

Design Criteria Fact Sheet

South Fort Collins Sanitation District



Calculations: use Manning's Equation with 0.013 coefficient

Velocity: minimum 2 ft/sec, maximum 7 ft/sec

Depth Ratio Maximum (d/D): ≤15 inch diameter: 0.5, >15 inch diameter: 0.75

Pipe Size: minimum 8 inch diameter for mains, 4 inch diameter for services

Peaking Factor: 3

Separation Minimums: 10 feet from water supply and trees, 1.5 feet vertically from all utilities. Potable water lines shall pass above sewer lines unless specifically exempted.

Manhole Drop Min.: straight channel to 45° bend: 0.1 ft, 45° - 75°: 0.2 ft, 75° - 90°: 0.3 ft

Average Daily Flow:

Land Use	Criteria
All Residential	80 gpd/capita
Single Family Residential Single Family Attached	3.2 capita/dwelling unit
Multi-Family (≥3 units)	2.8 capita/dwelling unit
Retail, Offices	0.2 gpd/sq ft
Hotels (meeting space, add 0.6 gpd/sq ft)	75 gpd/guest room
Commercial, Industrial, Institutional, Churches and Others	Considered case-by-case

Pipe Slope:

	Pipe Diameter (inches)	Minimum Slope (Percent)	Maximum Slope (Percent)
Service Laterals	4	2.0	21
	6	1.0	12
Sewer Mains	8	0.40	8.3
	10	0.28	6.2
	12	0.22	4.9
	15	0.15	3.6
	18	0.12	2.8
	21	0.10	2.3
	24	0.08	1.9

This Fact Sheet is provided as a courtesy. It is the Design Engineer's responsibility to be aware of all requirements of the South Fort Collins Sanitation District Development and Design Specifications.

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