

February 12, 2024

Aaron Osborne
Miami Beach Public Works Department
Engineering Division
1700 Convention Center Drive
Miami Beach, FL 33139

**RE: 1960 Normandy Drive
Folio Number 02-3210-011-0370
Mixed-Use Workforce Housing and Commercial Development
Demand Flow Letter for Hydraulic Analysis**

Dear Mr. Osborne,

The owner of the property at the address 1960 Normandy Drive is proposing the construction of a mixed-use development consisting of 120 apartment units, 2,500 square feet of retail space, and 2,591 square feet of restaurant space. The developer would like to request a hydraulic analysis to be performed for the proposed water and sewer connections for the development. The demand calculations are provided below:

i. Commercial Water Demand:

Retail = 2,500 square feet @ 10 gpd/100 sq. ft =	250 gpd
<u>Restaurant = 2,591 square feet @ 100 gpd/100 sq. ft =</u>	<u>2,591 gpd</u>
Total Commercial Demand =	2,841 gpd

ii. Residential Water Demand:

<u>Apartment Units = 120 units @ 135 gpd/unit =</u>	<u>16,200 gpd</u>
Total Residential Demand =	16,200 gpd

iii. Fire Flow Demand:

Per NFPA 18.4.4.2, the square footage of the three (3) largest floors can be utilized for construction type I-B (II(222))

Fire Flow Building Area (Floors 1, 2, 3) = 57,252 SF

Minimum Required Fire Flow per Table 18.4.5.2.1: 2,500 gpm for 2 hours

NFPA 18.4.5.3.2 states that the required fire flow can be reduced by 75% if the building has automatic sprinkler with a minimum required flow of 1,000 gpm

$2,500 \text{ gpm} \times (100\% - 75\%) = 625 \text{ gpm} \rightarrow 1,000 \text{ gpm minimum}$

Fire flow demand = 1,000 gpm for 2 hours

iv. Irrigation Demand

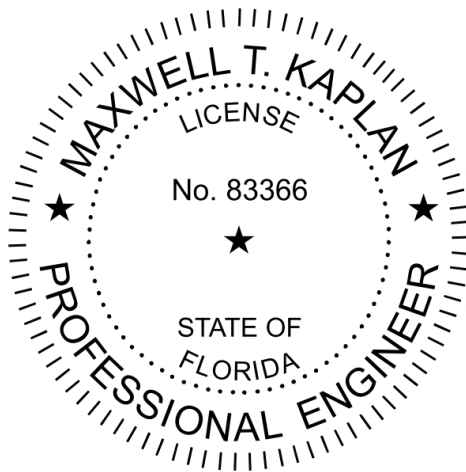
½" over Irrigated Area per day per IFAS recommendations

½" x 2,798 square feet (open space) = 116.58 cubic feet x 7.48 gallons/cubic foot =
872 gallons per day

Total Irrigation Demand = 872 gpd

Should you have any questions, please do not hesitate to contact me at 954-202-7000 or mkaplan@thomaseg.com. Thank you for your time and kind consideration with regards to this matter.

Sincerely,



2/12/2024

Maxwell Kaplan, P.E.

Florida Professional Engineer License No. 83366

Florida Business Certification of Authorization No. 27528

This item has been digitally signed and sealed by Maxwell T. Kaplan on the date adjacent to the seal.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.