CITY OF PALM SPRINGS ENGINEERING DIVISION STREET IMPROVEMENT PLAN CHECK SHEET

Revised March 15, 2011

Most Recent Changes to this Document are Underlined

- I. Preparation of Plan OR Plan and Profile sheets.
 - 1. Mylar plan and profile sheets (3 mil) 24" x 36" or approved equal.
 - 2. Drawings will be in ink and all work must be clearly reproducible.
 - 3. Quantity estimate to be placed on first sheet.
 - 4. **No applicate film** to be used on final plans.
 - 5. Existing features may be greyscaled, but no less than 40% black. Lines may be solid or dashed. No dotted lines are permitted for existing features.
- II. Vicinity Map
 - 1. Shown on first sheet: Scale 1" = 800' min.
 - 2. Street names shown thereon with lot numbers.
 - 3. If part of tract, show drainage flow.

III. Research

- 1. Investigate engineering records for previous designs and surveys of project area.
- 2. Investigate all monuments within project area.
- 3. Investigate all bench marks within project area.
- 4. Field check before checking plan.
- 5. Check condition of existing improvements.
- 6. Landscaping.
- 7. Private property structure encroachments.

IV. Title Block

1. City Standard Title Block shown on all sheets.

- 2. City project number, drawing and file number to be shown on all sheets.
- 3. Registered Engineer's signature and R.C.E. number on all sheets.
- 4. Date plans prepared and checked by consulting engineer's staff.
- 5. Show benchmark description, as described by the City of Palm Springs Benchmark Book, on all sheets.
- 6. Number all drawings as follows:

Sheet 1 of ___ (do not use letters)

V. General Notes

General Notes shall be shown on the first sheet.

VI. Plan

- 1. North arrow (pointing up or to the left) and scale (1" = 20', 1" = 40' or as approved by City Engineer) to be shown.
- 2. The center line station to be shown on plan and profile.
- 3. Stationing at intersections with equations (if any)
- 4. Stationing of all B.C.'s and E.C.'s
- 5. Stationing of all B.C.R.'s, M.C.'s and E.C.R.'s of curves
- 6. Stationing of end of improvements from left to right. No negative stationing. Show match lines on consecutive sheets.
- 7. Scales as required for all segments of the plans
- 8. Names of all streets shown on plan and profile
- 9. Bearing of all streets shown on plan
- 10. Curb return data:

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Delta Radius
Length of Arc Tangent
Show top of curb and flow line elevations at B.C.R'S and E.C.R's

- 11. Flow arrows of all returns, spandrels and cross gutters shown on plan
- 12. Straight grade all cross gutters:

The PI for a vertical curve is a min. 50 feet back from cross gutter flow line. No mid-block cross gutters.

- 13. Center line curve data, short and long side of curve sections
- 14. Lot numbers and addresses, if any
- 15. Lot lines
- 16. Show connections to existing improvements with elevations at the join point and a minimum of 50' at each side of the join.
- 17. Lengths and stationing of transitions of super-elevations (if any); also of transitional paved sections for drainage control.
- 18. Show improvements TO BE constructed with solid lines.
- 19. Show existing improvements with dashed lines.
- 20. Typical sections of all streets, labeled and referenced to sheets.
 - a. dimensions of right-of-way, pavement, and parkway
 - b. Crushed miscellaneous base thickness per soil tests
 - c. Asphalt concrete thickness as required by Flexible Pavement Structural Section Design Guide for California Cities and Counties.
 - d. Percent of cross fall of pavement
 - e. Slopes to adjacent property lines
 - f. Supplemental cross sections 50' stations required for different widths, structural sections, half streets, existing street improvements, etc.

- 21. Note size, length and gauge of C.M.P. or aluminum pipe for drainage
- 22. Note size, length, "D" strength or class of R.C.P. or class/type of drain pipes
- 23. Show construction notes wherever necessary to clarify construction details if not standard
- 24. The term "by others" shall not be used.
- 25. Show existing and proposed underground and overhead utilities, including approximate locations of laterals and services to property line

Desert Water Agency Verizon

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- 26. Refer to City Standard Drawing Number if applicable to structure or work.
- 27. Specifications, notes and details, if different from City Standards.
- 28. Improved drainage easement shall provide either pipe or lined ditch sections. Ditches lined with asphaltic material shall have the soil sterilized prior to the placement of the lining.
- 29. Slope easements
- 30. Feather the straight saw cut edge when meeting existing pavement.
- 31. Driveway approaches being installed shall be shown on the plan view only.

32. Minimum centerline curve radii and design speeds shall be as follows, except for hillside streets, which radii shall be determined by specific plans for individual sites:

Type Street	<u>TI</u>	<u>Min.</u> CL Radii	<u>Design</u> <u>Speed</u>
A. Major Thoroughfare (limited access)	9	1,150 feet	60 mph
B. Major Thoroughfare	9	1,000 feet	55 mph
C. Hillside Major Thoroughfare	8	600 feet	45 mph
D. Secondary Thoroughfare	8	850 feet	50 mph
E. Hillside Secondary Thoroughfare	7	250 feet	30 mph
F. Collector Street	6	700 feet	45 mph
E. Minor Street	5	300 feet	30 mph
F. Private/Hillside Street	4	130 feet	20 mph

- 33. Average street grades along property frontage shall not exceed 10% and shall not exceed 15% at any time. Minimum rate of grade for cross fall on asphalt pavement is 1.5% and for concrete pavement is 0.5%.
- 34. Generally minimum street grade shall be 0.35%, UNLESS otherwise approved by the City Engineer.
- 35. Grade breaks are not to exceed 0.5% along the curb line without going to a vertical curve design
- 36. Cul-de-sac min. flow line grade is 0.5%. Max. street grade into gutter at back of cul-de-sac shall not exceed 3%. On flat cul-de-sacs with a 0.5% grade in cul-de-sac high-point, omit vertical curve at cul-de-sac high point.
- 37. Use Manning's "n" for streets 0.02 for residential and 0.015 for major streets.
- 38. Show construction notes on all sheets.

VII. Profile

- Scale, unless otherwise authorized by City Engineer, is 1" = 40' horizontal and 1"
 = 4' vertical horizontal scale shall match plan scale
- 2. Profile of center line in existing streets or ground line is dashed
- 3. Finish center line grade is heavy solid line

- 4. Right-of-way or property line profile, both sides if full improvements, is dashed
- 5. Finish top of curb grade is heavy solid line
- 6. Label all grade lines and profiles; show percent of grade on center line and curb lines
- 7. Stations and elevations at beginning and end of improvement
- 8. P.I. (Point of Intersection) stations with elevations
- 9. Elevations as required on vertical curves
- 10. Elevations and stations on all grade breaks
- 11. Elevation and stationing of all equations both sides of curb
- 12. Extend profiles beyond end of improvement a minimum of 100' as necessary to justify grade. Show elevations of nearest intersection street. If new street intersects existing street, show profiles on existing street. Submit work profiles and sections. Show connection with or future design to existing improvements.
- 13. In all "grade to drain" situations show profile of ditch with elevations from beginning of ditch to daylight at 100' intervals
- 14. Indicate length of curb returns, show in projection
- 15. Show 100' stationing at bottom of profile
- 16. Names and stationing at intersecting street points
- 17. Structures to scale, note critical flow line elevations
- 18. Use vertical curves for all grade break differentials in excess of 1.0%. Check for flat spots at high and low points.
- 19. Minimum fall around curb returns with no cross gutters shall be 0.10'
- 20. Profile of ditch for piped drainage facilities
- 21. When widening an existing street, show elevations of top edge of existing pavement

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VIII. Striping Plan - Separate Sheet(s)

- 1. Show barricades needed at temporary dead ends
- 2. Show widening and narrowing flare lengths
- 3. Show construction notes on all sheets.
- IX. Americans Disabilities Act (A.D.A.) Requirements
 - 1. The Americans With Disabilities Act (ADA) Requirements must be complied with and shown on plans.
 - 2. The 4-foot wide sidewalk required behind driveway approaches shall have a maximum of 2% cross-slope.
 - 3. The <u>A.D.A.</u> special criteria required at bay parking spaces shall be complied with. Proposed bay parking spaces must have the approval of the City of Palm Springs.