

CONCRETE CURB AND GUTTER REQUIREMENTS

SPECIFICATIONS

I. Work Included

- 1.) Concrete curb and gutter construction shall include the following items of work:
 - a. Placement of all barricades, cones, and other protective devices necessary to insure the protection of pedestrians, vehicles, and other traffic during day and night hours.
 - b. Fine grading and preparation of the subgrade. This work shall include removal of all unsuitable materials from beneath the proposed curb and gutter area and replacement with sand subbase material free from rocks or other debris.
 - c. Compaction of subbase to 95% modified proctor density.
 - d. Placement of forms and other incidental items necessary to facilitate placement of new concrete.
 - e. Placement of new concrete.
 - f. Curing protection as required.
 - g. Removal of forms and other incidental items.
 - h. Rough grading of areas damaged during concrete curb and gutter placement.

II. Construction Methods

- 1.) Preparation of Base.
 - a. Excavation shall be made to the required depth and to a width that will permit forming. All unsound material shall be removed and replaced with sound earth.
- 2.) Forms.
 - a. Only fixed-forms or slip-forms may be used (***wooden forms do not meet the City's Standard Construction Specifications and are not allowed for use***). Forms shall be straight and free from warp, and of sufficient strength to resist deformation during the construction process. Fixed forms shall be firmly staked to the required line and grade.
- 3.) Placing and finishing concrete.
 - a. The base shall be moist and the concrete shall be deposited thereon to the depth specified. The concrete shall be thoroughly spaded along the along the faces of the forms before the finishing operations are started.
 - b. Sidewalk ramps shall be smooth and uniform and in conformance with all

applicable regulatory guidelines.

c. The surface shall be floated just enough to produce a smooth surface free from irregularities.

4.) Joints.

a. Transverse and longitudinal expansion and plane-of-weakness joints shall be constructed at the intervals and locations shown on the plans. Joints shall be constructed true to line with their faces perpendicular to the surface. Joints shall not vary more than 1/4 inch from their designated position. Transverse joints shall be constructed at right angles to the centerline of the curb.

b. The concrete at the faces of joints shall be thoroughly spaded or vibrated and compacted to fill all voids. Expansion joint filler shall extend the full depth of the joint and the top shall be just below the finished grade of the curb.

c. Plane-of-weakness (crack control) joints shall be 1/4 the depth of the section and between 1/8 and 1/4 inch in width.

d. 1/2 inch thick expansion joints containing fiber joint filler shall be placed along the curb at 50 intervals. Plane-of-weakness joints shall be constructed at 10 foot intervals.

5.) Curing.

a. Concrete shall be cured in accordance with the latest American Concrete Institute (ACI) specifications.

III.) Materials.

1.) Concrete Mix.

a. The concrete shall be a limestone aggregate air entrained portland cement mix with a 28 day compressive strength of 3500 p.s.i.

b. No admixtures are allowed unless approved by the Director of Public Services.

c. Slump to be 2 to 4 inch.

d. Mix to conform to the latest ACI standards.

2.) Reinforcement.

a. Reinforcement shall be placed as shown on the plans.

b. Reinforcement shall be clean and free from rust and scale. No form coating shall be allowed to contact the reinforcement.

3.) Fiber Joint Filler

a. Fiber joint filler shall conform to the requirements of ASTM D 1751.

IV.) Time of Performance

1.) All work to be complete as approved by the Department of Public Services.