CHISVETTE ENGINEERING

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UTILITY ENGINEERING REPORT

Proposed New Mixed Use Building
118-124 Monticello Avenue
Block 16902, Lots 5, 6 & 7
Jersey City, Hudson County, NJ

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Prepared for:

120 LLC
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Introduction

120 LLC proposes to construct a new six-story, mixed-use building on the easterly side of Monticello Avenue, at mid-block between Brinkerhoff Street and Astor Place. The project site includes Lots 5, 5 & 7 of Block 16902. This report details the stormwater runoff, water demands and sanitary sewer demands of the proposed development and addresses compliance with the stormwater management regulations of Jersey City.

The site is located in the Jackson Hill Redevelopment Plan Area of Jersey City. The property is approximately 14,870 square feet (0.34 acres) in area. The site is currently occupied by a 3-story mixed-use building on Lot 5 and a 2-story mixed-use building on Lot 7. Lot 6 is vacant. Overall, the project area is 36% impervious.

The site is in the combined sewer service area of Jersey City with a 36-inch reinforced concrete combined sewer Monticello Avenue.

Based on Jersey City Municipal Utility Authority (JCMUA) mapping, there is a 12-inch water main in the southbound lane on Monticello Avenue.

According to the most recent "Revised Preliminary" F.E.M.A. Flood Insurance Rate Map, dated January 30, 2015", the site is located Zone X, outside the 0.2% (500-year) flood zone. Therefore, is not subject to New Jersey Department of Environmental Protection (NJDEP) flood hazard area regulations.

Proposed Development

The subject development involves the demolition of both existing buildings and the construction of a new 6-story building mixed-use building consisting of ground floor retail and amenity space and 46 residential units on the upper floors. The proposed building will have a jogged front wall at ground level with a smaller setback of 1.43 near at the northerly retail space and a 6.7-foot setback for the remainder of the frontage. There are no proposed side yards. The rear yard will vary from 47.2 feet to 51.5 feet. A 10-foot wide pervious paver patio will extend along the rear wall of the building. The remainder of the rear yard will be lawn or landscaped.

Stormwater Management

As stated in the Residential Site Improvement Standards (RSIS) N.J.A.C. 5:21-7.5, any development that meets the definition of a "major development" must meet the requirements of the New Jersey Stormwater Management Rules (N.J.A.C 7:8-5.5). The NJDEP regulations define a major development as one that increases impervious area by 1/4-acre or entails an acre of disturbance. The proposed project will result in 0.34 acres of disturbance and will increase impervious area by 0.13 acres. Therefore, under the State rules, this project does not meet the definition of a major development.

However, the Jersey City Stormwater Ordinance defines a major development as one that "adds or replaces" more than 5,000 square feet of impervious area. The proposed project will add and/or replace approximately 10,800 square feet. Thus, under the municipal definition, the project is a major development. As such, detention must be provided to reduce the peak rate of runoff for the 2-year, 10-year and 100-year storms to 50%, 75% and 80%, respectively, of existing runoff rates.

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It is proposed to construct a detention system below ground within the rear lawn area. The system will consist of 3 parallel 30-inch HDPE pipes, each 65 feet long. All roof runoff and rear yard runoff will be directed to this system. The detention system will flow into control structure to be located under the sidewalk within the front yard setback. Storm runoff will eventually discharge into an existing combined sewer manhole in Monticello Avenue. The system is designed to meet or exceed the required peak runoff rate reduction required by the municipal ordinance.

Quality Treatment

The Jersey City municipal ordinance specifically exempts projects served by the combined sewer system from water quality requirements. Furthermore, nearly all of the runoff from the completed project will consist of roof or patio runoff, which is considered clean under the state and municipal stormwater standards. Therefore, no water quality measures are required.

Groundwater Recharge

The proposed site is delineated on the State Plan Policy Map as a Metropolitan Planning Area 1 (PA-1). Consequently, according to the Jersey City stormwater ordinance section345-74.4.-F.1b(2), the groundwater recharge requirement does not apply to this project.

Sanitary Sewer

The proposed project will include 46 residential units, consisting of 29 studios, 15 one-bedroom units and 2 two-bedroom units. The project will also include approximately 3,276 square feet of retail space. In accordance with NJDEP standards in NJAC 7:14A-23, the projected average daily flow from this project will be approximately 7,378 gallons per day (GPD). Assuming the ratio of peak flow to average daily flow is four times the average daily flow, the peak sanitary flow from the site will be approximately 0.05 cubic feet per second (CFS).

It is proposed to connect the building directly to the 36" combined sewer main in Monticello Avenue with a 6" PVC sewer lateral. Since the project will generate less than 8,000 GPD average daily flow, a Treatment Works Approval (TWA) from the NJDEP will not be required.

Water Service

Based on New Jersey Residential Site Improvement Standards (RSIS) Table 5.1 for "Garden Apartments" the proposed project will generate an average domestic water demand of 6,040 GPD. A new 6" DIP fire/domestic water lateral is proposed to connect to the 12" main in Monticello Avenue. In accordance with standard Jersey City procedures, fire demand will be calculated based on a recent hydrant flow test and furnished to the JCMUA with the water connection application. At that time, the required water service lateral size can be verified.

Hydrant flow tests will be performed prior to applying for connection permits to verify adequate pressure and flow is available for fire suppression needs. If needed, a booster pump will be provided within the building to achieve the required fire demand flow.