

**SECTION 3  
PLAN SHEET REQUIREMENTS**

**3-1 DIGITAL SUBMITTALS:** Portable Document Format (PDF) improvement plans may be submitted for checking. PDF improvement files shall be direct conversion from CAD files. PDF plans and supplemental documents may be submitted to the County on disc, flash drive or through a File Transfer Protocol (FTP) site, as required by the County Engineer. Electronic plan submittals shall include all that is required in Section 2-5 of these standards.

**3-2 PAPER SIZE DETAILS:** All improvement plans shall be prepared and submitted on 22" X 34" or 24" X 36" paper size. Only common engineering scales shall be used.

**3-3 DRAFTING STANDARD:** All approved plans and record drawings are stored electronically for future reference. Therefore, all line work must be clear sharp and of appropriate weight. Letters and numerals must be 0.1-inch minimum height, well formed and sharp. Line work shall not intersect numerals showing profile elevations. Sharp solid arrowheads shall terminate dimension lines.

**3-4 TITLE SHEET:** All improvement plans shall have the following information as minimum on the cover sheet:

- A. The entire subdivision or parcel and project
- B. Assessment district limits (if applicable)
- C. City limits (if applicable)
- D. Street names and widths
- E. Adjacent subdivision, including names, lot lines and lot numbers
- F. Property lines
- G. Public easements
- H. Location map
- I. Scale of drawings, including scale bar
- J. Index of sheets
- K. Legend of symbols
- L. Signature block conforming to Standard Drawing 3-1
- M. Benchmark information

**3-5 TITLE BLOCK:** Each sheet within the set of drawings shall have an approved title block showing the following:

- Sheet title

- Sheet number
- Date
- Scale
- Consulting Engineer's name, signature and seal. Signature may be placed across the seal.
- Project title.

The title block shall be either across the bottom or along the right edge of each plan sheet.

**3-6 DRAINAGE, SEWER, WATER AND GRADING LAYOUT:** On all subdivision plans, a separate plan is required for each of the following:

- Water
- Street Lights
- Grading and erosion control

In addition, the storm drainage, sanitary sewer and water systems shall be shown on plan and profile sheets. On all other plans, a composite plan layout will be acceptable but the above facilities shall be shown within the development and on the plan and profile plans.

All plans showing the domestic water systems shall include signature blocks and be approved by the responsible water and fire districts. The signature block shall conform to Standard Drawing 3-1 and shall be situated near the lower right hand corner of the first sheet of the water plans.

**3-7 PLAN DETAILS:** In addition to the other requirements of these Improvement Standards, the following details shall be shown on the plans submitted for approval. This does not in any way exempt the Consulting Engineer preparing plans from the responsibility of preparing neat, accurate and comprehensive plans in keeping with the standards of the profession.

**A. Record Information - All existing and proposed:**

- Right of Way lines
- Boundaries of lots fronting on the street
- Easements
- Both on-site and off-site right of way and easement lines shall be properly dimensioned.

B. **Existing Facilities** - All pertinent existing facilities shall be shown, including:

- Street striping
- Medians  
Driveways (on both sides of the street when within 40 feet of the medians ending)
- Curbs
- Sidewalks
- Pavement shoulders
- Location and size of all underground utilities, storm and sanitary sewer lines
- Limits of 100-year flood plains
- Structures
- Trees (6-inch and larger) and other foliage
- Traffic signals, traffic conduits and traffic detector loops
- Street lights, pull boxes, and underground electric conduits
- Drainage ditches
- Utility poles
- Fire Hydrants
- Retaining walls
- Any other features of the area that may affect the design requirements for the area.

When the potential utility conflict exists, the consulting engineer shall verify the “as built” elevations for the utilities. For existing structural sections, the grade of the cross slope on the road and 20 feet into the property at driveways shall be shown.

C. **Contours and Elevations** - Existing contours or supporting spot elevations shall be shown on all plans (see Section 10 for off-site requirements).

D. **Profiles** - The plans shall show the existing profile of all roadway centerline, edges of pavement, curb and gutter flow lines, drainage ditches, storm and sanitary sewers. Designs of proposed public improvements shall include profiles showing centerline elevations at 50-foot intervals and rate of grades, vertical curves and other vertical alignment data. When curb and gutters are designed for reconstructed County roads, elevations shall be shown on the edge of the outside traveled way or if the road has a full paved section, elevations shall also be shown two feet from the proposed lip of gutter. Designs for vertical curves shall show elevations at 25-foot intervals. Where it exists, county stationing shall be used for profiles of public roads. The consulting engineer shall contact the Sacramento County Department of Transportation for such stationing.

The plans shall show the existing ground profile for a minimum distance of 200 feet beyond temporary street endings to insure proper vertical alignment within the proposed improvement limits. The 200-foot minimum shall be increased when requested by the County Engineer.

**E. Stationing and Orientation** - The stationing on plan and profile shall read from left to right. Stationing shall increase from south to north or from west to east, except for cul-de-sacs, where stationing shall proceed from the intersection. Plans shall be so arranged that the North arrow points toward the top or upper 180 degrees, insofar as practical.

**F. Bench Marks** – Location, description, and elevation of bench mark(s) shall be clearly delineated on all sheet the plans. Effective (Board Adoption Date or allow transition period) all improvement plans, FEMA submittals, and drainage studies that are submitted to the County of Sacramento shall be based upon the North American Vertical Datum of 1988 (NAVD88). NAVD88 bench marks shall be referenced to the North American Vertical Datum of 1988 and be published by the National Geodetic Survey (NGS) or County of Sacramento Department of Development and Code Services. NAVD88 elevations computed by applying Vertcon shift value to superseded NGVD29 heights shall not be allowed.

Projects with compelling justifications may use the NGVD 29 datum, subject to the written approval of the Deputy County Executive. Written approval from the Deputy County Executive must be obtained prior to any submittal of improvement plans, grading plans or drainage studies to the County. Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) submittals shall comply with the Federal Emergency Management Agency requirements. All plan sheets shall describe the vertical conversion from the County bench mark to NAVD88.

**G. Cross Sections** - Cross sections shall be included in the plans, where determined necessary by the County Engineer. Sections shall include all pertinent structural and topographical features. Section calls shall be identified by a number and letter and the sheet on which the section appears.

**H. Special Notes** - Special Notes shall be clearly indicated. Notes shall contain a statement regarding obtaining encroachment permits from other agencies when applicable.

**3-8 REQUIRED NOTES:** A list of County required notes shall be obtained from the County Engineering Division of the Office of Development and Code Services and shall be included on all improvement plans submitted to the County for approval.

**3-9 STANDARD DRAWINGS:** Consulting engineers shall not include the standards drawings included herein on improvement plans, but shall refer to the drawing by number. If a variance to a standard drawing is intended, the drawing shall be shown with the variance noted.

IMPROVEMENT PLAN APPROVAL BLOCK

IMPROVEMENT PLAN REVISION BLOCK

<b>SACRAMENTO COUNTY PUBLIC WORKS AND INFRASTRUCTURE AGENCY</b>	
PROJECT TITLE:	
ASSESSORS PARCEL NO:	
APPROVED:	
ORDER NUMBER:	DRAINAGE FEE:
CHECKED BY:	DRAINAGE APPROVED:



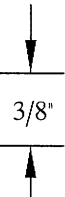
NO.	DESCRIPTION	ENGR INIT	COUNTY APPROVAL	
			BY	DATE

1. Project name, parcel number, and map coordinates shall be in 10 point arial font
2. Approval block shall be located at the lower right corner of title sheet, within bottom 6 inches, and right 8 inches of page

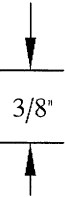
ENGINEER APPROVAL BLOCK

APPROVED BY:	
COUNTY ENGINEER	DATE

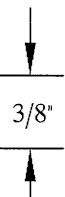


WATER AND FIRE APPROVAL BLOCKS

APPROVED BY:	
(PUT NAME OF FIRE DISTRICT HERE)	DATE



APPROVED BY:	
(PUT NAME OF WATER DISTRICT HERE)	DATE



Put water and fire approval blocks on water distribution plans for subdivisions, and on the title sheet for all other projects

*Robert A. DeL...*  
COUNTY ENGINEER

<b>SACRAMENTO COUNTY PUBLIC WORKS &amp; INFRASTRUCTURE AGENCY</b>	
Signature Blocks	
DATE: April 2018	3-1