



www.EngineeringPropertiesPC.com
71 Clinton Street
Montgomery, NY 12549
phone: (845) 457-7727
fax: (845) 457-1899

October 25, 2012

Town of Lloyd Planning Board
12 Church Street
Highland, NY 12528

**RE: MOUNTAINSIDE WOODS
TOWN OF LLOYD
SEWER FLOW CALCULATIONS**

Dear Board Members:

We are in receipt of comments/calculations from the public regarding sanitary sewer flows for the project. The comments can be summarized into two basic concerns.

1. The average daily sanitary flow rate used for the design is not correct.
2. A peak flow analysis of the sanitary sewers was not considered.

In response to these comments we offer the following.

1. The proposed average daily flow rate of 37,275 gallons per day was based on the NYSDEC Design Standard of 75 gallons per day per person times the estimated population of the project. It is our opinion that this flow accurately estimates the average daily flow rate for the project.

During review of the Engineer's Report for the Sewer District Extension the Town's consulting engineers, Morris Associates, asked that the design flow be revised to reflect a more conservative design flow estimate of 400 gallons per day for 3 bedroom homes and 475 gallons per day for 4 bedroom homes with a deduction of 20% for water saving fixtures per page 10 of the *NYSDEC Design Standards for Wastewater Treatment Works 1988* as quoted below.

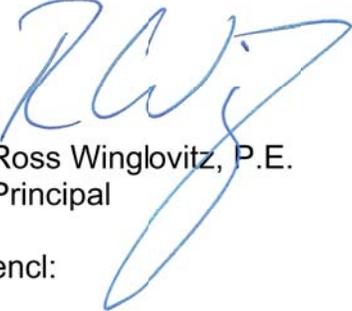
"Section 15-0314 of the Environmental Conservation Law mandates the use of water-saving plumbing facilities in new and renovated buildings. Hydraulic loading, as determined from reference to Table 3 may be decreased by 20 percent in those installations serving premises equipped with certified water-saving plumbing fixtures. A combination of new and old fixtures can be considered on a pro rata basis."

This analysis yields a design average daily flow of 53,340 gallons per day which was the basis of the Engineer's Report for the sewer district extension.

2. The analysis of the capacity of the sewers had not been completed as the estimated sewer flows are far less than the capacity of an 8 inch sewer pipe placed at minimum slope. The capacity of an 8 inch sewer pipe with the flattest slope proposed for the site (0.5%) will flow approximately 550,000 gallons per day. This capacity is more than 10 times the estimated average daily flow and would therefore easily meet the design requirement of passing the maximum daily flow rate which is 2 times the average daily flow rate or 106,680 gallons per day.

If you have any additional questions and/or comments please don't hesitate to contact this office.

Sincerely,
Engineering & Surveying Properties, PC



Ross Winglovitz, P.E.
Principal

encl:

cc: file