

SECTION 3

IMPROVEMENT PLAN REQUIREMENTS

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SECTION 3
IMPROVEMENT PLAN REQUIREMENTS

3-1 **DIGITAL SUBMITTALS**

At the discretion of the Director, plans prepared on a computer may be submitted in digital format for review. Only plans prepared using AutoCAD (acceptable versions as determined by the Director) will be accepted. Plans may be submitted on disc or via e-mail, as required by the Director. Digital plan submittals shall include all that is required in this Manual.

3-2 **PAPER SIZE AND SCALE**

All improvement plans shall be submitted on 22" X 34" or 24" X 36" paper. Only common engineering scales shall be used.

3-3 **DRAFTING STANDARD**

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 a minimum on the cover sheet:

- The entire subdivision or parcel and project
- Assessment district limits (if applicable)
- City limits (if applicable)
- Street names and widths
- Adjacent subdivision, including names, lot lines and lot numbers
- Property lines
- Public easements
- Location map
- Scale of drawings, including scale bar
- Index of sheets
- Legend of symbols
- Signature and revision blocks conforming to the Standard Drawing
- Benchmark information
- MMRP control number
- WDID #

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, SIGNING AND STRIPING AND GRADING LAYOUT

On all subdivision plans, a separate plan is required for each of the following:

- Water
- Signing and Striping, including traffic calming features
- Streetlights
- Grading and erosion control

In addition, the storm drainage, sanitary sewer, and water systems shall be shown on the 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 plan and profile plans.

All plans showing the domestic water systems shall include signature blocks and be approved by the responsible water and fire departments. The signature block shall conform to the Standard Drawing and shall be on the cover sheet of the Plan set.

3-7 PLAN DETAILS

In addition to the other requirements set forth in this Manual, 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 record information shall be shown, including:

- 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
- Existing street addresses, where applicable

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

- Pavement delineation and traffic signage
- Medians
- Driveways (on both sides of the street along the project frontage)
- Curbs (rolled curbs or vertical curbs)
- Sidewalks
- Sidewalk ramps
- Pavement shoulders
- Location and size of all underground utilities, including but not limited to water, storm, and sanitary sewer lines
- Limits of 100-year flood plains
- Structures
- Trees (6" and larger) and other foliage
- Traffic signals, cabinets, pull boxes and traffic detector loops with detector hand holes
- Street lights, cabinets, pull boxes, and underground electrical conduits
- Drainage ditches
- Utility poles and transformers
- Fire hydrants
- Retaining walls
- Any other features which may affect the design requirements for the project area

C. Contours and Elevations - Existing contours and supporting spot elevations shall be shown on all plans that extend fifty feet (50') beyond limits of work.. See Section 10 for offsite requirements.

D. Profiles - The plans shall show the existing profile of all roadway centerline, edges of pavement, gutter flow lines, 100-year HGL at critical locations, drainage ditches, existing water lines and storm and sanitary sewers. Designs of proposed public improvements shall include profiles showing centerline elevations at 50-foot intervals and rates of grades, vertical curves and other vertical alignment data. When curbs and gutters are designed for reconstructed City streets, elevations shall be shown on the edge of the outside traveled way, or if the road has a full paved section, shall also be shown two feet from the proposed lip of the gutter. Designs for vertical curves shall show elevations at 25-foot intervals. Where it exists, City stationing shall be used for profiles of public streets. The Consulting Engineer shall contact Public Works for such stationing. When clearance between utilities is less than two feet (2') the clearance shall be noted by dimension in the profile.

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 Director.

- 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 benchmarks and datum shall be clearly delineated on the plans. The datum shall be 1929 North American Datum (U.S.G.S. or U.S.C. & G.S.) unless otherwise approved by the Director. Consulting Engineers shall contact Public Works for location and elevation of the official benchmark nearest their project.
- G. California Coordinates System** - The Director may require that proposed improvements be tied into the California Coordinates System if monument coordinate points are available within a reasonable distance (200 feet or less) of said improvement as determined by the Director.
- H. Cross Sections** - Cross sections shall be included in the plans where determined necessary by the Director. 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.
- I. 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 City required notes may be obtained from Public Works and shall be included on all improvement plans submitted to the City for approval.

3-9 STANDARD DRAWINGS

Consulting Engineers shall not include the standard 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.