

## SECTION 4

### STREET IMPROVEMENT PLANS

#### GENERAL

The guidelines, criteria, and standards listed here should be considered the minimum design standards for street improvements. Exceptions may be considered if dictated by adverse topographic or environmental conditions. A request for each exception shall be submitted to the City Engineer for decision. The following are general requirements that apply to all plans for public improvements.

1. Each sheet of the improvement plans submitted for plan check shall be stamped by a Registered Civil Engineer with expiration date. Prior to approval all original Mylar plans shall be wet signed, sealed and dated.
2. Plans submitted for checking shall be complete in all phases of design. Incomplete plans will be returned unchecked.
3. Any named travel way shall be a street. If developers desire a street to have a name, it must be constructed to City standards.
4. Private streets are discouraged and will only be allowed when approved in advance by the Planning Commission. Private streets shall be constructed to City standards.
5. Developer's Engineer shall establish a minimum one permanent bench mark in each project, and provide to the City Engineer a complete description, elevation to three decimal places and level notes from a bench mark listed in the LACPD precise bench mark list, Palmdale Quad.

#### GEOMETRICS

1. For purposes of geometric and structural design, streets shall be classified according to the following. Any deviation from the following standard shall require the approval of the City Engineer.
2. The parameters listed on Figure 4-1 shall be used for the design of streets within the City of Palmdale and the Standard Street Sections shown in this section. The structural section given is based on an R-value of 5. A lesser structural section may be used only after the City Engineer has given written approval of the soils engineer's recommendations, which must be based on R-Value soils tests taken after rough grading.

## STREET DESIGN PARAMETERS

Street Classification	R/W	Curb Width	R/W Cut Off	Curb Radius	TI	Section (See note 1)	Max. Grade %	Min Grade %	Min Radius Valley Min.
Major Arterials	***	***	27' x 27'	35'	10	5"AC/CAB	6**	0.4	1500
Secondary Arterials	***	***	27' x 27'	35'	9	4"AC/CAB	6**	0.4	1000
IND. / COMM. Collector	76/84	64	27' x 27'	35'	9	4"AC/CAB	6*	0.4	600
IND. / COMM. (minor / CDS)	66	46	27' x 27'	35'	9	4"AC/CAB	10*	0.4	300
Res Collector	64	40	13' x 13'	25'	5	3-1/2"AC/CAB	10*	0.4	300
Res. Local	60	36	13' x 13'	25'	5	3-1/2"AC/CAB	10*	0.4	250
Res Cul-de-sac	58	34	13' x 13'	25'	4	3-1/2"AC/CAB	10*	0.4	250
Frontage Road	54	40	13' x 13'	25'	7	3-1/2"AC/CAB	10*	0.4	250
Alley	30	30	10' x 10'	15'	4	3-1/2"AC/CAB	10*		

- \* Up to 14% with special approval of the City Engineer
- \*\* Up to 8% with special approval of the City Engineer
- \*\*\* See Standard Street Sections

Note 1: The street structural section shall be determined from "R" values obtained from materials gathered at the level of the proposed subgrade using the State of California Division of Highways design method for crushed aggregate base. Crushed aggregate base shall conform to section 200-2.2 of the latest edition of the Standard Specifications for Public Works Construction (Green Book). In no case shall the minimum street section be less than 3-1/2 inches asphalt concrete and 4 inches of aggregate base. If deep lift asphalt is used the minimum section shall be 7 inches of asphalt.

FIGURE 4 - 1

## SUBMITTAL REQUIREMENTS

1. The initial submittal of Street Improvement plans for review shall include the following:

Street Improvement Plans	3 folded copies
Grading plan	1 copy
Sewer Plans	2 copies
Water Plans	1 copy
Cost estimate on City form	2 copies
Cost summary on City form	2 copies
Sewer Area study with design calculations	1 copy
List of estimated bond amounts	1 copy
Storm drain hydraulics calculations	2 copies
Approved Conditions of Approval	1 copy
Approved Tentative Tract map	1 copy
Tract map	1 copy
Plan Check Fees	As calculated in city Cost Estimate forms

2. Subsequent submittals shall include:

The previous marked up check prints	1 redlined copy
Revised plans	2 copies
Previously checked Hydrology/Hydraulics calculations	1 redlined copy
Revised Hydrology/Hydraulics calculations	2 copies
Any additional material necessary for the plan checker to complete his review	1 copy

3. Prior to approval of plan, owner/developer/civil engineer is required to submit:

- 3.1. Right of entry for any work to be performed on adjacent properties. Permission to be in letter form signed by adjacent property owner and notarized. A form is available at the City Engineer's Office. This is required even if the owner of the impacted property is the developer of the subject project.

- 3.2. Drainage acceptance letter or easement from the owners of all impacted properties. This is required even if the owner of the impacted property is the developer of the subject project.

## **PLAN PREPARATION**

Plan and Profile Sheets shall be prepared in accordance with the Los Angeles County Road Department Design Manual and the following:

1. All sheets must be prepared on Mylar (3 MIL), 24" x 36" overall size, with a 1" margin on all sides except the left margin which shall be 1.5".
2. Stationing shall increase northerly and easterly.
3. Stationing shall read from left to right. Negative stationing is not acceptable. Stationing has preference over North arrow.
4. Right end of one sheet joins the left end of the next.
5. All streets shall have continuous stationing. Where possible, continue stationing from previously approved plans.
6. The first sheet shall be a Title Sheet and include:
  - 6.1. Location map showing project location, major cross street, city limit lines if near project, north arrow and scale.
  - 6.2. Index map showing the street configuration within project, lot configurations and lot numbers, if project is a subdivision, project and phasing boundaries, street names, index of sheets, city limit lines, if near project, North arrow, scale 1"=200' with bar scale, storm drain improvements (existing and those to be constructed), arrows indicating direction of surface flow in streets, detention/retention or retarding basin location, and drywell locations.
  - 6.3. Benchmark - number, quad, description, date (year of adjustment), and elevation to three decimal places.
  - 6.4. Engineering firm name, address, telephone number, date of plan preparation, signature, stamp, R.C.E. number and date of expiration.
  - 6.5. Title block containing tract number and which phase of tentative tract number, if applicable; City-assigned "ST" number.
  - 6.6. Developer's name, address and telephone number.
  - 6.7. Signature block for Plan Check Engineer and a Recommended By block.
  - 6.8. Approval block for City Engineer's signature and date, and for other agencies when necessary.
  - 6.9. Revision block with revision number, date, initials of design engineer, description of plan change, index of sheets affected by the revision, and spaces for City approval and date.

- 6.10. Applicable general notes.
- 6.11. Typical sections showing:
  - 6.11.1. Each geometric street variation with limits, if applicable. (See STD No. M-8.3)
  - 6.11.2. Existing pavement to be overlaid, joined or removed. (See STD No. M-8.3)
  - 6.11.3. Paving, curb and gutter to be constructed, and details of join to existing pavement.
  - 6.11.4. Where full improvements are not to be constructed, show interim section with required grading, slopes, and right-of-way.
  - 6.11.5. All necessary geometric dimensions including, but not limited to sidewalk width, centerline to curb face, pavement cross fall slope, centerline to right-of-way, level line relationship between centerline (crown) and top of curb with vertical dimension.
  - 6.11.6. Structural section (use Structural Section shown in chart until sections recommended by the soils Engineer are approved by the City Engineer).
  - 6.11.7. A complete list of construction notes.
7. Profile shall include all rates of grade, negative grades shall be indicated, elevations of curb return quarter points, all utility line crossings and sub-structures which could interfere with road or other underground construction.
8. Plan view shall include:
  - 8.1. North arrow, scale and 3" bar scale.
  - 8.2. Existing improvements to be shown with dashed line.
  - 8.3. Improvements to be constructed, including all joins at project boundaries; the interim conditions shall be clearly shown.
  - 8.4. Approved Street names.
  - 8.5. Centerline stationing of both streets at all intersections. The station and name of the subject street shall be shown above the leader and the station and name of the intersecting street below.
  - 8.6. Stationing along the centerline of construction should match stationing established by earlier plans.
  - 8.7. Stationing shall be marked on all construction centerlines and aligned with profile.
  - 8.8. All existing utilities - show proposed water and sewer (solid).

- 8.9. Tract number, tract boundary, lot lines and lot numbers for each parcel adjoining the street right of way.
- 8.10. Match lines clearly shown and referenced.
- 8.11. Curve data for all horizontal curves. BC's, EC's, BCR's and ECR's shall be labeled and stationed, (convention for BCR's and ECR's - proceed clockwise around the return from BCR to ECR).
- 8.12. Identification of all storm drains.
- 8.13. Drywell locations.
9. Construction details not included in the standard drawings of an approved agency.
10. Construction notes shall be positive statements to perform certain specific items of work shown on the plan. General comments not specifically tied to a symbol on the plan shall be placed in the General Notes. A list of standardized construction notes is shown in this section. Use only the notes that apply to the specific street plans. Additional construction notes that are site specific must be developed by the design engineer as necessary.
11. Because of ambiguity in the way it is used, the word "proposed" shall not be used on construction plans. Items may be classified as existing, under construction, by others., or future.
12. Address review comments and requirements by other jurisdictions and coordinate with the City.

## STREET PLAN GENERAL NOTES

- 1) Work shall be performed according to the latest edition of the Standard Specifications For Public Works Construction, the excavation and building code of the City of Palmdale, the City of Palmdale Engineering Design Standards and any special requirements of the permit. Other references are to the latest editions of APWA Standard Plans For Public Works Construction, Los Angeles County Department of Public Works Standard Plans and Caltrans Standard Plans.
- 2) Before work can be started, the contractor must obtain an encroachment permit to work within the existing public right-of-way from the City Engineering Division, 38250 Sierra Highway, Palmdale CA 93550.
- 3) Application for inspection by The City of Palmdale shall be made by the contractor at least twenty-four (24) hours before the services thereof will be required; phone (661) 267-5255.
- 4) Work in public streets, once begun, shall be prosecuted to completion without delay so as to provide minimum inconvenience to adjacent property owners and to the traveling public. Failure to comply with this requirement is a violation of the Highway Permit Ordinance.
- 5) The contractor shall take all necessary and proper precautions to protect adjacent properties from any and all damage that may occur from storm water runoff and/or deposition of debris resulting from any and all work in connection with subdivision construction.
- 6) Construct sidewalk returns per Standard Plan C-7 series as applicable.
- 7) Paving to be done in 2 layers - bottom layer shall be 3/4" rock (Type B mix PG 70-10/ AR-4000) and the final layer shall be 1-1/2" thick Rubberized Asphalt (TMAC) Type "C" per Section 600-5 of The Standard Specification For Public Works Construction. All work is to be completed to the satisfaction of the City inspector in the field and also to the satisfaction of the City Engineer.
- 8) Street structural sections will be determined by R-Value soil testing. Subdivider's soils engineer shall provide R-Value tests after streets have been rough graded. Test results shall be subject to review and approval by the City Engineer. Plan must be as-built to show actual structural section constructed. The crushed aggregate base shall consist entirely of crushed rock and rock dust.
- 9) There shall be no above ground obstructions in any portion of the sidewalk except where the width, exclusive of top of curb, is 6' or greater. Otherwise provide a taper to maintain a 48" minimum unobstructed width (reference Standard Plan C-6).
- 10) Where sidewalks are adjacent to curb, construct residential driveways per Palmdale Standard Drawing No. C-1. Use Standard Drawing No. C-3.1 for alternate residential driveway sections. Construct Industrial and Commercial driveways per APWA Standard Plan 110-1, Type C and Standard Plan 111-2, Type 2.

- 11) Construct street name signs per Palmdale Standard Plan M-5. Placement locations shall be as directed by the City Traffic Engineer. Street name signs shall be posted prior to occupancy of buildings.
- 12) Provide a street lighting system plan for the City Engineer's review and approval.
- 13) Processed miscellaneous base may be used under curb and gutter in lieu of crushed aggregate base.
- 14) In lieu of crushed aggregate base under walks, contractor may use processed miscellaneous base or select material with expansion of 3% or less as determined by Soil Engineer's expansion test. Any deviation from these requirements will require the Soils Engineer's testing and recommendation submitted for review and approval by the City Engineer.
- 15) Prior to sidewalk construction contact City of Palmdale Landscape Architect for requirements on tree well locations and irrigation system construction.
- 16) Curb and sidewalk joints shall be per A.P.W.A. Standard Plan 112-1. Sidewalk landings and returns shall be per City of Palmdale Standard No. C-7 series as applicable.
- 17) The purchase and installation of street name signs shall be the responsibility of the developer. The developer shall secure the approval of the City Traffic Engineer for the type and location of the street name signs prior to installation. (Reference Standard Plans M-5.1, M-5.2 and M-5.3).
- 18) Stencil street names on at least two returns at each intersection in 4" block letters with black paint on white background.
- 19) The Engineer of Record signing these plans is responsible for assuring the accuracy and acceptability of the work hereon. In the event of discrepancies arising during construction, the Engineer of Record shall be responsible for determining an acceptable solution and revising the plans for approval by the City.
- 20) If drywells are required, all drywells shown on this project shall be maintained by the owners where their locations are on private property or through the creation of a Landscape Maintenance District (LMD) when approved by the City. Drywells will be replaced by the owners when they cease to drain standing surface water in a 24 hour period or are deemed to be obsolete by the City. Regular Maintenance of the drywell settling chamber is required to achieve proper operation of the drywell and shall be performed annually or more often depending upon its location, and shall be performed by the owner or district as applicable. All drywells shall be constructed per City of Palmdale Standards.
- 21) All material shall be inspected and accepted by the Public Works Inspector prior to being used for construction. The Public Works Inspector has the authority to reject the use of materials that are damaged or not in compliance with plans or standards.
- 22) The Contractor is hereby noticed that this street work will not be accepted for maintenance until the street improvements shown hereon have been completed, all

manholes, handholes and valve boxes brought to grade, utilities underground as required, street lights installed and operational, striping and signing completed as required, all Geotechnical testing completed and approved, as-built plans completed and approved, and existing improvements damaged during construction are repaired, all to the satisfaction of the City Engineer.

- 23) The Contractor shall provide for contributory drainage at all times and take all necessary and proper precautions to protect adjacent properties and improvements from any and all damage that may occur from storm water runoff and/or deposition of debris resulting from any and all work, to the satisfaction of the City Engineer.
- 24) The Engineer of Record shall be required to provide as-built plans to the City Engineer prior to the acceptance of the work.
- 25) IMPORTANT NOTICE - Section 4216/4217 of the Government Code requires a Dig Alert Identification number be issued before any "Permit to excavate" will be valid. For your Dig Alert I.D. number, call Underground Service Alert toll free @ 1-800-422-4133, two working days before you dig.
- 26) If Work is to be done within a State Right-of-Way, a permit must be obtained from the State of California, Division of Highways, 120 South Spring Street, Los Angeles, CA.
- 27) It shall be the responsibility of the developer or contractor to submit to the Engineering Division an approved plot plan approved by the City Engineer of Planning prior to issuance of any encroachment permit and/or construction of any curb and gutter.
- 28) Standard hours of Operation within the City are 6:30 AM to 8:30 PM, Monday through Saturday. Work performed outside standard business hours is prohibited without the expressed written permission of the City Engineer.
- 29) Overtime inspection request are granted based on staff availability. Request must be received 48 hours in advance and additional inspection fees paid prior to work commencing.

PRIVATE ENGINEER'S NOTICE TO CONTRACTOR

The existence and location of any underground utility pipes, conduits or structures shown on these plans was obtained by a search of the available records. To the best of our knowledge, there are no existing utilities except as shown on these plans. The contractor is required to take due precautionary measures to protect the utility lines shown on these drawings. The contractor further assumes all liability and responsibility for the utility pipes, conduits or structures shown or not shown on these drawings. The contractor shall pothole all existing utilities to verify the location and any discrepancy between the plans shall be brought to the attention of the Design Engineer.

Contractor agrees that he shall assume sole and complete responsibility for the job site condition during the course of construction of this project, including safety of all persons and property and that this requirement shall apply continuously and not be limited to normal working hours. The contractor also agrees to defend, indemnify and hold the owner and the engineer harmless from any and all liability, real or alleged in connection with the performance of work on this project, excepting for liability arising from the sole negligence of the owner or the engineer.

\_\_\_\_\_  
ENGINEER'S SIGNATURE  
(Print Name under signature line)

\_\_\_\_\_  
R.C.E.

\_\_\_\_\_  
DATE

## STREET IMPROVEMENT CONSTRUCTION NOTES

- 1) Construct 3-1/2" minimum thick A.C. pavement on 4" minimum thick crushed aggregate base. (See General Notes 7 & 8).
- 2) Construct minimum 4" thick A.C. pavement on 6" minimum crushed aggregate base (See Gen. Notes 7 & 8).
- 3) Construct 8" curb and gutter per A.P.W.A. Std. Plan 120 - 1, A2 - 200(8) ( See Gen. Note 13).
- 4) Construct 6" curb and Gutter per A.P.W.A. Std Plan 120 -1, A2 - 150(6) (See Gen. Note 13).
- 5) Construct 4" P.C.C. sidewalk. (See Gen. Notes 14, 15 & 16).
- 6) Construct concrete cross gutter per A.P.W.A. Standard Plan 122-1.
- 7) Construct modified concrete wheelchair ramp per City of Palmdale Standard No. C-7, Case \_\_\_\_ . (See Gen. Note 14).
- 8) Sawcut and remove 1' minimum existing AC pavement to provide for a neat joint.
- 9) Cold plane 1-1/2" min. to meet centerline and overlay.
- 10) Existing utility equipment (power poles, water meters, fire hydrants, etc.) will be relocated per City Standards and utility company requirements.
- 11) Construct 2" x 6" redwood header, or construct an additional 1' of AC pavement at edge of AC paving.
- 12) Install\_\_\_\_\_, Type I guide markers per L.A.C.R.D. Standard Plan 84-01.

\*\* Additional project specific Construction Notes to be developed by the design engineer as necessary.

## DESIGN

Street improvements shall be designed in accordance with the policies and criteria set forth in the Los Angeles County Road Department Design Manual incorporated by reference in these Design Standards and the following:

1. The street structural section shall be determined from "R" values obtained from material gathered from the level of the proposed subgrade using the State of California Division of Highways design method. In no case shall the minimum street section be less than 3-1/2 inches asphalt concrete and 4 inches of aggregate base. The aggregate base section may be comprised of an equivalent section of aggregate base and aggregate subbase, but in no case shall the aggregate base be less than 4 inches. If deep lift asphalt is used the minimum section shall be 7 inches of A.C.
2. Arc length on centerline of horizontal curve shall not be less than 100 feet unless the centerline radius is greater than 3,000 feet. At an intersection, only that portion of the curve outside curb returns can be used to satisfy this requirement.

3. In hillside terrain, or if other design constraints are present, curve radii may be reduced (with corresponding super elevation) in conformance with the L.A. County Highway Design Manual, and shall be subject to the approval of the City Engineer.
4. If a highway changes classification and width at an intersection the typical section of the higher classification shall be carried through the intersection and then transition back to the lower classification. This transition is normally 600 feet and is subject to the approval of the City Traffic Engineer prior to approval of the improvement plans.
5. Corner cut-offs are required at all highway intersections, including intersections with local streets. Local-to-local street intersections also require corner cutoffs. (See City of Palmdale Std. No. C-7 series)
6. Adjacent intersections along the highway, but on opposite sides and offset in a direction in which left turns will not be in conflict, should be spaced a minimum of 150 feet centerline to centerline.
7. When new asphalt is joined to an existing street, one and one half inch depth of asphalt shall be removed from the edge of existing pavement to the centerline of the street and shall be overlaid with one and one half inch of asphalt to the satisfaction of the City Engineer. The means of removal shall be cold planed or any other means of removal approved by the City Engineer.
8. Major highways may require raised medians. (This to be determined by the City Traffic Engineer). All access points are subject to approval by the City Traffic Engineer.
9. Local and Collector streets:  
 Definition:
  - 9.1. Local Street - (58' & 60' R/W) A street with direct residential frontage with Average Daily Traffic (ADT) volumes not exceeding 1200 vehicles per day.
  - 9.2. Collector - (64' R/W) A non-arterial street normally through a residential area, designed to collect traffic from local streets and distribute it onto arterial highways. Residential collectors are designed to carry traffic volumes generally greater than 1200 vehicles per day but less than 4000 vehicles per day. No direct residential access is permitted.
10. General Design Criteria for Local Streets and Collectors:
  - 10.1. Collector streets - Minimum centerline radius is 300 feet.
  - 10.2. Local streets - Minimum centerline radius is 250 feet.
  - 10.3. Curb returns shall be designed by the "plane method"; see City of Palmdale Standard Plan No. G-4.
  - 10.4. Standard cul-de-sacs are required for all permanent dead-end streets and may be required for temporary dead-end streets if future development seems remote. The following are recommended maximum lengths of cul-de-sacs:

- 10.4.1. 500 feet in length when serving land zoned for industrial or commercial.
- 10.4.2. 700 feet in length when serving land zoned for residential uses having a density of more than four dwelling units per net acre.
- 10.4.3. 1000 feet in length when serving land zoned for residential uses having a density of four or less dwelling units per acre.

11. Vertical Curves

11.1. The minimum length of vertical curves will be governed by the Algebraic Grade Differential as noted in the table below:

Algebraic difference in grades (%)	Local min length VC (ft)	Major/Secondary min length VC (ft)
0.50 & Less	Not Required	Not Required
0.51-1.00	Not Required	80'
1.01-2.00	60'	80'
2.01 & Greater	100'	120'

11.2. In addition to the previous table, the minimum length of vertical curves shall comply with current Los Angeles County Public Works Department Standards (refer to 1972 Los Angeles County Road Department Design Manual). The minimum length of crest vertical curves shall be governed by passing sight distance, if appropriate (Plate 2.5 - 01), or by stopping sight distance (Plate 2.5 - 02). The minimum length of sag vertical curves shall be governed by Headlight Sight Distance (Plate 2.5 - 03).

## STREET IMPROVEMENT PLAN CHECKLIST

TITLE SHEET (asterisk means item requires special attention by the plan checker)

- 24" x 36" SHEET
- BENCHMARK - County of Los Angeles, Palmdale Quad, elevation, location, benchmark number, description, adjustment date.
- TITLE BLOCK - Tract number & Palmdale number (bottom right and right margin), sheet number, phase, City Engineer approved by, recommended by and plan check by signature blocks, revision blocks.
- KEY MAP - Scale, bar scale, north arrow up, flow arrows, street names, street widths, drywell locations, lot lines and numbers, retention/detention basin location, key to sheet numbers, adjoining tracts, City Limits. Show entire tentative tract boundary.
- VICINITY MAP - Major street names, city and county boundary, north arrow UP.
- Engineer's seal, expiration date, signature, date signed. Company name, address, phone number.
- TYPICAL SECTIONS - for each geometric section show right of way width, right of way half-widths, C.L. to T.C., T.C. to right of way, maximum cut and fill slope at right of way, level line with crown dimension; existing and proposed improvements with dimensions; sidewalk width and 1/4" slope per foot, parkway width, appropriate construction notes, street name, limits, interim conditions.
- CONSTRUCTION NOTES (numbered and circled) - i.e. Pavement sections, sidewalk, wheelchair ramp, curb and gutter, sawcutting existing pavement, thickened pavement edge, cross gutters, driveways, misc. Construction note numbers must be consistent throughout set of plans.
- General Notes.
- Private Engineer's Notice to Contractor.
- Private Engineer's Statement of Responsibility.

## STREET IMPROVEMENT PLAN CHECKLIST

PLAN AND PROFILE SHEET (asterisk means requires special attention by plan checker)

- TITLE BLOCKS - Revision Blocks
- Stamp/seal with exp. Date and signature of Engineer
- Signature blocks for Checked By and Recommended By.
- Tract and phase number.
- Palmdale number.
- Pages numbered consecutively.
- Stationing along C.L.- does it match existing stationing and show a reference station at an intersecting street.

PLAN VIEW 1"=40'

- North arrow (to top or left), scale 1" = 40', 3" bar scale.
- \* Existing improvements and utilities shown dashed.
- \* Limits of construction (joins and interim conditions), new asphalt shaded.
- Street names. Street widths with construction dimensions.
- Center line stationing of both streets at intersection on leader (subject street above, intersecting street below). \*Offsets. Minimum centerline curve length per Conditions of Approval.
- Tract boundary, tract number, lot lines and numbers, adjacent parcel numbers, detention/retention basin.
- \* Applicable construction notes only.
- Match lines with sheet reference.
- \* Flowline elevations and curve data for all horizontal curves. BC's, EC's, BCR'S and ECR's shall be labeled and stationing, with elevation (convention for BCR's and ECR's - proceed clockwise from BCR to ECR). Include flowline elevation at P.I.'s in cross gutter.
- Storm drain facilities.
- Wheelchair ramps.
- \* Depressed inlet detail with reference, stationing, and elevations.
- \* Stationing for any other miscellaneous structures, i.e. driveways, fire hydrants, poles, barricades and references.

[ ]\* Horizontal curve table with delta, R, L, & T consecutively labeled. (The difference in the delta of any two adjacent curb returns may not exceed 10° ). Horizontal curve data shall be identified by letters in a hexagon and shall be consistent throughout the set of plans.

## PROFILE

- [ ] Stationing and elevation of grid.
- [ ] Profile Line labeled for each side and center line.
- [ ] T.C. grade each side. Finished surface at centerline.
- [ ] Existing ground at right of way and center line.
- [ ] No grade breaks of more than 0.50%.
- [ ] Open circle at grade breaks (-0-).
- [ ]\* Station and elevation at grade breaks, intersections, B.C.'s, E.C.'s, tract boundary, match line.
- [ ] Scale (1" = 40' horizontal and 1" = 4' vertical).
- [ ]\* Vertical curve data - tangent grade, length of curve, P.V.I. station and elevation, stations and elevations at 25' maximum interval, 100' minimum length where possible.
- [ ]\* Elevation at curb return quarter points, curb face height at quarter points of transition, curb face transition labeled.
- [ ] Height of curb face noted for each side.
- [ ]\* New cul-de-sac bulbs shall have a 1% minimum grade at gutter flowline when not impacted by existing development.
- [ ]\* Utility line and sub-structure crossings.
- [ ] Profile of existing ground extended 300' beyond end of improvements.
- [ ] Identical points flagged as such.
- [ ]\* Storm drain facilities.

## STREET IMPROVEMENT PLAN CHECKLIST

### DRAINAGE STRUCTURES

- TITLE BLOCKS
- DRAINAGE STRUCTURE DETAILS
- Check Drainage Master Plan for required drain lines.

### PLAN VIEW

- Station correlation with street plan. Stationing along pipelines (increasing in upstream direction) with invert elevations at intersections and types of material.
- \* All structures identified and referenced to standard and/or details. Variable dimensions noted, debris racks, protection barriers, headwalls, wingwalls, aprons, cut-off walls, etc.
- \* Rip-rap.
- Streets with existing and new utilities, dimensions, names.
- Nuisance water system shown.
- Detail of each local depression.

### PROFILE VIEW

- Stationing and elevation of grid, stationing of plan and profile are lined up.
- Structures with reference to standard or detail, invert elevations, lengths and type of pipe, class or strength.
- Existing and finished surface over storm drains.
- Existing and new water and sewer crossings with separation labeled.
- Hydraulic grade line.
- Water surface elevation at basin.
- \* Sections from plan view (as appropriate).

### **GUIDELINES FOR CURB, GUTTER AND SIDEWALK**

These guidelines set forth the minimum acceptable requirements for curb, gutter and sidewalk in the City of Palmdale. Listed below are the conditions under which these requirements apply.

Following is a graphic presentation of street sections, showing required curb, gutter and sidewalk improvements in their proper dimensions.

As a matter of clarification, the width of sidewalks adjacent to curb are measured from the back of curb to the outside edge of sidewalk (i.e., a 5' wide sidewalk adjacent to curb includes only the sidewalk width and not the width of the curb):

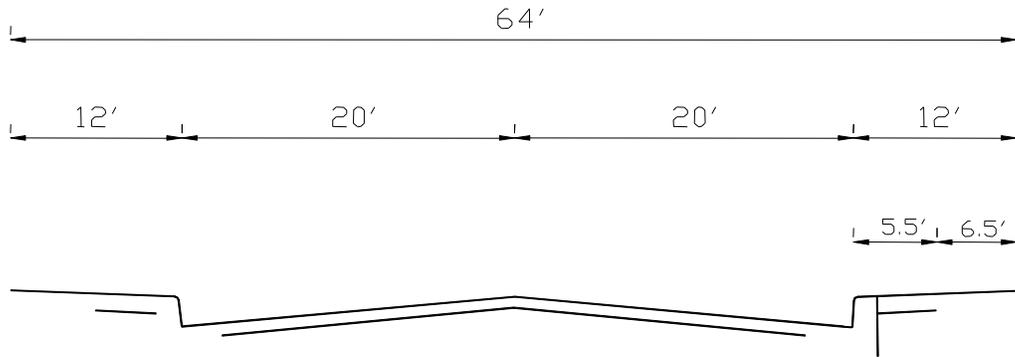
## **SINGLE FAMILY RESIDENTIAL STREETS**

1. In urban areas where the minimum size of single family residential lots is less than or equal to one acre, standard (6" or 8" standup face) curb and gutter, 5' wide concrete sidewalks and concrete drive approaches shall be required on both sides of streets of the following classifications:
  - 1.1. Residential collector (64' right-of-way).
  - 1.2. Local residential (60' right-of-way).
  - 1.3. Residential cul-de-sac (58' right-of-way)
2. Service roads (roads having access on one side) shall require curb and gutter on both sides of the street and 5' wide sidewalk on the fronting side of the street.
3. In urban areas where the minimum size of single family residential lots is greater than one acre, curb, gutter and sidewalk requirements shall be determined by the City Engineer for approval on a case by case basis.
4. In areas having City approved Memorandums of Understanding (MOUs) where there is a conflict between the provisions stated in Paragraphs a and b above and those MOUs, the MOUs will take precedence. Areas known to have active MOUs include, but are not limited to the following associations:
  - 4.1. Sunnyside Farms
  - 4.2. Shadow Acres
  - 4.3. White Fence Farms II
  - 4.4. White Fence Farms III
  - 4.5. El Dorado
  - 4.6. Westside Park
  - 4.7. Royal Lanes
5. In areas having specific plans where there is conflict between these provisions and the provisions in those specific plans, the provisions of the specific plan will take precedence except where the conflict would adversely affect public safety and welfare.
6. For property adjacent to any major or secondary highway or master plan highway, construction of standard (6" or 8" stand-up face) curb and gutter and full width (back of curb to property line) sidewalk shall be required. An exception may be granted for highways adjacent to rural single family residential subdivisions where the minimum lot size is greater than one acre. In that case, standard (6" or 8" stand-up face) curb and gutter shall be required at a minimum. In areas designated as rural or mountainous, where there are exceptions to these requirements, specific requirements shall be cited on a case by case basis.

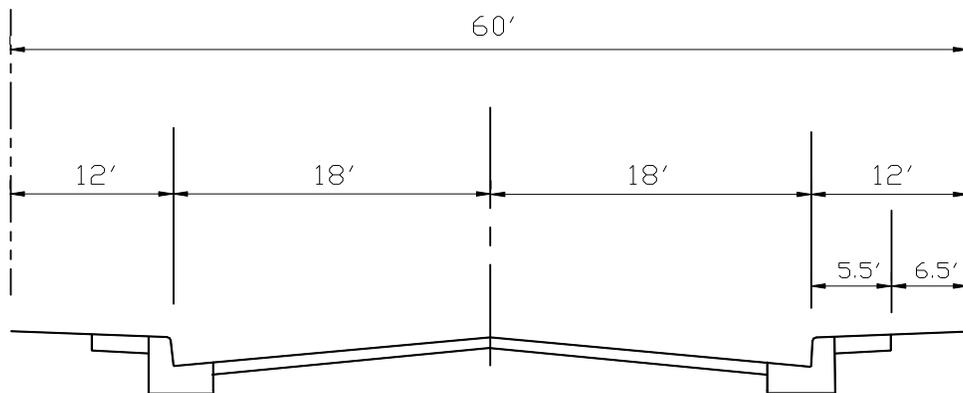
## COMMERCIAL, INDUSTRIAL & MULTIPLE FAMILY RESIDENTIAL

Standard (6" or 8" stand-up face) curb and gutter, concrete sidewalk and concrete drive approaches shall be required. The width and placement of sidewalk shall be in accordance with the guidelines shown graphically below or as amended.

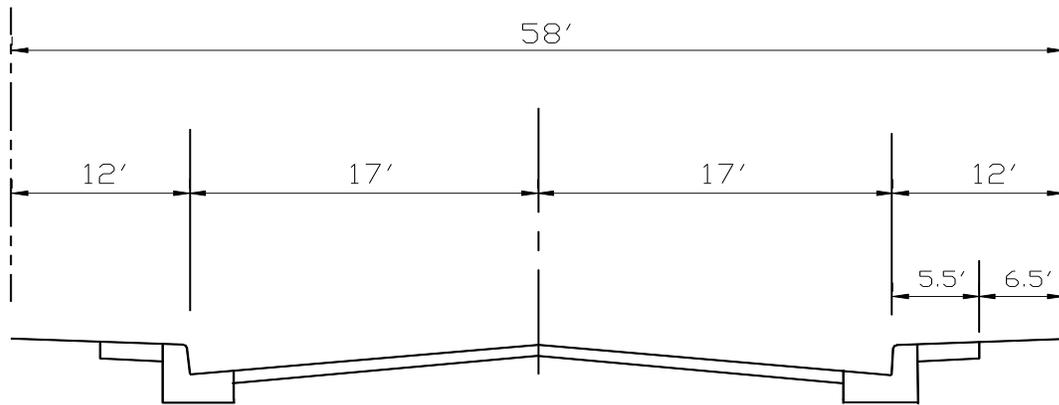
### STANDARD STREET SECTIONS



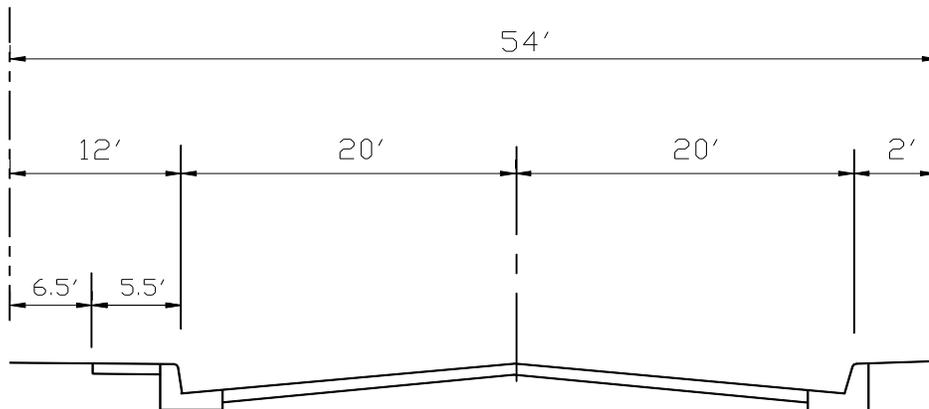
1. Residential entrance street from Main and Secondary or other master plan highways, through Collector Streets, streets adjacent to schools and multiple family residential streets.



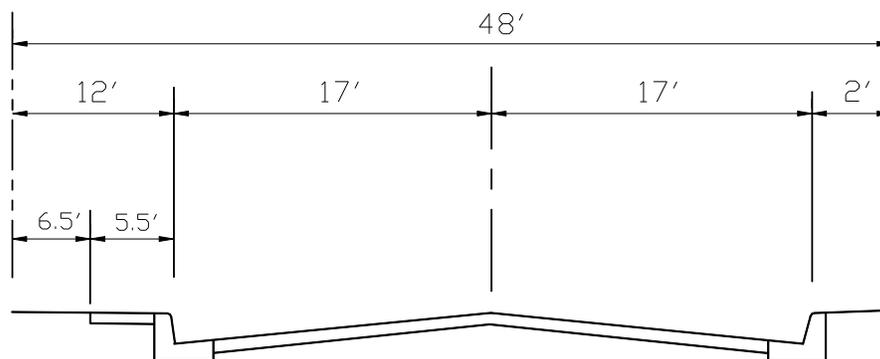
2. Local Interior Streets



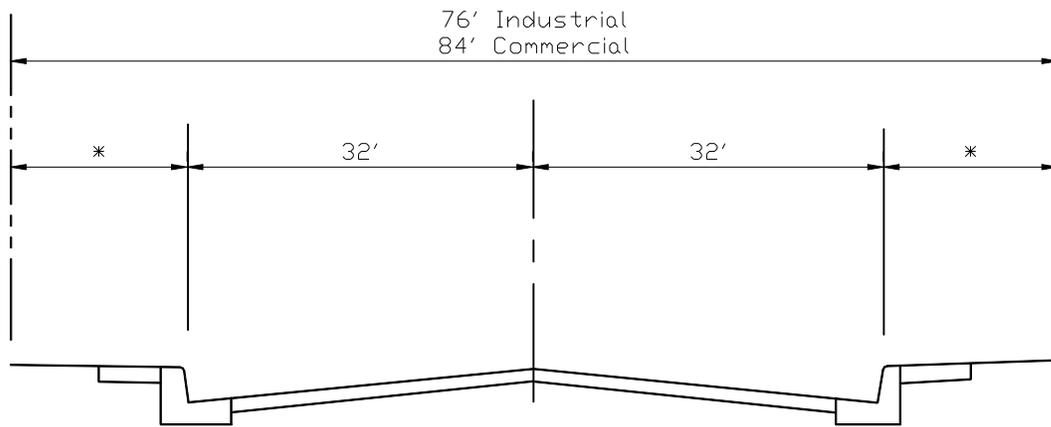
3. Residential Cul-de-sac streets



4. Service road serving a collector street and multiple family residential area.

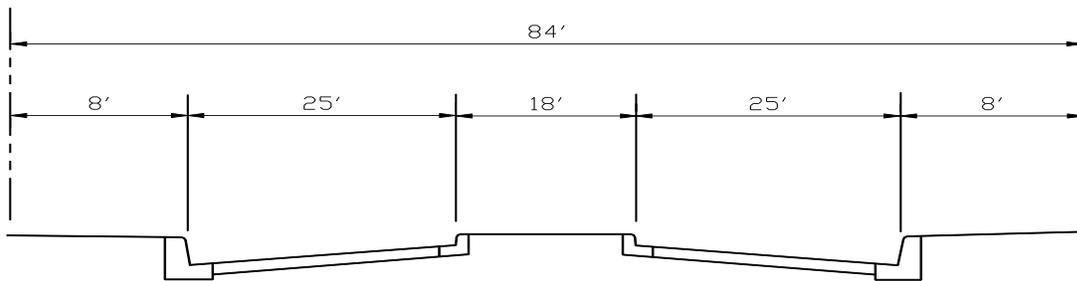


5. Service road serving single family residential area.

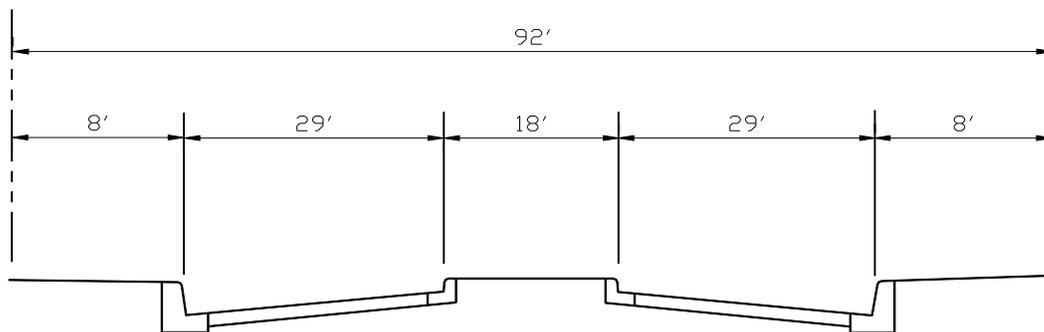


\* INDUSTRIAL 6'  
\* COMMERCIAL 10'

6. Industrial and commercial street entrance, collector or loop.

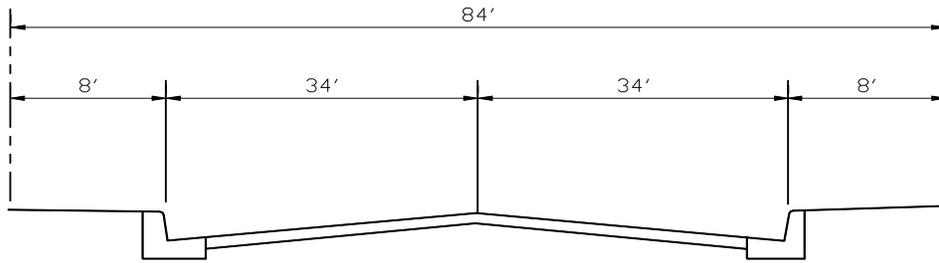


7. Secondary arterial, Section C1, 4-lane arterial, with medians.

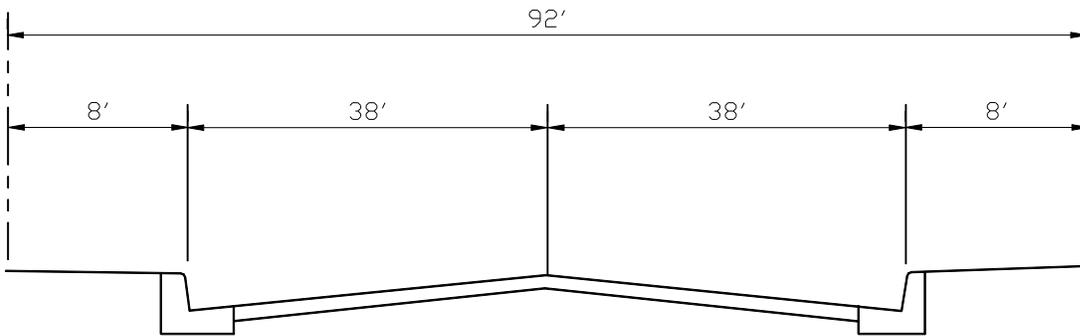


\* Medians may be painted or raised.

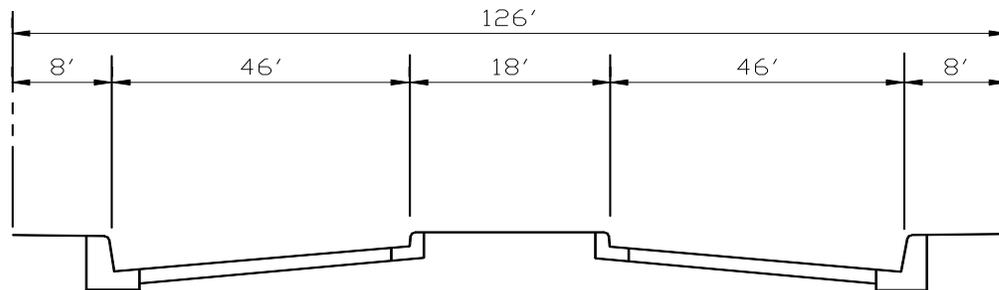
8. Secondary arterial, Section C2, 4-lane arterial, with median\*, with bike lanes



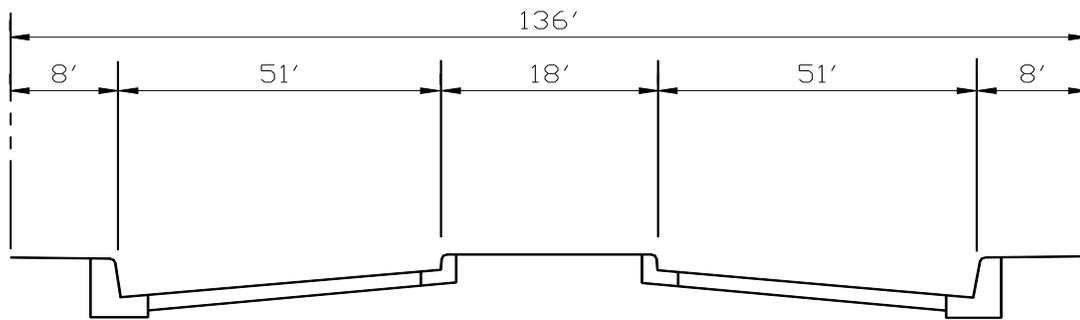
9. Secondary arterial, Section D1, 4-lane arterial, no median, with bike lanes



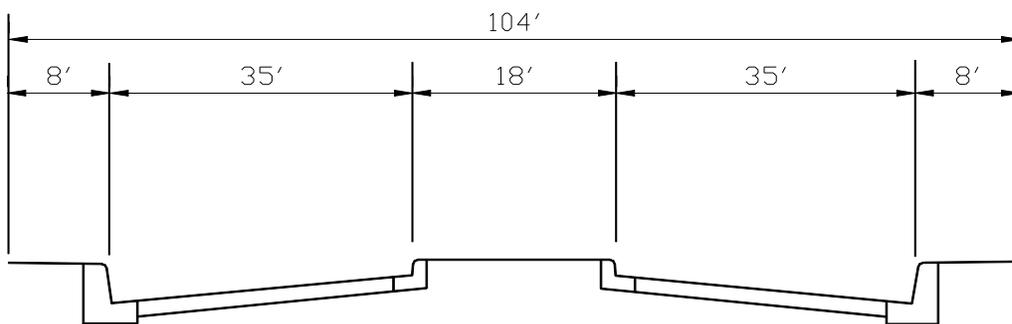
10. Secondary arterial, Section D2, 4-lane arterial, no median, with bike lanes



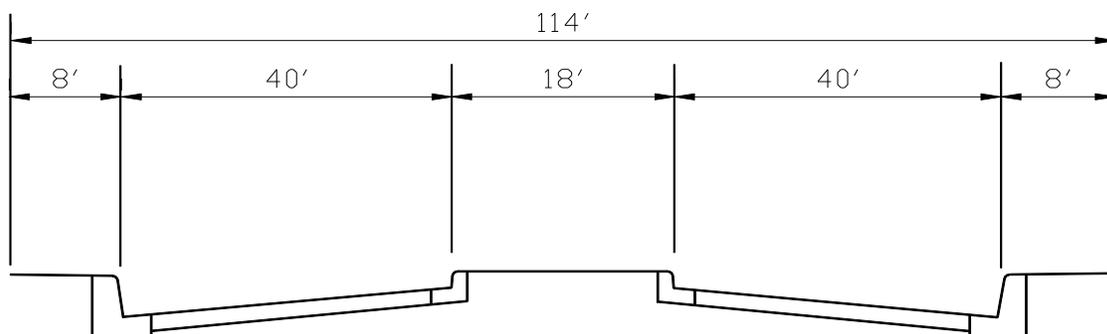
11. Regional arterial, Section A1, 8-lane arterial, with median (may be painted or raised)



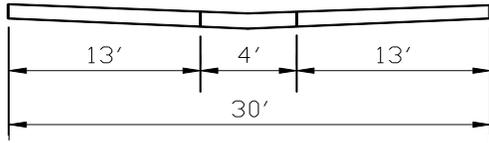
12. Regional arterial, Section A2, 8-lane arterial, with median (painted or raised), with bike lanes – design by special study.



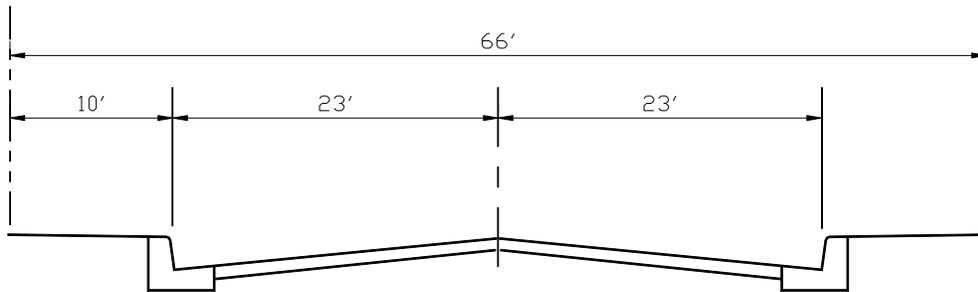
13. Major arterial, Section B1, 6-lane arterial, with median



14. Major arterial, Section B2, 6-lane arterial, with median (painted or raised), with bike lanes



15. Alley



16. Local commercial/industrial streets

Notes:

In Rural areas only curb and gutter is required; no sidewalk. For Landscaping Easements, see Palmdale City Zoning Ordinance.