

**3-300 SEWER DESIGN CRITERIA**

**Style Definition:** Style 4: Indent: Left:  
0.56", Hanging: 0.81"

**3-301 Design capacity sewer trunks and mains;** - The design criteria for public sewers is based on residential (R1) zoning and land use with a density of 4 dwelling units per acre and 3.3 persons per dwelling unit. Use these figures unless more accurate population or land use studies are available:

**3-301.1 Sewage production**

- (1) Residential = ~~8063~~ gallons (~~304240~~ lpcd) per capita per day (gpcd) or ~~26530~~ gallons (~~4006870~~ liters) per EDU, per day.
- (2) School flow:
  - a) Elementary Schools: ~~152~~ gpcd (~~5746~~ lpcd).
  - b) Junior High and High Schools: ~~2013~~ gpcd (~~7650~~ lpcd).
- (3) Commercial/Industrial/Church: ~~2,500~~ 1,401, 712, 1,313 gpd/acre.
- (4) Parks: ~~500~~ 410 gpd/acre.
- (5) Peak to average ratio: See CVDS 18.

**3-301.2 Pipe design capacity based on Manning's flow equation:**

- (1) New Pipes Use 1/2 full design flow for diameters up to and including 12 inches.
- (2) New Pipes Use 3/4 full design flow for diameters greater than 12 inches (30cm).
- (3) "n" factors
  - a) for vitrified clay or reinforced concrete pipe:
    - 1) n = 0.013 for pipes up to 21" (53cm) diameter;
    - 2) n = 0.012 for pipes greater than 21" (53cm) diameter;
  - b) for PVC pipe, n = 0.012 for PVC pipe all sizes.
- (4) Velocities:
  - a) Minimum = 2 feet/second (.61m/s). See Section 3-302.2(6) also.
  - b) Maximum = ~~120~~ feet/second (~~3.60~~m/s) (except as approved by City Engineer).