction of 1-foot of asphalt concrete 3 inches deep along the installed curb and gutter within 48 hours of Engineer’s direction. Quantities of Remove and Replace Concrete Curb and Gutter – On-Call (including min. 1-foot of asphalt concrete)” will be paid for at the contract price per measured quantity, and shall include full compensation for furnishing transportation, labor, materials, tools, equipment, and incidental costs. All work be completed and in place as

accordance with project plans, specifications, and permits.

1.04 REFERENCES

- A. American Concrete Institute (ACI)
ACI 318 Building Code Requirements for Structural Concrete.
- B. American Society for Testing and Materials (ASTM International):
ASTM A615 Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM C33 Standard Specification for Concrete Aggregates
ASTM C150 Standard Specification for Portland Cement
- C. State of California Department of Transportation Standard Specifications (SS):
Section 52 Reinforcement
Section 73 Concrete Curbs And Sidewalks
Section 90-7 Curing Concrete
Section 90-10 Minor Concrete
- D. City of San Bruno Standard Detail Drawings
- E. State of California Department of Transportation (Caltrans) Standard Plans:
A88A Curb Ramp Details

1.05 SUBMITTALS

- A. Submit concrete mix design to Engineer for approval.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Minor Concrete: Conform to SS Section 90 and Subsection 90-10 unless shown otherwise on Drawings. Portland cement Type II Modified shall be in conformance with ASTM C150.
- B. Mortar and grout shall conform to SS Section 73-1.05.

- C. Concrete curing compound shall be Type I Class A, clear, and in conformance with SS Section 90-7.01.
- D. Reinforcing bars shall be Grade 60 in conformance with ASTM A615, SS Section 52, and ACI 318
- E. Aggregate in construction of concrete curbs, sidewalks, gutter depressions, island paving, curb ramps (wheelchair ramps) and driveways shall be in conformance with SS Section 73
- F. Forms shall be in conformance with ACI 318
- G. Expansion joints shall consist of pre-molded joint filler strip ½ inch thick and shall be in conformance with SS Section 73

PART 3 - EXECUTION

3.01 INSPECTION

- A. All work shall be inspected and approved by the City's inspector
- B. General:
 - 1. Construct concrete curb, walk, gutters, access ramps, and driveway in conformance with SS Section 73-1.06
 - 2. Subgrade preparation shall be in conformance to SS Section 73-1.02
 - 3. All concrete used in the construction of sidewalks shall have **one (1) pound of lamp black per cubic yard** introduced into the mix at the batching plant.
 - 4. Concrete sidewalk shall, unless otherwise provided, be 4 inches in thickness, and shall conform to the details on the appropriate Standard Drawing, or as shown on the plans. Sidewalks adjacent to the driveway approach shall be 6 inches thick.
- C. Formwork:
 - 1. Construct form work per SS Section 73-1.04 and 73-1.05.
 - 2. Construct forms that can be removed without hammering or prying against the concrete.
 - 3. Provide plywood sheathing for all exposed concrete
 - 4. Form exposed angles in concrete with neat 3/4 inch chamfers and fillets.

5. Remove forms in accordance with SS Section 73.

D. Placing Concrete:

1. Place concrete curbs, walks, gutters, cross gutters, alley intersections, and access ramps, and driveway in conformance with SS Subsection 73-1.04 and 73-1.05.
2. Construct weakened-plane (contraction) joints in conformance with SS Section 73 unless otherwise directed by Engineer.
3. Construct construction joints against existing concrete in conformance with SS Section 73 only as directed by Engineer.

E. Placing Reinforcement:

1. Place reinforcing bars in conformance with SS Section 53 and ACI 318.

3.02 PROTECTION

- A. Protect finish concrete surfaces from stains, abrasions, and other damages.

-END OF SECTION-