PRELIMINARY ENGINEERING REPORT

Prepared for

WALLACE CAMPUS

Located at

319, 325, 327-329, 331 Main Street,
302, 304, and 306 Mill Street
City of Poughkeepsie, Dutchess County, NY
Tax ID 6162-77-114098, 109079, 109077, 121116
116114, 112116, & 6162-78-127091

Submitted

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Prepared for

Wallace Campus Manager, LLC

48-02 25th Ave, Suite 400
Astoria, NY 11103

Prepared by

Land Planning ♦ Civil Engineering ♦ Environmental Services ♦ Land Surveying ♦ Landscape Architecture

85 Civic Center Plaza, Suite 103
Poughkeepsie, NY 12601
Phone 845-243-2880
Fax 845-265-8175
www.lrcconsult.com

Offices in Connecticut, New York and New Jersey

LRC Engineering & Surveying, DPC
LRC Engineering & Surveying, LLC
LRC Environmental Services, Inc.

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1.0 INTRODUCTION

The Wallace Campus is 3.04 acres consisting of 7 parcels located at 319, 325, 327-329, 331 Main Street, 302, 304, and 306 Mill Street in the City of Poughkeepsie. The properties are identified as Tax ID#'s 6162-77-114098, 109079, 109077, 121116, 116114, 112116, & 6162-78-127091. The site is located on the north side of Main Street, the west side of Catharine Street, and the south side of Mill Street (Westbound Arterial). The project has UTM coordinates of 589367 Easting and 4617455 Northing.

Tax Lots 6162-78-127091, 6162-77-114098, 109077, & 109079 will be combined into one tax parcel. The proposed project will demolish the existing buildings at 319, 325, and 327-329 main street and will replace them with a new seven story building which will include retail and residential units. The project will also include a new seven story addition to 331 main Street to be located along Catharine Street. The proposed project will also remove a large amount of impervious surface from behind 325 and 327-329 Main Street to construct a new park.

2.0 WATER SERVICES

2.1 Domestic Water Demand

The site is currently developed. Due to the change in owners and recent vacancies historic water usage records are not available for all of the parcels. Assuming all parcels are fully occupied as they exist, the estimated consumption values for the existing buildings were derived from Table B-3 "Typical per Unit Hydraulic Loading Rates" of the New York State Department of Environmental Conservation (NYSDEC) Division of Water "Design Standards for Intermediate Sized Wastewater Treatment Systems", March 5, 2014. A summary of the projected sanitary sewer flow/water consumption is as follows:

Sanitary Sewer Flow / Water Consumption Projections

EXISTING SITE

Location	Use	Size		Rate*		Flow (GPD)
Parcel A	Residential	10	Beds	110	Per Bedroom	1,100
Parcel B	Residential	6	Beds	110	Per Bedroom	660
Parcel C	Residential	6	Beds	110	Per Bedroom	660
Parcel D	Restaurant	150	Seats	28	Per Seat	4,200
	Club	800	Persons	16	Per Person	12,800
Parcel E	Office	73,112	sq ft	0.08	Per sq ft	5,849
Parcel F	Office	8,740	sq ft	0.08	Per sq ft	699
Parcel G	Office	13,047	sq ft	0.08	Per sq ft	1,044
					Total Proposed Daily Flow:	**27,012**

* Rates based on New York State Design Standards for Intermediate Sized Wastewater Treatment Works (March 5, 2014), with a 20% reduction for the use of modern water saving fixtures.

The Wallace Campus will include Residential, Retail, and a Day Care. The estimated consumption values for the new additions and renovations were derived from Table B-3 "Typical per Unit Hydraulic Loading Rates" of the New York State Department of Environmental Conservation (NYSDEC) Division of Water "Design Standards for Intermediate Sized Wastewater Treatment Systems", March 5, 2014. A summary of the projected sanitary sewer flow/water consumption is as follows:

PROPOSED RE-DEVELOPMENT						
Location	**Use**	**Size**		**Rate***		**Flow (GPD)**
Parcel A	Residential	7	Beds	110	Per Bedroom	770
Parcel B	Residential	6	Beds	110	Per Bedroom	660
Parcel C	Residential	5	Beds	110	Per Bedroom	550
Parcel D - Wallace Bldg	Residential	73	Beds	110	Per Bedroom	8,030
Parcel D - Wallace Bldg	Retail	3,085	sq ft	0.08	Per sq ft	247
Parcel D - Main Str Bldg	Residential	96	Beds	110	Per Bedroom	10,560
Parcel D - Main Str Bldg	Retail	3,331	sq ft	0.08	Per sq ft	266
Parcel D - Main Str Bldg	Fitness	50	Patrons	16	Per Patron	800
Parcel D - Catherine Str Bldg	Residential	78	Beds	110	Per Bedroom	8,580
Parcel D - Catherine Str Bldg	Retail	0	sq ft	0.08	Per sq ft	0
Parcel D - Catherine Str Bldg	Daycare	160	Person	16	Per Person	2,560
					Total Proposed Daily Flow:	**33,023**

The proposed project will result in an increase of 6,011 GPD.

2.2 Proposed Water Supply

Water supply for the project will be provided from the City of Poughkeepsie Municipal Water System. The water is supplied by the joint Town and City water treatment facility located at 3431 North Road, Poughkeepsie, NY 12601.

The buildings and utilities for 302, 304, and 306 Mill Street will remain unchanged. The existing water supply for 331 Main Street and 14 Catharine Street (Mailing address) will also remain unchanged and is a 2" water line from Catherine Street. The new 331 Main Street Addition will utilize the existing water supply for 319 Main Street which was formerly Bull and Buddha which includes a 6 inch sanitary sewer line, 6 inch fire line and 2 inch domestic line. The water is supplied from the municipal line in Main Street. Water supply for the 331 Catharine Street Addition will be provide by a new 6 inch connection to the municipal water main in Catharine Street.

2.3 Water Infrastructure Improvements

A new water meter and backflow prevention device will be installed in the mechanical room in the proposed 331 Main Street Addition. A new 6 inch water service line will be installed for the 331 Catharine Street and will include a water meter and backflow prevention device to be located in the mechanical room. Both building additions will include a new FDC connection and knox box on the building frontage.

2.4 Fire Suppression

The proposed buildings will be equipped with sprinkler systems in accordance with NFPA guidelines. There are no new fire hydrants proposed as part of the site plan. Existing municipal fire hydrants are located on Main Street, Mill Street, and Catharine Street.

3.0 WASTEWATER SERVICES

3.1 Design Wastewater Flows

As discussed in section 2.1 the estimated consumption values are derived from Table B-3 "Typical per Unit Hydraulic Loading Rates" of the New York State Department of Environmental Conservation (NYSDEC) Division of Water "Design Standards for Intermediate Sized Wastewater Treatment Systems", March 5, 2014. The total average day demand for sewer and water is 33,023 GPD for the project. Using a peaking factor of 4.0 as recommended by the NYSDEC the design max hourly flow rate is 91.7 GPM.

3.2 Existing Wastewater Treatment

The project will connect to the existing municipal sewer collection system. Wastewater generated at the site will be treated by the City/Town of Poughkeepsie Municipal Wastewater Treatment Plant. The plant is located off of Hudson Street in the Town of Poughkeepsie.

3.3 Wastewater Infrastructure Improvements

The buildings and utilities for 302, 304, and 306 Mill Street will remain unchanged. The existing sewer service for 331 Main Street and 14 Catharine Street (Mailing address) will also remain unchanged. Both buildings have an existing 6 inch sewer line. The new building addition at 311 Main Street will utilize the existing 6 inch sewer supply for 319 Main Street which was formerly Bull and Buddha. The sewer is connected to the municipal line in Main Street. Sewer Service for the annex at 311 Catharine Street addition will be provide by a new 6" connection to the municipal sewer system in Catharine Street.

4.0 WATER AND WASTEWATER SERVICES – CONCLUSION

Based on the planned re-development water/wastewater consumption estimates, the site will have an increase sewer and water usage of 6,011 GPD. The water and sewer system will be connected to the City of Poughkeepsie water and sewer systems, using the existing infrastructure at the site. The proposed water and wastewater services, from the City of Poughkeepsie Department of Public Works, have adequate infrastructure and capacity.

5.0 STORMWATER

A complete SWPPP will be prepared as part of the project approval. The proposed project is a redevelopment with a reduction in impervious surface and will be designed in accordance with Chapter 9 of the New York State Stormwater Management Design Manual.

The project has been designed to take advantage of the good soils in the vicinity of the proposed re-development. By allowing stormwater runoff to infiltrate back into the ground we are able to minimize the impacts on the surround surface waters and treat the runoff through exfiltration into the sub surface soils. The evaluation of the site to determine the water quality volumetric requirements follow strictly the procedures presented in chapters 4, 5, and 9 of the New York State Stormwater Design Manual.

The proposed project will result in a reduction of 0.73 acres of hard surface which is 49% of the impervious surface within the disturbed area. Restoring the existing impervious areas to grass will allow increased infiltration and a reduction in the amount of runoff generated at the site. In additional to the reduction in impervious surface the proposed project will also include drywells to collect and infiltrate runoff in critical areas.

The SWPPP will demonstrate the design is a NYSDEC-compliant Stormwater Management Plan for the Wallace Campus project. Overall, the proposed stormwater management system reduces and/or eliminates the impacts of the proposed re-development by controlling and treating stormwater through the reduction in impervious surface. Offsite storm discharges and velocities for the proposed project are less than what currently exists. The stormwater management system will function adequately and will not adversely affect adjacent or downstream properties provided it is constructed and maintained as outlined in this plan and as shown on the site plans.