CITY OF HAWTHORNE
CALIFORNIA

Specifications for Construction of Concrete Curbs, Gutters, Sidewalks and Driveway Approaches Within the Street Right-of-Way and Trenching

Engineering Department
2017
SPECIFICATIONS FOR CONSTRUCTION OF CONCRETE CURBS, GUTTERS, SIDEWALKS AND DRIVEWAY APPROACHES WITHIN THE STREET RIGHT-OF-WAY.

I. GENERAL

A. Permit
   All work performed within the right-of-way shall be done under a permit issued by the Engineer Department.

B. Specifications
   All work shall be done in accordance with the American Public Works Standards Plans and Specification for Public Works Construction, except as herein specified.

C. Inspection
   All work shall be inspected by a Public Works Inspector. Form inspection is required on all work prior to the placement of concrete. This inspection will be made when the sub-base and base (if required) have been prepared and forms have been installed. Concrete placed without inspection will not be accepted and shall be removed by parties placing said concrete. Inspections requested before 9:00 A.M. will be made the same day; those requested after 9:00 A.M. will be made the following day. No inspections will be made on Saturdays, Sundays or holidays.

II. MATERIALS

A. Concrete
   Concrete shall be Class “B” 5 ½ sack concrete. If mixed by hand the proportions by volume shall be 1 part Portland Cement, 2 ½ parts concrete sand and 3 ½ parts rock. The maximum slump shall be 3”.

B. Base Material
   Base material shall either be sand or rock base at the option of the contractor. Rock base shall be commercially refined, untreated rock base consisting of broken stone and crushed gravel with ¾” maximum aggregate. Decomposed granite shall not be used in the base. Sand base shall be a washed commercial fill sand, or concrete sand.

III. CONSTRUCTION DETAILS

A. Removals
   Where the work consists of reconstruction of existing facilities, the entire section shall be removed to the first scoring line at or beyond the limit work. If this line is not a cold joint or expansion joint, it shall be sawed to a minimum depth of 2 inches (2”) before removal.
   Existing four inch (4”) sidewalk at drive approaches must be removed prior to construction of the new approach, except in “R1” zones where in the opinion of the Engineer the existing sidewalk is in satisfactory condition.

B. Sub-Grade and Base
   The sub-grade and base shall be constructed true to grade and cross-section. It shall be moistened and thoroughly compacted before the concrete is placed. All soft and spongy material shall be removed and replaced with suitable material.
Curb/Sidewalk Specifications – (Continue)

C. Sidewalks
Sidewalk shall be constructed in accordance with City of Hawthorne Standard Drawing No. A88A, and as herein specified.
Sidewalks shall be a minimum of four inches (4”) Portland Cement concrete, except at driveways. Sidewalk shall be constructed on four inches (4”) of base material unless the existing soil is approved by the Engineer as having an adequate sand content.
Sidewalk at driveway approaches shall be constructed six inches (6”) thick. When constructed in a “C” or “M” zone, these sidewalks shall be on four inches (4”) of base material.

D. Driveway Approaches
Driveway approaches shall be constructed in accordance with City of Hawthorne Standard Drawing No. A87A, and as herein specified.
Driveway approaches shall be constructed of six inch (6”) thick Portland Cement concrete. Driveways shall be constructed on four inch (4”) of base material unless the existing soil is approved by the City Engineer as having adequate sand content.
When constructed in a “C” or “M” zone, approaches shall be constructed on four inches (4”) of base material regardless of existing soil.
The width of any driveway approach, not including slopes, shall not exceed ten feet (10’) in an “R1” zone, seventeen feet (17’) in an “R1” zone where an attached garage exists in the front, thirty feet (30’) in an “R2”, “R3”, “C” or “M” zone; and in any event shall exceed 50% of the street frontage of any lot. Upon proper showing, a variance to these standards may be granted by the City Engineer. The minimum intervening distance between the top of side slopes of adjacent driveway approaches serving the same lot or parcel shall be eighteen feet (18’); and the corresponding distance in the case of adjacent driveways serving two adjoining lots or parcels shall be three feet (3’), unless otherwise specifically permitted.

E. Forms
Forms shall be true and shall have a smooth, straight upper edge. The width of forms shall be equal to the full dimension of the surface they are forming. All forms shall be thoroughly cleaned and coated with form oil to prevent concrete from adhering to them.
Timber forms shall be surfaced on the side placed next to the concrete. For straight work, forms shall not be less than one and five-eighths inches (1-5/8”) thick after being surfaced.
Forms for curb returns and other curves may be of lesser thickness, providing they are adequately supported.
Forms shall be carefully set to alignment, grade and dimension, and shall be stacked and braced to ensure rigidity.

F. Weakened Plane Joints
Weakened plane joints shall be constructed at intervals of from twelve to sixteen feet (12’-16’), to correspond with score lines. These joints shall be formed by a scoring tool and shall be one-eighth inch (1/8”) wide and three-fourths inch (3/4”) deep in sidewalks and one inch (1”) deep in top of curbs and gutters. The edge of joints shall be finished with a one-quarter inch (1/4”) edging tool.
G. **Placing and Finishing**
Concrete shall be placed in the forms without segregation and struck off and compacted until a layer of mortar has been brought to the surface. The surface shall then be finished to grade and cross-section and smoothed with a float. The final finish shall be applied with a soft broom. Brooming on driveways shall be transverse to the line of traffic.
The form on the front of curbs shall not be removed in less than two (2) hours, nor more than six (6) hours, after the concrete has been placed. In no event shall the form be removed while the concrete is sufficiently plastic to slump upon removal of the form. Holes or pockets appearing in the surface, after removing forms, shall be filled with mortar composed of one part Portland Cement to two parts of sifted sand. When necessary to achieve the proper finish, the curb face shall be painted with a grout of the same composition. The face of the curb shall then be smoothed and finished with a steel trowel and given a final fine brush finish with brush strokes parallel to the line of curb. The surface sidewalks shall be marked to match other work in the area with a scoring tool which will leave the edges rounded. Curbs shall be scored to conform to score marks on adjacent sidewalk. In no event shall score marks be more than six feet (6') apart.
Special finishes and markings must be approved by the Engineer prior to commencement of the work.

H. **Protection and Curing**
Exposed surfaces shall be sprayed uniformly with a pigmented curing compound at the rate of approximately one gallon per 150 square feet of area. The contractor shall maintain suitable barriers to protect the concrete from traffic and any part of the work damaged by traffic or other causes shall be repaired or replaced by the contractor in a manner satisfactory to the City Engineer.

I. **Final Clean-Up**
The areas adjacent to the work shall be cleared of debris, filled as necessary with soil suitable for planting, and raked smooth and neat.
TABLE A

CASE A

<table>
<thead>
<tr>
<th>CURB TYPE</th>
<th>A1-6</th>
<th>A1-8</th>
<th>A2-6</th>
<th>A2-8</th>
<th>A3-6</th>
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<td>1'-2&quot;</td>
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CASE B

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<th>CURB TYPE</th>
<th>A1-6</th>
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<td>1'-0&quot;</td>
<td>1'-2&quot;</td>
</tr>
</tbody>
</table>

NOTES:
1. See Table A for typical driveway and sidewalk.
2. See Table A for typical driveway with depressed sidewalk.
3. See Table A for typical driveway with depressed sidewalk.
4. See Table A for typical driveway with depressed sidewalk.
5. See Table A for typical driveway with depressed sidewalk.
6. See Table A for typical driveway with depressed sidewalk.
7. See Table A for typical driveway with depressed sidewalk.
8. See Table A for typical driveway with depressed sidewalk.
9. See Table A for typical driveway with depressed sidewalk.
10. See Table A for typical driveway with depressed sidewalk.
11. See Table A for typical driveway with depressed sidewalk.
12. See Table A for typical driveway with depressed sidewalk.
SEE NOTE 10

WHERE A FLARED SIDE OCCURS PROVIDE 2'-0" MIN. OF CURB

CROSSWALK IF PROVIDED

DETAILED A

TYPICAL TWO-RAMP CORNER INSTALLATION

See Note 1

DETAILED B

TYPICAL ONE-RAMP CORNER INSTALLATION

See Notes 1 and 3

GUTTER NOT SHOWN

CURB NOT SHOWN
1. Sidewalk, ramp and passageway thickness, \( t \), shall be 3 1/2" minimum.

2. For details of detectable warning surfaces, see Revised Standard Plan RSP A88A.

3. Where an island passageway length is greater than or equal to 6'-0", but less than 8'-0", each detectable warning surface shall extend the full width and 2'-0" depth of the passageway length. Where an island passageway length is greater than or equal to 8'-0", detectable warning surfaces shall be extended to full width and depth of the passageway length. Detectable warning surfaces shall extend the full width of the island passageway except a maximum gap of 1 inch is allowed on each side of the passageway.

4. The adjacent surfaces at transitions of curb ramps to walks, gutters, and streets shall be at the same level.

5. Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramps will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction. The detectable warning surface may have to be cut to allow removal of utility covers while maintaining detectable warning width and depth.

6. Detectable warning surface may have to be cut to allow removal of utility covers while maintaining detectable warning width and depth.

7. For additional curb ramp details, see Revised Standard Plan RSP A88A.

8. The detectable warning surface will be a rectangle as shown at the face of curb, unless modified in the Project Plans.
NEW CURB AND GUTTER

12"

NEW AC PAVEMENT
TYPE C2-PG 64-16

SAWCUT

EXISTING AC PAVEMENT
AND BASE ROCK

8" DEEP TRENCH BACKFILL SLURRY
2-SCAK CEMENT SLURRY

WITH NEW CURB AND GUTTER
NO SCALE

NEW CURB

12"

NEW AC PAVEMENT
TYPE C2-PG 64-16

EXISTING AC PAVEMENT
AND BASE ROCK

8" DEEP TRENCH BACKFILL SLURRY
2-SCAK CEMENT SLURRY

WITH NEW CURB
NO SCALE

CITY OF HAWTHORNE - DEPARTMENT OF PUBLIC WORKS - ENGINEERING DIVISION

DATE ISSUED

TYPICAL SECTION
SLOT PATCH DETAIL (WITH STREET OVERLAY)

SHEET 1 OF 1
TRENCH REPAVING DETAIL

NOTES:

1. ALL PAVEMENT REMOVALS SHALL BE MADE ON STRAIGHT LINE SAW CUTS A MINIMUM OF 1-1/2 INCHES DEEP. IF CUT LINE IS LESS THAN THREE FEET FROM A CUT LINE, EXPANSION JOINT OR EDGE THE EXISTING PAVEMENT SHALL BE REMOVED TO CUT LINES, EXPANSION JOINT OR EDGE OR AS DIRECTED BY THE ENGINEER.

IN ADDITION THE EXISTING PAVING IS TO BE MECHANICALLY GROUND DOWN A MINIMUM OF 1-1/2" BY AN ADDITIONAL 6" WIDTH. THE PERMANENT PAVING SHALL BE EXTENDED AS AN OVERLAY INTO THIS AREA. ALL EXISTING PAVEMENT EDGES ARE TO BE TACK COATED BEFORE AS APPLICATION OF PERMANENT PAVEMENT. IF THERE IS LESS THAN TWO (2) INCHES OF PAVEMENT AFTER GRINDING, THEN THE GROUND AREA SHALL BE REMOVED BY SAW CUTTING AND PERMANENT PAVEMENT PLACED.

2. DURING EXCAVATION AND SUBGRADE PREPARATION, THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO ENSURE THE PROTECTION OF ALL IMPROVEMENTS WHETHER PUBLIC OR PRIVATE, INCLUDING UTILITIES AND THEIR SERVICES, FROM ANY DAMAGE THAT COULD OCCUR DUE TO CONTRACTOR'S OPERATION.

3. BACKFILL AND IDENTIFICATION SHALL BE DONE IN CONFORMANCE WITH SUBSECTION 306-1.3 OF THE STANDARD SPECIFICATIONS. EXCEPT AS FOLLOWS:
   a) TRENCH BACKFILL SHALL BE DENSIFIED TO A MINIMUM OF 90 PERCENT RELATIVE COMPACTION.
   b) WHEN PAVEMENT IS TO BE PLACED DIRECTLY ON SUBGRADE MATERIAL THE TOP 6" OF SUB GRADE MATERIAL SHALL BE COMPACTED TO A RELATIVE COMPACTION OF 95 PERCENT.

4. A SAND SLURRY BACKFILL WITH 2 SACKS OF CEMENT PER CUBIC YARD MAY BE REQUIRED BY THE AGENCY.

5. TEMPORARY PAVEMENT REPLACEMENT SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE SPECIFIED BY THE ENGINEER. IT SHALL BE PLACED LEVEL WITH THE EXISTING PAVEMENT ON COMPACTED TRENCH BACKFILL AND SHALL BE A MINIMUM OF 2 INCHES THICK.

6. PERMANENT PAVEMENT RESURFACING SHALL BE DONE WITHIN TWO (2) WEEKS AFTER BACK FILLING OF TRENCHES HAS BEEN COMPACTED. ONLY AFTER SETTLEMENT HAS TAKEN PLACE AND THE FILL SURFACE HAS SUFFICIENTLY DRIED, ALL CUTS SHALL BE CLEAN AND STRAIGHT.

7. CONTACT SURFACES OF EXISTING PAVEMENT, MANHOLES, FRAMES AND SHAFTS AND CONCRETE SURFACES SHALL BE GIVEN A TACK COAT BEFORE PERMANENT ASPHALT TRENCH RESURFACING IS PLACED.

8. ASPHALT CONCRETE PAVEMENT SHALL BE B-PG 64-16 FOR BASE COURSE AND C2-PG 64-16 FOR SURFACE CAP.