

COUNTY OF SUTTER
DEPARTMENT OF PUBLIC WORKS
DESIGN STANDARDS

TABLE OF CONTENTS

	<u>Page</u>
SECTION 1 PURPOSE AND DEFINITIONS	
1-1 Purpose	1-1
1-2 Design Practice	1-1
1-3 Definitions	1-1
SECTION 2 GENERAL REQUIREMENTS	
2-1 Plans by an Appropriate Engineer	2-1
2-2 Approved Plans	2-1
2-3 Reference to Standard Specifications and Design Standards	2-1
2-4 Work in County Rights of Way, Easements and Waterways	2-1
2-5 Improvement Plan Submittal	2-2
2-6 Improvement Plan Resubmitted	2-3
2-7 Plan Check and Inspection Fee	2-3
2-8 Plan Approval	2-3
2-9 Final Plans Required	2-4
2-10 Improvement Plan Revisions During Construction	2-4
2-11 Record (As-Built) Plans	2-5
2-12 Conflicts, Errors and Omissions	2-5
2-13 Change in Professional Engineer	2-5
2-14 Sewer Annexation Requirements	2-6
2-15 Tunnel Safety Requirements	2-6
2-16 Existing Utilities	2-6
2-17 Partial Plans	2-6
2-18 Other Agency Notifications	2-7
2-19 Inspection Requirements	2-7
2-20 Special Notices and Permits	2-8
SECTION 3 PLAN SHEET REQUIREMENTS	
3-1 Paper Details	3-1
3-2 Drafting Standards	3-1
3-3 Title Sheet	3-1
3-4 Title Block	3-2
3-5 Drainage, Sewer, Water and Grading Layout	3-2
3-6 Plan Details	3-2
3-7 Required Notes	3-4

TABLE OF CONTENTS (CONTINUED)

SECTION 4 STREETS

4-1	Street Types and Design Widths.....	4-1
4-2	Street Class	4-3
4-3	Structural Sections	4-4
4-4	Profile Standards	4-6
4-5	Partial Streets	4-7
4-6	Offset Intersection.....	4-7
4-7	Cul-De-Sac.....	4-8
4-8	Elbow Intersection	4-8
4-9	Centerline Radii.....	4-8
4-10	Sight Distance at Intersections	4-9
4-11	Right-of-Way Radii	4-10
4-12	Right-of-Way Widths	4-11
4-13	Bus Stops	4-11
4-14	Intersection Widening.....	4-12
4-15	Partial Pavement Widening.....	4-12
4-16	Pavement Corner Radii	4-13
4-17	Developer’s Pavement, Signal, and Street Light Responsibility	4-13
4-18	Trenching in Existing Paved Roadways.....	4-15
4-19	Testing of Material	4-15
4-20	Street Names	4-15
4-21	Street Sign Locations	4-16
4-22	Traffic Signs	4-16
4-23	Permanent Barricades.....	4-17
4-24	Street Trees.....	4-17
4-25	Driveways	4-19
4-26	Pedestrian Lanes	4-21
4-27	Handicap Ramps.....	4-21
4-28	Curb and Gutter	4-21
4-29	Cross Gutters	4-22
4-30	Barrier Curbs.....	4-22
4-31	Sidewalks	4-22
4-32	Fences.....	4-23
4-33	Privately Owned Bridges.....	4-23
4-34	Street Terminations.....	4-23
4-35	Street Lights Required.....	4-24
4-36	Street Lights Not Required	4-24
4-37	Lighting Plan Details	4-24
4-38	Lighting Design Standards.....	4-25
4-39	Street Light Design Details	4-25

TABLE OF CONTENTS (CONTINUED)

SECTION 5 STORM DRAINAGE DESIGN

5-1	Drainage Policy	5-1
5-2	Permits from Other Public Agencies.....	5-1
5-3	Compliance with National Pollution Discharge Elimination System (NPDES)	5-1
5-4	National Flood Insurance Program.....	5-2
5-5	Drainage Capacity Design	5-2
5-6	Surface Drainage Grading Design.....	5-2
5-7	Drainage Diversions	5-2
5-8	Drainage Easements	5-2
5-9	Runoff Calculation.....	5-3
5-10	Hydraulic Design Criteria	5-22
5-11	Drainage Structures	5-24
5-12	Channels and Outfall Design	5-28
5-13	Fencing Requirements.....	5-30
5-14	Fill in a Floodplain.....	5-30

SECTION 6 DOMESTIC WATER SUPPLY SYSTEMS

6-1	Introduction	6-1
6-2	Intent of Criteria.....	6-1
6-3	Current Standards.....	6-1
6-4	Connection Permits and Fees	6-2
6-5	Water Supply Quality.....	6-2
6-6	Water Supply Pressure.....	6-2
6-7	Design Criteria.....	6-2
6-8	Well and Pumping Plant Design	6-3
6-9	Transmission System Design.....	6-3
6-10	Transmission System Layout Requirement	6-4
6-11	Distribution System Design.....	6-4
6-12	Distribution System Layout Requirements.....	6-5

SECTION 7 SANITARY SEWER DESIGN

7-1	Design Criteria.....	7-1
7-2	Average Flow Determination.....	7-1
7-3	Design Flow	7-2
7-4	Pipe Capacity, Slope, Velocity, Size, Depth and Material.....	7-2
7-5	Sewer Locations and Alignment Requirements	7-5
7-6	Trench Loading Conditions and Pipe Design.....	7-7
7-7	Manhole Criteria	7-8
7-8	Drop Connection Criteria	7-10
7-9	Flushing Branch Criteria.....	7-10
7-10	Service Sewer Design.....	7-10

TABLE OF CONTENTS (CONTINUED)

7-11	Creek Crossing Design.....	7-12
7-12	Boring and Jacking Requirements.....	7-13
7-13	Pump Station and Force Main Requirements.....	7-14
7-14	Sewer Improvement Plan Requirements.....	7-14
7-15	Design of Onsite Sewer Systems for Private Multiple Ownership Residential Developments.....	7-18
7-16	Multi-Parcel Commercial and Industrial Developments.....	7-19

LIST OF FIGURES

Figure 5-1	MAP, Lines of Equal Average Annual Rainfall.....	5-9
Figure 5-2A	Runoff Coefficients for 100-Year Storms.....	5-13
Figure 5-2B	Runoff Coefficients for 25-Year Storms.....	5-14
Figure 5-2C	Runoff Coefficients for 10-Year Storms.....	5-15
Figure 5-3	Point-Area Reduction Factors for Design Rainfall Depths.....	5-20

LIST OF TABLES

Table 5-1	Roughness Coefficients (η).....	5-10
Table 5-2	Design Rainfall Depths as a Function of MAP.....	5-11
Table 5-3	SCS Rainfall Temporal Distribution.....	5-21

APPENDIX A HYDROLOGIC SOIL GROUPS (HSGs)

APPENDIX B NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM
(NPDES) GUIDANCE INFORMATION

STANDARD DRAWINGS

STANDARD DRAWINGS
