



November 27, 2023

George Distefano
National Resources
485 West Putnam Avenue
Greenwich, CT 06830

**RE: iPark 87 Residential Development
Water Supply /Wastewater Disposal
Town of Ulster, Ulster County, New York
LaBella Project #2222588.01**

Dear Mr. Distefano:

This letter serves to summarize the proposed water supply and wastewater disposal systems for the residential portion of the proposed redevelopment of the former IBM manufacturing campus, currently known as iPark 87. The proposed residential development is located on the southern end of the East Campus and is bounded by Enterprise Drive to the west, Boices Lane to the south, and the railroad to the east. The development is bounded to the north by the northerly boundary of OU-4, an operable unit required for environmental monitoring. The residential portion of the iPark 87 redevelopment will consist of 181 studio units, 435 one-bedroom units, 264 two-bedroom units, and approximately 45,460 square feet of amenity/lobby area and 65,450 square feet of retail space.

To support the proposed residential development on the East Campus, iPark 87 LLC is proposing to connect the on-site private water distribution and sewage collection systems to the Town of Ulster water and sewer systems. The industrial portion of the East Campus and West Campus will continue to be serviced by the existing onsite water distribution system served by the City of Kingston water supply, and the existing sanitary sewer system connected to the Town of Ulster's 24-inch diameter north interceptor.

The anticipated average daily wastewater loading for the residential portion of the project was calculated using Table B-3 of the NYSDEC Design Standards for Intermediate Sized Wastewater Treatment Systems, 2014. As mandated by Section 15-0314 of the Environmental Conservation Law, plumbing facilities in new and renovated buildings must use water-saving fixtures and, therefore, a 20% reduction in water demand can be taken for the amenity/lobby/retail portion of the development. The anticipated average daily domestic water demand is estimated by correlating water supply to wastewater generation. The resulting anticipated average daily wastewater loading for the proposed redevelopment project is presented below.



Anticipated Average Domestic Water Demand and Wastewater Generation

Type of Use	Unit	No. of Units	Water Demand (gpd/unit)	Total Water Demand (gpd)
Apartment	Studio	181	110	19,910
	1 Bedroom	435	110	47,850
	2 Bedroom	264	220	58,080
Amenity/Lobby	Sq. Ft.	45,460	0.1	4,546
Retail	Sq. Ft.	65,450	0.1	6,545
Subtotal Estimated Average Daily Flow				136,931
Less 20% Water Saving Reduction (Amenity/Lobby/Retail Space Only)				-2,218
Total Estimated Average Daily Flow				134,713
Maximum Daily Flow (applying factor of 2.0 to Average Daily Flow)				269,426
Peak Hourly Flow (applying factor of 4.0 to Average Daily Flow)				374.2 gpm

It should be noted that the designs of the Amenity/Lobby and Retail portions of the development are preliminary and the estimated water and sewer calculations should be confirmed as the design progresses.

Water Supply

Based on discussions with the Town of Ulster, the existing 8" ductile iron service to the project from Boices Lane is currently shut off. This service connects to the existing decommissioned water tower onsite. The existing service will be utilized and the connection to the existing water tower will be removed. A second connection to the existing 8" water main in Boices Lane will be provided for redundancy. A new site water meter and backflow prevention device will be installed at the water service entrance and will be located in a heated above ground enclosure. The on-site private water distribution system will consist of 8" diameter Class 52 ductile iron pipe.

The site lies within the Town of Ulster Water District. The existing water treatment plant (WTP) has adequate reserve capacity and the demands imposed by the proposed redevelopment project will not adversely impact the plant operation. A hydrant flow test was conducted by the Town of Ulster on 9/8/2022. The static pressure was reported to be 71 psi, with a residual pressure of 41 psi at a flow rate of 2,160 gpm. No improvements to the off-site water distribution, storage, or treatment system are proposed.

Wastewater Disposal

The proposed on-site private sewer collection and conveyance system will consist of 8" diameter PVC gravity sewer pipe and associated manholes, and one sanitary sewer pump station. The proposed sewer system will connect to the Town of Ulster sewer terminus manhole located in Dogwood Street.

The site lies within the Town of Ulster Sewer District. The existing wastewater treatment plant (WWTP) has adequate reserve capacity and the loading imposed by the proposed redevelopment project will not adversely impact the plant operation. The existing gravity sewer has adequate reserve capacity to accept the additional flow from the development. Flow data was collected in a manhole at the entrance gate for the WWTP between September 11, 2023 and October 10, 2023. This location captures the



flow from all contributing sewer lines and conveys sewage through a 10" ACP sewer pipe that connects to the Sunset Park Trunk Sewer. The maximum flow rate measured during this period was 284-gpm on October 7, 2023. Adding the peak flow rate from the proposed development yields 658.2-gpm. According to record drawings received from the Town of Ulster Sewer Department, the flattest portion of the existing 10" sewer is at 0.00377 ft/ft (0.377%). Using Manning's equation, the capacity of this section of pipe was calculated to be 713-gpm. No improvements to the off-site sewer collection, conveyance, or treatment system are proposed.

Please feel free to contact me at (518) 266-7336 or wkubow@labellapc.com if you have any questions.

Respectfully submitted,

Walter J. Kubow, PE, LEED®AP
Senior Civil Engineer, LaBella Associates



Reg. Exp.
6/30/25