

ENVIRONMENTAL DESIGN  
PARTNERSHIP, LLP

---

## **SANITARY SEWER SERVICE NARRATIVE**

### **REGATTA VIEW AREA B PHASE 3**

### **CITY OF SARATOGA SPRINGS, NY**

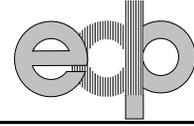
MAY 2016

#### **1.0 PROJECT DESCRIPTION**

Regatta View, LLC is proposing the development of a 6.79 +/- acre parcel located on the northeast corner at the intersection of Route 9P and Regatta View Drive in the City of Saratoga Springs. The proposed project includes 12 residential duplex condominium units (24 total units), associated driveways and a private road. The project will result in approximately 4.7 +/- acres of land disturbance and 1.88 acres of new impervious area.

The Saratoga County Sewer District No. 1 currently owns and operates a gravity sewer main that extends through the parcel proposed for development. With the development of this parcel the existing gravity sewer main will be re-routed to align with the proposed roadway and new gravity sewer mains will be extended to service the entire length of the proposed roadway. The following narrative provides information related to anticipated sewer hydraulic loading associated with the proposed project and background information relative to the existing Saratoga County sewer system serving this area.

Water service will be provided to the site via an extension of the existing City of Saratoga Springs water system distribution system infrastructure. Stormwater will be managed onsite. Separate engineering narratives have been prepared for the proposed water service to the site and proposed stormwater management system.



## 2.0 ANTICIPATED HYDRALUIC LOADING

The proposed Regatta View Area B Phase 3 development will include 24 residential condominium units. The anticipated hydraulic loading has been calculated in accordance with the *Recommended Standards for Wastewater Facilities*, 2014 Edition (Ten State Standards) as follows:

- Residential Hydraulic Loading:
  - Proposed Number of residential units = 24
  - Average persons / dwelling (2014 census estimate for Saratoga Springs) = 2.11
  - Design flow rate = 100 gpcd
  - Average Daily Flow =  $24 * 2.11 * 100 = 5,064$  gpd
  - Peaking factor = 4.0
  - Peak Hourly Flow Rate =  $5,064 * 4 / 1440 = 14.0$  gpm
  
- **TOTAL AVERAGE DAILY FLOW = 5,064 gpd**
- **TOTAL PEAK HOURLY FLOW RATE = 14 gpm**

## 3.0 PROPOSED COLLECTION SYSTEM

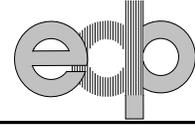
The proposed project will include an onsite gravity collection system consisting of 8 inch gravity sewer to be installed at a minimum slope of 0.5%. Assuming a Manning's coefficient of 0.012, the maximum flow within an 8 inch PVC pipe installed at 0.5% is approximately 400 gpm. The total peak hourly flow rate for the proposed project is 14 gpm; therefore sufficient capacity will exist within the 8 inch gravity sewer to support the proposed project.

Sanitary sewers will be constructed in accordance with the Ten State Standards and the Saratoga County Sewer District No.1 Standards. The common gravity sewer system will be proposed for dedication to the Saratoga County Sewer District No. 1.

## 4.0 EXISTING GRAVITY SEWER AND DOWNSTREAM INFRASTRUCTURE

The Saratoga County Sewer District No. 1 currently owns and operates a gravity sewer that extends through the project site. With the development of the proposed project, the existing gravity sewer will be re-routed to accommodate the proposed layout. Based on our initial review it appears the existing line provides sanitary sewer service to approximately 125 existing residential units. Applying anticipated hydraulic loading of 100 gal/day/capita, as outlined above, yields an average daily flow rate of approximately 26,375 gallons per day with a peak hourly flow of 73 gpm for the existing 125 residential units served by this line.

Available mapping indicates that the existing line is an 8 inch gravity sewer installed at a relatively shallow slope of 0.2%. Assuming a Manning's coefficient of 0.012, the maximum flow within an 8 inch PVC pipe installed at 0.2% is approximately 260 gpm.



Initial discussions with the Saratoga County Sewer District No. 1 indicate that there are no downstream capacity issues that would limit the ability of the collection system to accommodate the additional hydraulic loading proposed with this project. A formal application for review and reserve capacity is being submitted to the Saratoga County Sewer District No. 1.

## 5.0 SUMMARY

The proposed 24 unit Regatta View Area B Phase 3 condominium project will include an extension of existing Saratoga County Sewer District No. 1 wastewater collection system. Existing sanitary sewer system infrastructure extends through the project site and will be re-routed to accommodate the proposed building layout. It is anticipated that the proposed 24 unit condominium project will result in an average daily wastewater loading of 5,064 gallons per day.

All construction and design will be in conformance with the City of Saratoga Springs and Saratoga County Sewer District No. 1 requirements and specifications. The theoretical daily discharge from the proposed development (5,064 gpd) is within the Saratoga County Sewer District's downstream trucking and treatment capacity.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'Travis J Mitchell', is written over a horizontal line.

Travis J Mitchell, P.E.  
Environmental Design Partnership