

December 10, 2018

Andres Mizrahi, E.I.
KEITH
301 East Atlantic Blvd,
Pompano Beach, Florida 33060

Subject: **WATER AND WASTEWATER CAPACITY AVAILABILITY LETTER**
3016 Bayshore Drive – DRC R18058
3016 Bayshore Drive, Fort Lauderdale, Florida 33304

Dear Mr. Mizrahi,

According to the site plan submitted, the project consists of constructing a multi-tenant building with 115 condominium/apartment units, 168 hotel rooms, 2,390 S.F. of bar/cocktail lounge space, and 3,150 S.F. of merchandizing/retail space. It will replace four existing buildings with total of 89 hotel rooms. Water and sewer connections to existing City of Fort Lauderdale (City) utilities are proposed along Bayshore Drive and N. Birch Road. According to the calculations submitted, the project will increase water and sewer demand by 0.066 million gallons per day (MGD). The Department of Sustainable Development (DSD) will review and approve such flow calculations. Furthermore, if DSD staff issues comments on the proposed flow calculations after the issuance of this capacity availability letter, the consultant shall request a revised letter with the correct approved flow calculations.

The determination of capacity availability is based upon tools and data analysis as of the date of this letter. Availability of capacities, as calculated in the attached analysis, is not guaranteed and no existing system capacity shall be considered "committed" for this project until a permit has been issued and all fees have been paid. The City reserves the right to re-evaluate the availability of capacities at the time of permit application. If sufficient capacities are not available, the City may deny the permit application or ask the Owner/Developer to submit an alternate design prior to approval. Information contained in this letter will expire one year from the date issued.

Should you have any questions or require any additional information, please contact me at (954) 828-5862.

Sincerely,



Igor Vassiliev, P.E.
Project Manager II

Enclosures: Capacity Analysis Determination

cc: Nancy Gassman, Ph.D., Interim Deputy Public Works Director
Talal Abi-Karam, P.E., Assistant Public Works Director
Omar Castellon, P.E., Assistant City Engineer
Dennis Girisgen, P.E., City Engineer
File: Water and Sewer Capacity Letters

City of Fort Lauderdale
Public Works Department
Water and Wastewater Capacity Analysis
October 18, 2018

Project: 3016 Bayshore Drive
3016 Bayshore Drive, Fort Lauderdale, Florida 33304
DRC Case No. R18058

PROJECT AND DESCRIPTION

Construction of a multi-tenant building with 115 condominium/apartment units, 168 hotel rooms, 2,390 S.F. of bar/cocktail lounge space, and 3,150 S.F. of merchandizing/retail space to replace four existing buildings with total of 89 hotel rooms.

DESCRIPTION OF EXISTING UTILITIES

Water: The site is currently served by a 12-inch water main along North Birch Road, see Figure 1.

Wastewater: The site is currently served by an 8-inch gravity sewer main on Bayshore Drive and a 10-inch gravity sewer main on North Birch Road, which conveys flow downstream to a 15-inch sewer on North Birch Road and to pumping station D-31, see Figures 2 and 3.

Pumping Station: The site is served by Pumping Station D-31 (PS D-31) located at Las Olas Circle and South Birch Road.

SUMMARY OF ANALYSIS AND REQUIRED ACTION

Existing water infrastructure have sufficient capacity to serve the project with no improvements required. Existing wastewater infrastructure does not have sufficient capacity to serve the project. The applicant will be required to propose an alternative solution to the satisfaction of the City. Alternative solution may include a private gravity sewer system, private pumping station to collect and convey sewage, and a force main to connect to the City's sewage transmission system. Alternative solution may also include upsizing existing gravity sewer system to increase its capacity to handle proposed flow increase. A memorandum of agreement (MOA) shall be required between the City and the applicant to coordinate the design requirements and construction of the improvements.

Figure 1 – City Water Atlas

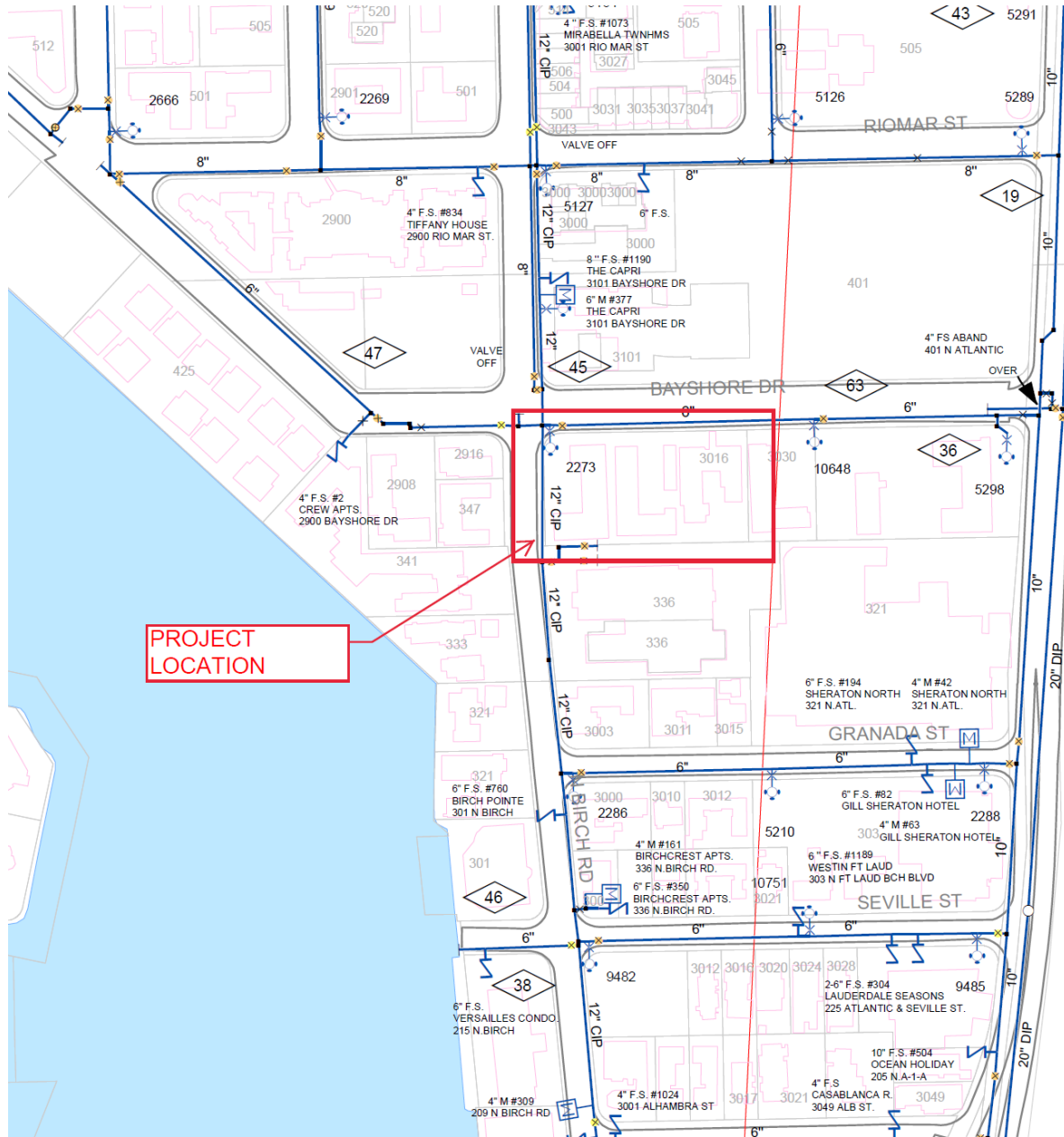


Figure 3 – City Sewer Atlas



WATER CAPACITY ANALYSIS

Requested Demand: Based on the applicant's site plan and building use information the estimated potable water demand is 66,117 gallons per day (GPD), which equates to 0.066 million gallons per day (MGD). Water use demands are calculated based on the City's "*Guidelines for the Calculations of Sanitary Sewer Connection Fees*".

Evaluation of impact on existing distribution pipe (flow & capacity): According to the site plan the applicant is proposing to utilize the 12-inch water main on North Birch Road. The InfoWater hydraulic model was analyzed to determine the impact of this project on the existing 12-inch water main. The existing water main has capacity to serve the project.

Evaluation of impact of Permitted Water Plant Capacity: The Fiveash and the Peele Dixie Water Treatment Plants are designed to treat 70 MGD and 12 MGD of raw water respectively (82 MGD total). The total permitted Biscayne aquifer water withdrawals for these plants is limited to 52.55 MGD per the South Florida Water Management District (SFWMD) permit number 06-00123-W.

Based on the current 12-month rolling average the current production at the two plants is 38.99 MGD. The previously committed demand from the development projects in the permitting or the construction stage is 4.719 MGD. Combining these figures with the demand from the proposed project of 0.066 MGD, the required production would be 43.99 MGD. This is less than the allowable withdrawal limit of 52.55 MGD. Therefore, the water plants have sufficient capacity to serve this project.

Recommended Water Infrastructure Improvements: No improvements required.

WASTEWATER CAPACITY ANALYSIS

Requested Demand: Based on the applicant's site plan and building use information the estimated additional potable water demand is 66,117 gallons per day (GPD), which equates to 0.066 million gallons per day (MGD). Although wastewater is usually 80% of the potable water, a higher, conservative figure has been used for calculations. Sewer use demands are calculated based on the City's "*Guidelines for the Calculations of Sanitary Sewer Connection Fees*".

Evaluation of impact on existing collection pipe (gravity system capacity): The site is currently served by an 8-inch gravity sewer main on Bayshore Drive and a 10-inch gravity sewer main on North Birch Road, which conveys flow downstream to a 15-inch sewer on North Birch Road and to pumping station D-31. Manual of Practice (MOP) 60, published by American Society of Civil Engineers (ASCE) for the gravity sewer design and used by the City staff, recommends that pipe diameters 15-inch or less be designed to flow half full during peak flows. Based on the tools and information available to the City staff, it has been determined that the 8-inch sewer on Bayshore Drive and the downstream 10-inch sewer on North Birch Road cannot convey the flow. The City has used a peak hourly flow factor of 3.0, which is higher than 2.2 as noted in the Reiss Report.

Evaluation of impact on pumping station: Pumping Station D-31 (PS D-31) has a capacity of 600 gallons per minute (GPM) as of November 1, 2018, has a Nominal Average Pumping Operating Time (NAPOT) of approximately 4.4 hours per day. Based on projected sewage flows the pumping run times would increase approximately 110 minutes per day for a total of 6.24 hours, which is lower than Miami-Dade County's recommended daily average (NAPOT) of 10 hours per day. Therefore, the pumping station has adequate capacity to serve the project.

Evaluation of impact of Permitted Wastewater Plant Capacity: The City of Fort Lauderdale owns and operates the George T. Lohmeyer Regional Wastewater Treatment Plant (GTL), which provides wastewater treatment for the City of Fort Lauderdale. The Broward County's Environmental Protection and Growth Management Department's (EPGMD) Environmental Licensing & Building Permitting Division's licensed capacity for GTL is 48 MGD-AADF (Million Gallons per Day – Annual Average Daily Flow). The current annual average daily flow (AADF) to the plant is 38.784 MGD. Combining the committed flows for previously approved projects of 4.719 MGD, plus the 0.066 MGD net contribution from the project, provides a total projected flow of 43.57 MGD. This is less than the permitted treatment plant capacity of 48 MGD. Therefore, the treatment plant has sufficient capacity to serve this project.

Recommended Wastewater Infrastructure Improvements: The applicant will be required to propose an alternative solution to the satisfaction of the City. Alternative solution may include a private gravity sewer system, private pumping station to collect and convey sewage, and a force main to connect to the City's sewage transmission system. Alternative solution may also include upsizing existing gravity sewer system to increase its capacity to handle proposed flow increase. A memorandum of agreement (MOA) shall be required between the City and the applicant to coordinate the design requirements and construction of the improvements.