

**SANITARY SEWER CONNECTION
SUMMARY REPORT**

**FOR
“HOPE STREET TOWNHOUSES”
RESIDENTIAL DEVELOPMENT**

**LOCATED AT
91 HOPE STREET
STAMFORD, CONNECTICUT**

**PREPARED FOR
RRIT, LLC**

December 12, 2023



A handwritten signature in blue ink that reads "Derek Daunais".

Derek Daunais, PE
CT License No. 22861

20XE_SCSR_00

LAND PLANNERS • ENGINEERS • SURVEYORS

D'Andrea Surveying & Engineering, PC

SECTION I: Introduction

The purpose of this report is to summarize the impacts that the sanitary sewer flow from the proposed 27-unit residential development will have on the City of Stamford sanitary sewer system. The proposed development will consist of the removal of an existing building that was previously used as a church, the construction of 26 new townhouse units, and the remodeling of an existing on-site dwelling into the 27th unit of the development.

The sanitary sewer lateral for the existing dwelling (proposed Unit 27) will remain in use. The sanitary sewer laterals for eight of the proposed townhouse Units (1-5 and 10-12) will discharge by gravity into a common sanitary sewer main that connects into the public 8-inch diameter sewer main in Hope Street. The sanitary sewer laterals for the other eighteen of the proposed townhouse Units (6-9 and 13-26) will be discharged by gravity into a proposed on-site sanitary sewer pump station. The collected sewage in the pump station from these units will then be pumped through a force main and discharged into a proposed on-site sanitary sewer manhole near the driveway entrance. The outflow from this manhole will then discharge by gravity into the previously mentioned common sanitary sewer main that connects into the public 8-inch diameter sewer main in Hope Street. Refer to the "Sanitary Sewer and Utility Layout Plan", Sheet 4 of 8, in the civil "Site Plan Review Set" prepared by this firm (D'Andrea Surveying & Engineering, P.C.) for a depiction of the proposed development and its sanitary sewer connection to the City's system.

The following is a summary of the contributing sanitary sewer flows from the proposed residential development.

SECTION II: Proposed Contributing Sanitary Sewer Flow

The proposed development will consist of the construction of nine new 4-bedroom townhouse units (Units 1-9), seventeen new 3-bedroom townhouse units (Units 10-26), and the remodeling of the existing on-site 4-bedroom house (Unit 27). The following computations were performed in order to determine the contributing sanitary sewer design flow from the proposed development to the sanitary sewer main in Hope Street. The amount of sewage that will be generated can be expressed in terms of average flow, or gallons per day (gpd). Average flow is estimated based on bedroom occupancy.

Proposed Residential Units:

Proposed number of 4 bedroom units = 10

Proposed number of 3 bedroom units = 17

The design flow per bedroom is 150 gallons per day (gpd) except for bedrooms beyond three in a single townhouse unit that have a design flow of 75 gpd for each additional bedroom.

$$10 \times (3 \text{ bedrooms} \times 150 \text{ gpd} + 1 \text{ bedroom} \times 75 \text{ gpd}) = 5,250 \text{ gpd (Units 1-9)}$$

$$17 \times (3 \text{ bedrooms} \times 150 \text{ gpd}) = 7,650 \text{ gpd (Units 10-26 \& 27)}$$

Proposed Total Design Flow Discharge = 12,900 gpd

The calculation for the proposed total design flow discharge is based on full occupancy with two people per every bedroom. This is a conservative calculation because occupancy is typically less than 2 people in every bedroom. The actual total discharge will most likely be less than calculated.