County of San Bernardino
Land Use Services Department
Land Development Division

Street Improvement Plans submittal requirements

Improvement Plans will not be accepted on first submittal without the following:

I. Initial submittal requirements

a. Submit the following:

i. A digital copy of the street improvement plans in pdf to the EZOP system

ii. Engineers estimate of quantities (check with Land Development for current unit costs), for bonding purposes.

iii. Checking fee, (payable to County of San Bernardino)

	Initial Deposit Per Sheet
a. Single Family	$1,500.00
b. Conditional Use (Plot)	$2,650.00
c. Minor Subdivision/Tentative Parcel Map	$2,650.00
d. Tract	$2,650.00

iv. Survey notes and/or plotted cross sections.

v. Drainage study, if applicable.

vi. Owner's name and address.

vii. Project number and Assessor's Parcel number. Assessor Parcel number not needed on Tract Street Improvement Plans. (Project #, MS #, PP #, PM #, TR #, etc.)

b. Deliver or mail check/Money order if needed to:

i. West Valley, East Valley
Land Development Division
385 North Arrowhead Ave, First Floor
San Bernardino, CA 92415
Phone (909) 387-8311

ii. North Desert
Land Development Division
15900 Smoke Tree St. Suite 131
Hesperia, CA 92345
Phone (760) 995-8140

c. Coordinate with Cal-Trans when Project adjacent to State Highway.

d. Coordinate with City when project adjacent to or in sphere of influence.

II. PREPARATION OF PLANS

A. Project design Parameters and Format

_____ 1. Project design must conform to Planning Commission Conditions of Approval, applicable San Bernardino County and Flood Control District Standards and acceptable engineering design principles.

_____ 2. Standard Plan and Profile mylar

_____ a. Sheet size: 24” by 36”

_____ b. All work shall be done in ink and must be clearly reproducible.

B. Title Block

_____ 1. Use Standard San Bernardino County, Road Department, Title Block.

_____ 2. Show street name.

_____ 3. Show, APN, Minor Subdivision Number or Tract Number.

_____ 4. Show road number and limits of work (will be provided by Land Development Division).

_____ 5. Show Engineer’s address block.

_____ 6. Include Registered Civil Engineer’s signature, Registration No., date, seal and expiration date.

C. Index and Vicinity Map

_____ 1. Show on first sheet.

_____ 2. Index map required in addition to vicinity map with multiple sheet projects.

_____ 3. Show street drainage diagram arrows on index map.

_____ 4. Show north arrow pointing up or to the right.

_____ 5. Show facility and street names.

_____ 6. Show flow arrows along drainage systems.

_____ 7. Show culverts, catch basins, channels and pipes.

D. Typical Section

_____ 1. May be shown on title sheet (multiple sheet projects) or on applicable plan sheet.

_____ 2. Show existing and proposed right-of-way dimensions.

_____ 3. Show and dimension all proposed construction elements (i.e. curb and gutter, sidewalk, walls, widths of existing and proposed channels, culverts, swales, pipe diameters, trench widths pavement widening, etc.)

_____ 4. Indicate cross-slope gradients of parkway, existing and proposed AC.

_____ 5. Cross-slope of proposed AC widening shall be 1.5% - 5% range.

_____ 6. Match-up widening to existing pavement should show saw-cut line (when applicable) and minimum 2’ grind & overlay/feather over existing

_____ 7. When required show minimum 0.1’ AC overlay over existing pavement. (0.17' AC on Secondary Highways and above)

_____ 8. Show removals of existing channels, revetment, fencing, curb/AC berm, AC pavement, etc.

_____ 9. Include following caption under typical section: “Construct _____ A.C. over _____ C.A.B. (Class II) per General Note 8”

E. General Notes

_____ 1. Include listing of applicable County approved general notes on first sheet.

_____ 2. For applicable general notes see the Land Development website General Notes Section:

F. Plan Review

_____ 1. Show bench mark information on first sheet. U.S.G.S. or other datum acceptable to the San Bernardino County Transportation/Flood Control/Surveyor/GIMS Department shall be used.

_____ 2. North arrow (oriented up or to the right) shall be dictated by stationing increasing from left to right on the sheet.

_____ 3. Scale is 40 feet to 1 inch (other scales require prior approval).

_____ 4. Direction of stationing should be downstream to upstream and increasing left to right on the sheet south to north or west to east. Where street improvements are proposed in conjunction with drainage improvements, stationing and dimensions of street improvements shall be clearly defined to avoid confusion with delineation of drainage improvements.

_____ 5. Show centerline stationing at 100' stations.

_____ 6. Extend future curb and gutter 300' beyond limits of proposed improvements or to tie to existing curb and gutter.

_____ 7. Stationing at centerline intersections with equations, if applicable.

_____ 8. Stationing at limits of construction.

_____ 9. Show centerline intersection station tie to nearest County Maintained Road.

_____ 10. TC/FL elevations at BCR's, and ECR's and PCR's, when applicable.

_____ 11. Stationing of BC's, PRC's and EC's.

_____ 12. Show names of all streets.

_____ 13. Curb return data (Delta, Tangent, Radius, Length)

_____ 14. Curb return and right-of-way radius are to follow standard 110 in the Standards and Specification Manual.

_____ 15. Centerline curve data (Delta, Tangent, Radius, Length).

_____ 16. Show proposed cross-gutters and spandrels with FL elevations at street centerline and PI's.

_____ 17. Show lot lines and numbers.

_____ 18. Show and dimension existing and proposed right-of-way lines on both sides of street

_____ 19. Plot and label existing topo within right-of-way, including disposition of items affected by construction. Topo should extend a maximum of 100' beyond the right-of-way line.

_____ 20. Show connections of existing improvements with elevations and stationing.

_____ 21. Show alleys and right-of-way dimensions.

_____ 22. Shade proposed pavement construction.

_____ 23. Hatch proposed AC overlay.

_____ 24. Cross-hatching existing pavement removal areas.

_____ 25. Show all existing driveways within area affected by construction (Provide all construction details, including profile of connection for any reconstruction).

_____ 26. Proposed reconstructed driveways or access road driveways shall include Standard Number, width and centerline station.

_____ 27. Show all easements and existing utilities. Indicated whether utilities are to be protected in place or relocated and by whom.

_____ 28. Indicate existing and proposed flowlines with drainage flow arrows (include FL elevations where applicable).

_____ 29. Show details of proposed improvements with applicable construction notes on each sheet.

_____ 30. Reference all proposed improvements with applicable construction notes on each sheet.

_____ 31. Show all proposed drainage facilities including construction data, dimensions, CL & corner elevations and centerline stationing.

_____ 32. Denote type, size, length, D-load (1350D minimum) gauge/strength of drainage pipe lines.

_____ 33. Show sidewalk ramps at all intersections where sidewalk required.

_____ 34. Show curb cut off wall and/or thickened-end section where dewatering off terminus of road exceeding 3% grade, or at County Engineers request.

_____ 35. Reference to standard drawings shall include all dimensions required by the standard.

_____ 36. Construction note numbers should be consistent for each sheet and only notes referring to work depicted on that sheet should be shown.

_____ 37. Show limit of all proposed grading work including fill areas, borrow areas, limits of cut and fill

slopes, etc.

38. Indicate how surface drainage along access roads is to be handled.
39. When street improvements are proposed in conjunction with drainage improvements, all details of their removal, construction, or/reconstruction shall be detailed on the plans and prepared in accordance with applicable road standards.
40. Traffic control devices and details of detours, if applicable, shall b included in the plans. A separate traffic control plan sheet will normally be required.

G. Profile View

1. Horizontal scale to correspond to plan scale.
2. Vertical scale is 4' to 1" (other scales require prior approval).
3. Show datum reference at both ends of profiles.
4. Existing ground at centerline and proposed centerline grade.
5. Existing edge of pavement left and/or right of centerline on match-up widening.
6. Existing ground at right-of-way line left and right of centerline.
7. Existing and proposed top of curb left and/or right of centerline.
8. Curb return profile shall show BCR, ECR and PCR designations and elevations at top of walls and flowline dimension length of return and flag elevations at ¼ points.
9. Curb returns show transitioning heights of TC, begin and end station of transitions and flowline elevation at each station curb face should show increments of transition at ¼ points.
10. Label all grade lines and profiles.
11. Stationing and elevations at limits of construction and at BVC's, EVC's and all grade breaks (1% maximum GB is allowed).
12. Show all grades (consult County design specifications for minimums/maximums).
13. Stationing and elevations at 25' increments on vertical curves.
14. Extend profiles beyond limits of improvement for 300' or to tie to existing curb and gutter.
15. Stationing at all manhole junction structures and inlet structures. Manholes shall be provided every 300 feet.
16. Access road profiles shall be shown on the plans (10% max.) Details of access road flares at street crossings may be necessary.
17. Stationing at bottom of profile grid.
18. Names, stations, elevations of intersecting streets.
19. Length of vertical curves to be a function of design speed (consult with County specifications) and safe stopping distance. 100' is the maximum length.
20. Grade of X-gutters shall be relative to street centerline grade. Using edge of gutter as control, maintain a 2% X-slope on new street construction and warp gutter flow line between end of X-gutter and point of return.
21. Show limit of all proposed grading work including fill areas, borrow areas, limits of cut and fill slopes, etc.
22. Indicate how surface drainage along access roads is to be handled.
23. Profile required for all proposed drainage facilities including lateral connections.
24. Show existing and proposed drainage utility and drainage facility crossing.
25. Profiles shall be required for all proposed drainage facilities, include hydraulic grade line or water surface profile, design Q and velocity.
26. Maximum approach grade to intersections shall not exceed 6%.
27. Denote type, size, length and D-load of proposed pipe.
28. Controlling upstream or downstream HGL or water surface shall be shown.
29. Show location of sub-drain system details.
30. When profiles of lateral connections and/or branches are shown on separate sheets, consistent cross references using sheet numbers and stations shall be used.

H. Details

_____ 1. Construction for proposed non-standard facilities (see Section F, item 29) may be shown on applicable plan sheet or separate detail sheet.

_____ 2. Show all necessary views and sections with dimensions, notes, data, specifications and elevations and re-bar placement necessary to insure proper construction and inspection.

_____ 3. Include any special construction notes applicable to proposed facility.

_____ 4. All details structures should be drawn shown to scale.

_____ 5. Reinforcing steel shall be clearly shown and labeled. Required clearance shall be clearly shown

_____ 6. All manhole openings and shafts shall be 36” diameter.

_____ 7. All modifications to standard drawings shall be indicated and detailed.