CITY OF
FORT LAUDERDALE

All-America City

PROJECT ADDRESS: 600 N ANDREWS AVE

Date request was received:3/25/2021

TEMP DRC CASE#: ENG-MISC-21070008 (For Invoicing Purposes)

Project Name: The Gallery at Flagler Village

IF NO DRC CASE NUMBER PROVIDED, WATER & SEWER AVAILABILITY LETTER TO BE PROVIDED UPON PAYMENT OF ENCLOSED A/R INVOICE.

*******IMPORTANT INFORMATION*******

The following analysis is only VALID FOR A PERIOD OF ONE YEAR FROM THE DATE OF ISSUANCE. After which point, a reanalysis must be conducted to ensure adequate availability for projects.

☐ Water and Sanitary Sewer Capacity Allocation Letter (Small Project) $960

☐ Modifications to small project that require capacity re-analysis.....$960

☑ Water and Sanitary Sewer Capacity Allocation Letter (Large Project) $2,400

☐ Modifications to large project that require capacity re-analysis.....$2,400

Dronix Suarez, E.I. | Project Manager II
City of Fort Lauderdale | Public Works
P: (954) 828-6982 | E: DSuarez@fortlauderdale.gov

CITY OF
FORT LAUDERDALE

July 29, 2021

Nathan Lewis
Botek Thurlow Engineering, Inc.
3409 NW 9th Avenue, Suite 1102
Fort Lauderdale, FL 33309

Subject: **WATER AND WASTEWATER CAPACITY AVAILABILITY LETTER**
The Gallery at Flagler Village – DRC Case No. TBD
600 N ANDREWS AVE, FORT LAUDERDALE FL 33311

Dear Nathan Lewis,

According to the information submitted, the project consists of the development of a 195-unit apartment building with 2,500 sf of retail space. There are proposed water connections to City of Fort Lauderdale (City) utilities along N. Andrews Avenue. There are proposed sewer connections to (City) Utilities along NE 1st Avenue. This project lies within the City's Pump Station (PS) A-21 basin and will increase the average day water demand by approximately 0.0365 million gallons per day (MGD) and the average day sewer demand by approximately 0.0277 MGD. The following projects are the City's major initiatives within this basin:

Pump Station A-21 Sewer Basin Rehab
Estimated Design Completion: Completed
Estimated Construction Completion: September 2020 [Check with Jorge if this has been completed]
New Pumping Station Flagler Village A-24

Estimated Design Criteria Package Completion: September 30, 2021
Estimated Construction Completion: December 31, 2022, provided no unforeseen conditions are encountered.

A review of the utility services impacted by the development indicate that improvements to the sanitary sewer mains would be necessary to adequately serve the development to the City's standards. Approximately 250 LF of 10-inch gravity sewer shall be upsized to at least an 18-inch pipe along NE 1st Avenue. These minimum improvements would allow the gravity mains to sufficiently handle the proposed and existing flows in the contributing area. Any live existing upstream sanitary sewer services must be maintained. See Figure 3.

Please be advised that the proposed Flagler Village Pump Station A-24 is estimated to be completed by December 31, 2022, and become operational soon thereafter, provided unforeseen circumstances are not encountered. Therefore, the timeline of all improvements must be coordinated well in advance with the City. Any Certificate of Occupancy will not be issued until the expanded wastewater system is fully functional.

If there are changes to the proposed development after issuance of this capacity availability letter, the Owner or Owner's authorized representative shall submit a revised request based on the updated plans. Failure to seek approval prior to changing the plans may result in revocation of permit and capacity allocation. 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) 828-6982.

Sincerely,

Dronix Suarez, E.I.
Project Manager II

Enclosures: Water and Wastewater Capacity Analysis
cc: Talal Abi-Karam, P.E., Acting Public Works Director
Victor G. Carosi, P.E., Assistant Public Works Director
Omar Castellon, P.E., Chief Engineer
Dennis Girisgen, P.E., City Engineer
File: Water and Sewer Capacity Letters

CITY OF
FORT LAUDERDALE

City of Fort Lauderdale
Public Works Department
Water and Wastewater Capacity Analysis

The Gallery at Flagler Village – DRC Case No. TBD
600 N ANDREWS AVE, FORT LAUDERDALE FL 33311

PROJECT AND DESCRIPTION

The project consists of the development of a 195-unit apartment building with 2,500 sf of retail space.

DESCRIPTION OF EXISTING UTILITIES

Water: The site is currently served by a 16-inch water main along N Andrews Avenue, west of the project site. See Figure 1.

Wastewater: The site is currently served by a 10-inch gravity sewer main to the east of the project site along NE 2nd Avenue. See Figure 2.

Pumping Station: The site is served by PS A-21 which is located along NE 2nd Avenue.

SUMMARY OF ANALYSIS AND REQUIRED ACTION

A review of the utility services impacted by the development indicate that improvements to the sanitary sewer mains would be necessary to adequately serve the development to the City's standards. Approximately 250 LF of 10-inch gravity sewer shall be upsized to at least an 18-inch pipe along NE 1st Avenue. These minimum improvements would allow the gravity mains to sufficiently handle the proposed and existing flows in the contributing area. Any live existing upstream sanitary sewer services must be maintained. See Figure 3.

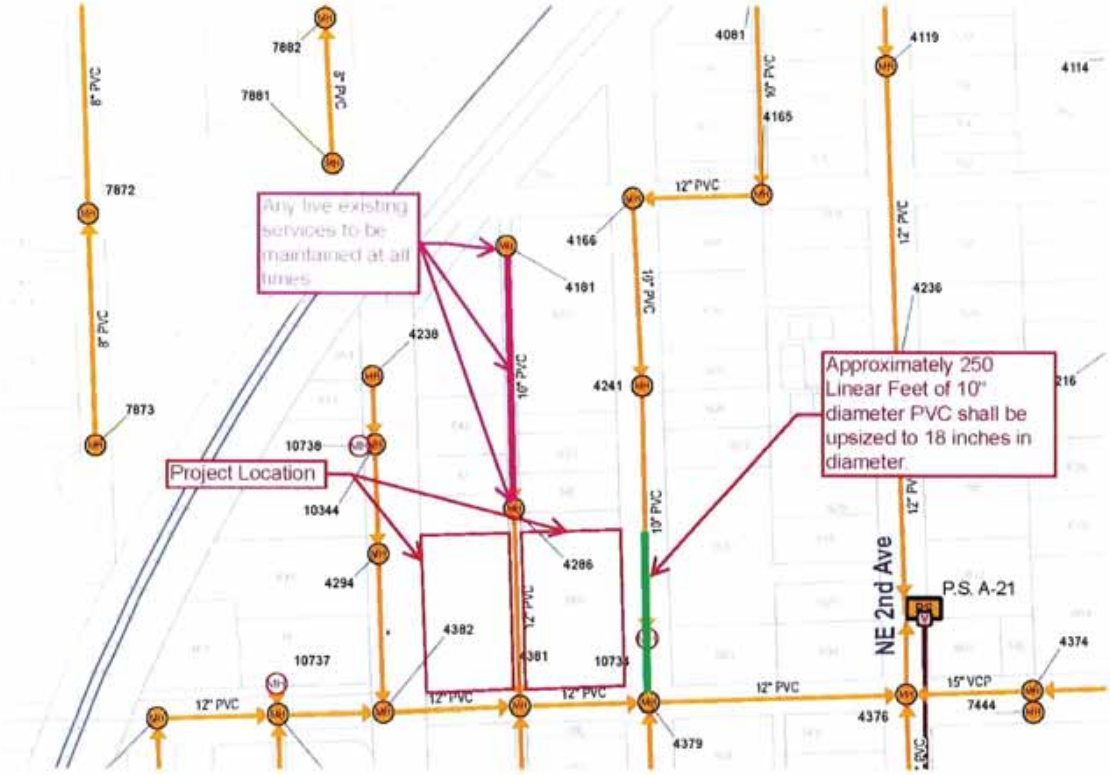
Additionally, PS A-21 does not have sufficient capacity to handle the proposed development. The proposed PS A-24 shall be constructed and on-line prior to the proposed development seeking a Certificate of Occupancy.

The existing water infrastructure has sufficient capacity to serve the project.

Figure 1 – City Water Atlas

Figure 2 – City Sewer Atlas

Figure 3 – Proposed Sewer Improvements



WATER CAPACITY ANALYSIS

Requested Demand: Based on the applicant's site plan and building use information, the estimated average day potable water demand is approximately 36542 gallons per day (GPD), which equates to 0.0365 MGD. Average day water use demands are calculated by reducing the calculated max day water use demands by a factor of 1.3 as determined in the City's Comprehensive Utility Strategic Master Plan. The max day water use demands are calculated using the City's Guidelines for the Calculations of Sanitary Sewer Connection Fees and are based on City Ordinance No. C-19-29.

Evaluation of impact on existing distribution pipe (condition & capacity): According to the site plan, the applicant is proposing to utilize the 16-inch water main along N. Andrews Avenue. The InfoWater hydraulic model was analyzed to determine the impact of this project on the existing 16-inch water main.

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.

The current twelve-month rolling average production at the two plants is 38.11 MGD. The previously committed demand from development projects in the permitting or the construction stage is 4.78 MGD. Combining these figures with the demand from the proposed project of 0.0365 MGD, the required production would be 42.93 MGD. This is less than the allowable withdrawal limit of 52.55 MGD. Therefore, the water plants have sufficient capacity to serve this project. See Figure 4 below.

Recommended Water Infrastructure Improvements: No improvements required.

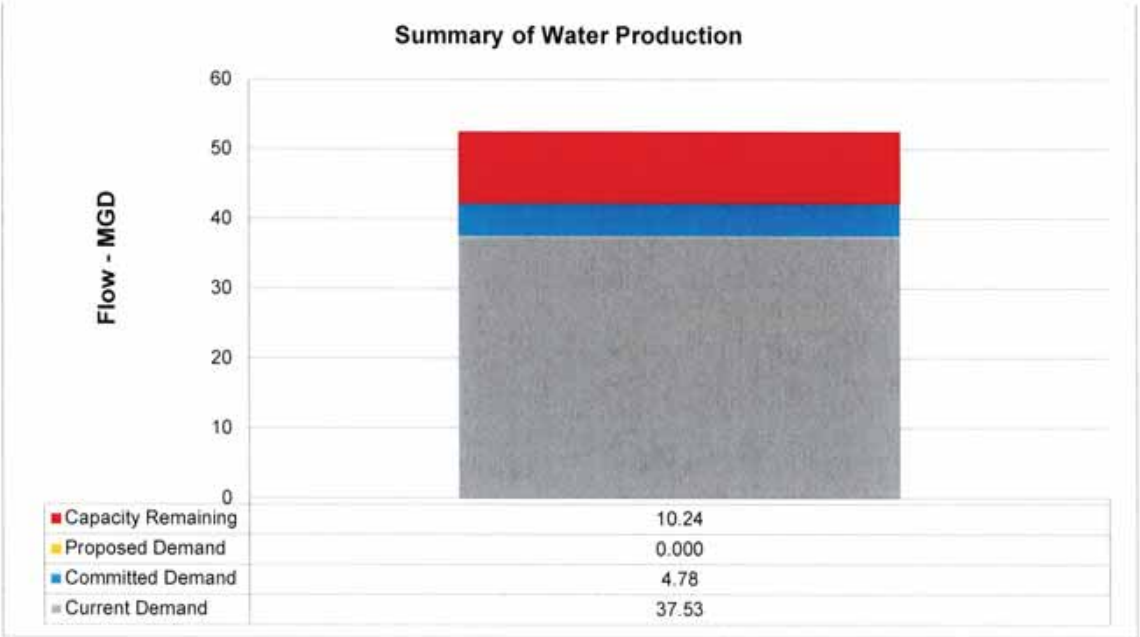


Figure 4

WASTEWATER CAPACITY ANALYSIS

Requested Demand: Based on the applicant's site plan and building use information, the estimated average day sewer use demand is approximately 27711 GPD, which equates to 0.0277 MGD. Average day sewer use demands are calculated using the City's Guidelines for the Calculations of Sanitary Sewer Connection Fees and are based on City Ordinance No. C-19-29.

Evaluation of impact on existing collection pipe (condition and capacity): According to the site plan, the applicant is proposing to utilize the 10-inch gravity sewer main to the east of the project site along NE 1st Avenue. 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. The City uses a peak hourly flow factor of 3.0. Accounting for existing flows and based on the tools and information available to the City staff, it has been calculated that the pipes downstream of the proposed development will flow less than the ASCE-recommended 70% during peak flows. Approximately 250 LF of 10-inch gravity sewer shall be upsized to at least an 18-inch pipe along NE 1st Avenue. These minimum improvements would allow the gravity mains to sufficiently handle the proposed and existing flows in the contributing area. Any existing upstream sanitary sewer services must be maintained. See Figure 3.

Evaluation of impact on pumping station: PS A-21 is a triplex pump station containing three pumps, each with a design capacity of 978 gallons per minute (GPM), and currently has a Nominal Average Pumping Operating Time (NAPOT) of approximately 7.2 hours per day. Based on projected demand, the pumping run times would increase approximately 55 minutes per day at the pump's firm operating condition. Additionally, there are other committed flows from proposed developments within the PS A-21 basin resulting in approximately 722 minutes of additional runtime at the pump's minimum operating condition. PS A-21 will have a total NAPOT of 20.17 hours at the pump's firm operating condition once the proposed developments are complete, more than the recommended average of 10 hours per day. See Figure 5.

The City's Pump Station Flagler Village A-24 is a major initiative within this basin to reduce the amount of flow handled by the existing PS A-21 and to provide additional capacity within this area. Once PS A-24 is constructed and on-line, there will be sufficient capacity at this new pump station to convey the estimated wastewater demand from the development to the treatment plant.

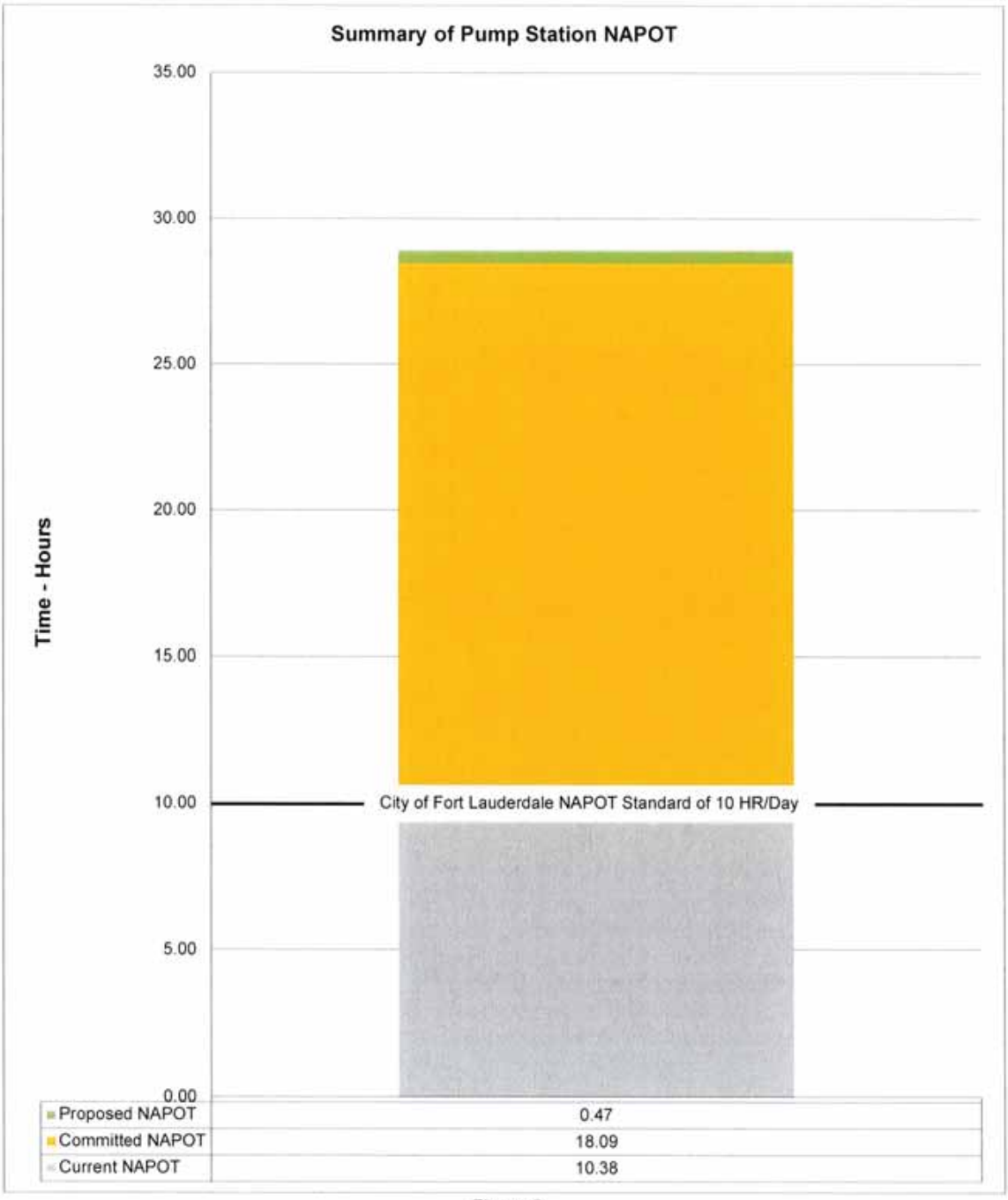

Summary of Pump Station NAPOT
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
Time - Hours
City of Fort Lauderdale NAPOT Standard of 10 HR/Day
Proposed NAPOT 0.47
Committed NAPOT 18.09
Current NAPOT 10.38

Figure 5

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 annual average daily flow (AADF) to the plant is 40.47 MGD. Combining the committed flows for previously approved projects of 4.62 MGD plus the 0.0277 MGD net contribution from the project results in a total projected flow of 45.11 MGD. This is less than the permitted treatment plant capacity of 48 MGD. Therefore, the treatment plant has sufficient capacity to serve this project. See Figure 6 below.

Recommended Wastewater Infrastructure Improvements: A review of the utility services impacted by the development indicate that improvements to the sanitary sewer mains would be necessary to adequately serve the development to the City's standards. A review of the utility services impacted by the development indicate that improvements to the sanitary sewer mains would be necessary to adequately serve the development to the City's standards. Approximately 250 LF of 10-inch gravity sewer shall be upsized to at least an 18-inch pipe along NE 1st Avenue. These minimum improvements would allow the gravity mains to sufficiently handle the proposed and existing flows in the contributing area. See Figure 3. These minimum improvements would allow the gravity mains to sufficiently handle the proposed and existing flows in the contributing area. Any existing upstream sanitary sewer services must be maintained. See figure 3.

Additionally, PS A-21 does not have sufficient capacity to handle the proposed development. The proposed PS A-24 shall be constructed and on-line prior to the proposed development seeking a Certificate of Occupancy.

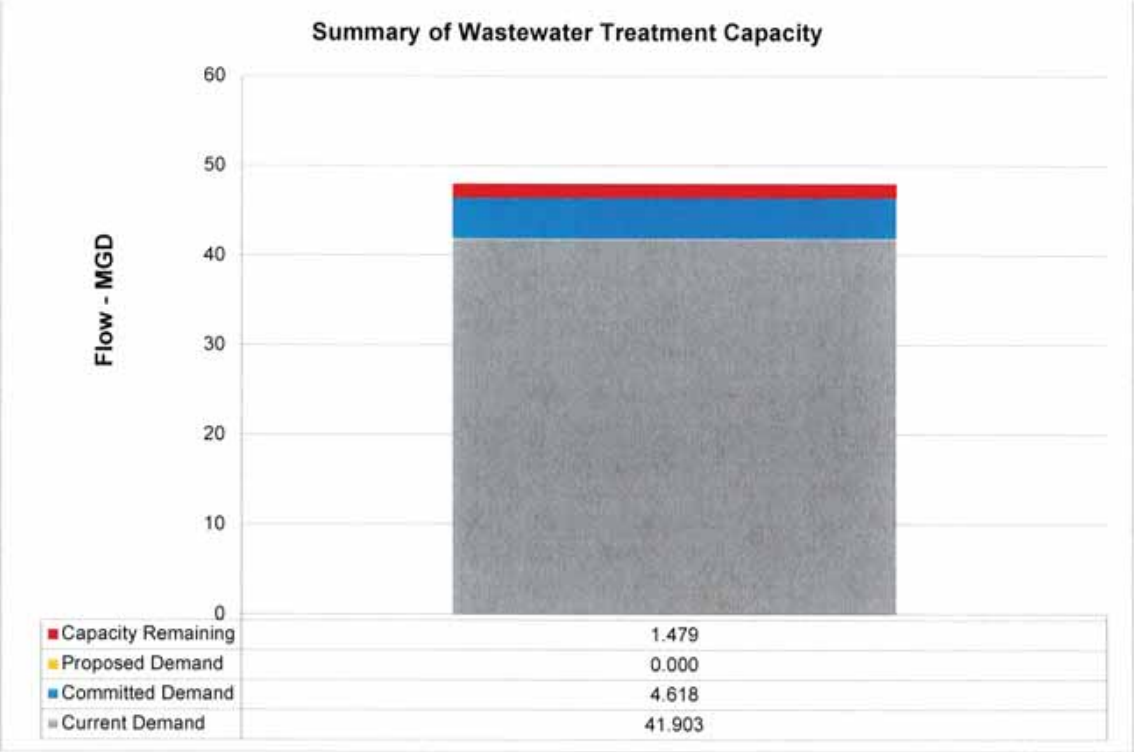

Summary of Wastewater Treatment Capacity
Flow - MGD
60
50
40
30
20
10
0
Capacity Remaining 1.479
Proposed Demand 0.000
Committed Demand 4.618
Current Demand 41.903

Figure 6

TRAFTECH ENGINEERING, INC.

June 28, 2021

Mr. Steve Arcamonte
Project Executive
Fortune Construction Company
Related

Re: The Gallery at Flagler Village - Traffic Statement

Dear Steve:

Traf Tech Engineering, Inc. conducted a trip generation analysis associated with the proposed residential development planned to be located at the northeast corner of Andrews Avenue and NE 6th Street (Sistrunk Boulevard) in the City of Fort Lauderdale, Florida. This traffic impact statement addresses trip generation.

Trip Generation

A trip generation analysis was performed using the trip generation equations published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (10th Edition)*. The trip generation analysis was undertaken for daily, AM peak hour, and PM peak hour conditions. The analysis was based on the following assumptions:

PROPOSED LAND USE

- High Rise Residential Development w/Retail on the Ground Floor (195 dwelling units +2,500 square feet of retail)

The attached site plan depicts the land use described above.

Using the above-mentioned *Trip Generation Manual*, a trip generation analysis was undertaken for the proposed high rise residential development. The results of this effort are documented in Table 1. As indicated in Table 1, the proposed residential building is anticipated to generate approximately 868 new daily trips, approximately 60 AM peak hour trips (14 inbound and 46 outbound) and approximately 41 PM peak hour trips (25 inbound and 16 outbound).

Based on the above analysis, the proposed 195-unit residential development is not required to prepare a detailed traffic study for the following reasons:

- According to the City of Fort Lauderdale ULDR Section 47-25.2.M.4, when the proposed development generates more than 1,000 daily trips, a traffic impact study is required. The subject project will generate fewer (868) new trips than the 1,000 daily-trip threshold.

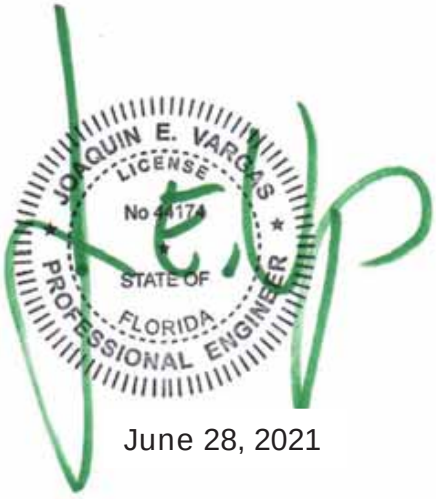
- If the daily trips are less than 1,000 and more than 20% of the daily trips are anticipated to arrive or depart, or both, within one-half hour, a traffic impact study is required. As presented in Table 1, the maximum number of new trips anticipated within one-half hour is approximately 3.5%[1] of the new daily trips, which is significantly less than the 20% threshold.

Please give me a call if you have any questions.

Sincerely,

TRAF TECH ENGINEERING, INC.

Joaquin E. Vargas, P.E.
Senior Transportation Engineer



June 28, 2021

[1] Sixty (60) new AM peak hour trips occurring in one hour represents approximately 30 trips in one-half hour. Thirty (30) trips equate to approximately 3.5% of the 868 daily trips.

TABLE 1
Trip Generation Summary
The Gallery at Flagler Village

Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound
E-High Rise w/Retail 1st Floor LUC 232	195	868	60	14	46	41	25	16
External Trips		**868**	**60**	**14**	**46**	**41**	**25**	**16**

Source: ITE Trip Generation Manual (10th Edition)
NOTE: Daily Trips and Directional Distribution n/a (used High Rise LUC 222)

ITE Land Use Code 232 - High Rise with Retail on the Ground Floor
Daily Trips: T = 4.45 (X), X = dwelling units
AM Peak: T = 0.31 (X) (24% inbound and 76% outbound), X = dwelling units
PM Peak: T = 0.21 (X) (61% inbound and 39% outbound), X = dwelling units

TRAFTECH ENGINEERING, INC.