



SEXTON ENGINEERING ASSOCIATES, INC.

Consulting Engineers and Surveyors

WATER & SEWER DEMAND ANALYSIS

for

THE MARKETPLACE AT THE WELLINGTON

WELLINGTON, FLORIDA

Prepared by

SEXTON ENGINEERING ASSOCIATES, INC.

110 PONCE DE LEON STREET, SUITE 100

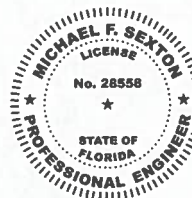
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SEA PROJECT NO: 2242T18

January 12, 2024



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Michael F Sexton

Digitally signed by Michael F

Sexton

Date: 2024.01.12 17:12:30 -05'00'

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WATER & SEWER DEMAND ANALYSIS

Introduction:

The 17.85-acre property is known as the Professional Center at Wellington, it has a land use of Commercial and has current approved uses of professional and medical office, retail, and restaurant. The site is partially developed with a one 2-story building, stormwater, water, sewer, and electrical infrastructure.

Water Demand Analysis:

The Village of Wellington currently provides water service to the property via an onsite 6" watermain on Sheffield Street. There is also an existing 8" watermain on the east side of South Shore Blvd. Right of Way.

The Marketplace at the Wellington is proposed as a mixed-use development that will ultimately incorporate 75 multi-family units, an 80-room hotel with a 25-seat bar and lounge and 25,500 square feet of lobby and meeting areas, 80,000 square feet of retail and restaurants, 40,000 square feet of office space, at grade paved parking spaces, two wet detentions ponds, and open space.

These uses are estimated to add the following water daily demand, based on the attached Potable Water and Sanitary Sewer Request for Confirmation of Available Capacity letter from The Village of Wellington:

Water Demand Table (The Marketplace at the Wellington)

Use	Units	Unit Average Daily Demand	Total Average Daily Demand
Multi-family Residential	75 units	650 gpd	20,670 gpd
Hotel, 80 Rooms	80 rooms	130 gpd per room	10,400 gpd
Hotel, Bar & Lounge	25 seats	26 gpd per seat	650 gpd
Hotel, Lobby & Meeting	25,500 sq. ft.	20 gpd per 100 sq. ft.	4,973 gpd
Retail	50,000 sq. ft.	0.13 gpd per sq. ft.	6,500 gpd
Restaurants (30,000 sq. ft.)	1,200 seats	52 gpd per seat	62,400 gpd
Professional Office Space	20,000 sq. ft.	20 gpd per 100 sq. ft.	3,900 gpd
General Office Space	20,000 sq. ft.	20 gpd per 100 sq. ft.	3,900 gpd
TOTAL			113,393 gpd

Sewer Demand Analysis:

The Village of Wellington currently provides sewer service to the property via an onsite 8" gravity sanitary sewer collection system located south of the property along Sheffield Street.

The Marketplace at the Wellington is proposed as a mixed-use development that will ultimately incorporate 75 multi-family units, an 80-room hotel with a 25-seat bar and lounge and 25,500 square feet of lobby and meeting areas, 80,000 square feet of retail and restaurants, 40,000 square feet of office space, at grade paved parking spaces, two wet detentions ponds, and open space.

These uses are estimated to add the following wastewater daily demand, per the attached Potable Water and Sanitary Sewer Request for Confirmation of Available Capacity letter from The Village of Wellington:

Sewer Demand Table (The Marketplace at the Wellington)

Use	Units	Unit Average Daily Demand	Total Average Daily Demand
Multi-family Residential	75 units	500 gpd	15,900 gpd
Hotel, 80 Rooms	80 rooms	100 gpd per room	8,000 gpd
Hotel, Bar & Lounge	25 seats	20 gpd per seat	500 gpd
Hotel, Lobby & Meeting	25,500 sq. ft.	15 gpd per 100 sq. ft.	3,825 gpd
Retail	50,000 sq. ft.	0.10 gpd per sq. ft.	5,000 gpd
Restaurants (30,000 sq. ft.)	1,200 seats	40 gpd per seat	48,000 gpd
Professional Office Space	20,000 sq. ft.	15 gpd per 100 sq. ft.	3,000 gpd
Medical Office Space	20,000 sq. ft.	15 gpd per 100 sq. ft.	3,000 gpd
TOTAL			87,225 gpd

Per DRC Petition No. 2011-49-ASA 4, the approved site plan for The Professional Center at Wellington includes the following uses:

Use	Units
Retail	15,136 sq. ft.
Restaurants (4,809 sq. ft.)	195 seats
Professional Office Space	88,133 sq. ft.
Medical Office Space	53,300 sq. ft.

The approved site plan for The Professional Center at Wellington includes the following uses within the Existing Building #3:

Use	Units
Retail	6,339 sq. ft.
Restaurants (4,809 sq. ft.)	195 seats
Professional Office Space	4,887 sq. ft.
Medical Office Space	4,886 sq. ft.

The estimated water and sewer demand for the existing Building #3 of the Professional Center at Wellington based on the estimated average daily demand is as follows:

Water Demand Table (Building #3 of The Professional Center at Wellington)

Use	Units	Unit Average Daily Demand	Total Average Daily Demand
Retail	6,339 sq. ft.	0.13 gpd per sq. ft.	824 gpd
Restaurants (4,809 sq. ft.)	195 seats	52 gpd per seat	10,140 gpd
Professional Office Space	4,887 sq. ft.	20 gpd per 100 sq. ft.	956 gpd
Medical Office Space	4,886 sq. ft.	20 gpd per 100 sq. ft.	955 gpd
TOTAL			12,875 gpd

Sewer Demand Table (Building #3 of The Professional Center at Wellington)

Use	Units	Unit Average Daily Demand	Total Average Daily Demand
Retail	6,339 sq. ft.	0.10 gpd per sq. ft.	634 gpd
Restaurants (4,809 sq. ft.)	195 seats	40 gpd per seat	7,800 gpd
Professional Office Space	4,887 sq. ft.	15 gpd per 100 sq. ft.	735 gpd
Medical Office Space	4,886 sq. ft.	15 gpd per 100 sq. ft.	735 gpd
TOTAL			9,904 gpd

Demand Summary:

The net Average Daily Demand of the proposed The Marketplace at the Wellington less than the existing Building #3 of the Professional Center at Wellington is as follows:

	Summary of Average Day Water Demands (MGD)	Summary of Average Day Wastewater Demands (MGD)
Proposed (The Marketplace at the Wellington)	0.113	0.087
Building #3 (The Professional Center at Wellington)	0.013	0.010
Estimated Proposed Additional Demand Total	0.100	0.077
Summary of Additional Peak Day Wastewater and Water Demands (MGD) = Average Daily Demand x 1.4 =	0.140	0.108



Potable Water and Sanitary Sewer Request for Confirmation of Available Capacity

Date: January 12, 2024

To: Anjuli K. Panse, P.E.
Interim Utility Director
Village of Wellington Utility Department
12300 Forest Hill Blvd.
Wellington, FL 33414

From: Sexton Engineering Associates, Inc.
110 Ponce de Leon Street, Suite 100
Royal Palm Beach, Florida 33411

Project Address:
THE MARKETPLACE AT THE WELLINGTON
Proposed demand base on Conceptual
Site Plan dated November 10, 2022

PCN: See attached.

Project Summary (Include all applicable land use, zoning, and density information)

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Demand Summary

(Submit Potable Water and Sanitary Sewer Average Day Projected Demand Table Worksheet as backup)

Average Day Water Demands (MGD) =	0.113	MGD
Peak Day Water Demands (MGD) =	0.159	MGD
Average Day Wastewater Demands (MGD) =	0.087	MGD
Peak Day wastewater Demands (MGD) =	0.122	MGD

By submittal of this document and backup information, the applicant requests that the Village of Wellington review the information provided in order to confirm that Wellington can meet the proposed demands for water and sewer service as noted above. The applicant is advised that no guarantee of available capacity is expressed or implied, until such a time that the Owner has reserved capacity through payment of all applicable fees and charges. **The capacity letter shall be considered expired 90 days from the date of issuance.**

Potable Water and Sanitary Sewer Average Day Projected Demand Table Worksheet- July 2022

TYPE OF ESTABLISHMENT	Number of Units	WW demand per unit (GPD)	Water demand per unit (GPD)	Avg WW Demand (GPD)	Avg Water Demand (GPD)
Complete Green Cells to Calculate Projected Average and Peak Demands					
Water to Wastewater average day Demand Factor (12 month rolling average) Updated October 1, 2018	1.30				
COMMERCIAL:					
Barber & beauty shops per service chair		75	98	0	0
Bowling alley bathroom waste only per lane		50	65	0	0
Country Club					
(a) Per resident		100	130	0	0
(b) Add Per member or patron		25	33	0	0
(c) Add Per employee per 8 hour shift		15	20	0	0
Doctor and Dentist offices					
(a) Per practitioner		250	325	0	0
(b) Add per employee per 8 hour shift		15	20	0	0
Food operations					
(a) Restaurant operating 16 hours or less per day per seat	1200	40	52	48000	62400
(b) Restaurant operating more than 16 hours per day per seat		60	78	0	0
(c) Restaurant using single service articles only and operating 16 hour or less per day per seat		20	26	0	0
(d) Restaurant using single service articles only and operating more than 16 hours per day per seat		35	46	0	0
(e) Bar and cocktail lounge per seat	25	20	26	500	650
1. add per pool table or video game		15	20	0	0
(f) Drive - in restaurant per car space		50	65	0	0
(g) Carry out only, including caterers					
1. Per 100 square feet of floor space		50	65	0	0
2. Add per employee per 8 hour shift		15	20	0	0
(h) Institutions per meal		5	7	0	0
(i) Food Outlets excluding deli's, bakery, or meat department per 100 square feet of floor space		10	13	0	0
1. Add for deli per 100 square feet of deli floor space		40	52	0	0
2. Add for bakery per 100 square feet of bakery floor space		40	52	0	0
3. Add for meat department per 100 square feet of meat department floor space		75	98	0	0
4. Add per water closet		200	260	0	0
Hotels					
(a) Regular per room	80	100	130	8000	10400
(b) Resort hotels, camps, cottages per room		200	260	0	0
(c) Add for establishments with self-service laundry facilities per machine		750	975	0	0
Office building					
1. per employee per 8 hour shift or		15	20	0	0
2. per 100 square feet of floor space, whichever is greater	655	15	20	9825	12772.5

TYPE OF ESTABLISHMENT	Number of Units	WW demand per unit (GPD)	Water demand per unit (GPD)	Avg WW Demand (GPD)	Avg Water Demand (GPD)
Service stations per water closet					
(a) Open 16 hours per day or less		250	325	0	0
(b) Open more than 16 hours per day		325	423	0	0
Shopping centers without food or laundry per square foot of floor space	50000	0.1	0.13	5000	6500
Stadiums, race tracks, ball park per seat		4	5	0	0
Stores per bathroom		200	260	0	0
Theatres and Auditoriums, per seat		4	5	0	0
Veterinary Clinic					
(a) Per practitioner		250	325	0	0
(b) Add per employee per 8 hour shift		15	20	0	0
(c) Add per kennel, stall or cage		20	26	0	0
Warehouse					
(a) Add per employee per 8 hour shift		15	20	0	0
(b) Add per loading bay		100	130	0	0
(c) self-storage, per unit(up to 200 units)		1	1	0	0
1. Add 1 gallon for each 2 units or fraction thereof, for over 200 units, and shall be in addition to employees, offices or living quarters flow rates.		1	1	0	0
INSTITUTIONAL:					
Churches per seat which includes kitchen wastewater flows unless meals prepared on a routine basis		3	4	0	0
1. If meals served on a regular basis add per meal prepared		5	7	0	0
Hospitals per bed which does not include kitchen wastewater flows		200	260	0	0
1. add per meal prepared		5	7	0	0
Nursing, rest homes, adult congregate living facilities per bed which does not include kitchen wastewater flows		100	130	0	0
1. add per meal prepared		5	7	0	0
Parks, public picnic					
(a) With toilets only per person		4	5	0	0
(b) With bathhouse, shower & toilets per person		10	13	0	0
Public Institutions other than schools and hospitals per person which does not include kitchen wastewater flows		100	130	0	0
1. add per meal prepared		5	7	0	0
Schools per student					
(a) Day-type		10	13	0	0
(b) Add for shower		4	5	0	0
(c) Add for cafeteria		4	5	0	0
(d) Add for day school workers		15	20	0	0
(e) Boarding -type		75	98	0	0

TYPE OF ESTABLISHMENT	Number of Units	WW demand per unit (GPD)	Water demand per unit (GPD)	Avg WW Demand (GPD)	Avg Water Demand (GPD)
RESIDENTIAL					
(a) Single or multiple family per dwelling Unit					
1 Bedroom with 750 sq. ft. or less of building area		100	130	0	0
2 Bedroom with 751 - 1200 sq. ft. of building area	66	200	260	13200	17160
3 Bedroom with 1201 - 2250 sq. ft. of building area	9	300	390	2700	3510
4 Bedroom with 2251 - 3300 sq. ft. of building area		400	520	0	0
For each additional bedroom or each additional 750 square feet of building area or fraction thereof in a dwelling unit, system sizing shall be increase by 60 gallons per dwelling unit		60	78	0	0
(b) Other per occupant		50	65	0	0
OTHER CATEGORY NOT LISTED (ENGINEER TO PROVIDE BACKUP)				0	0
OTHER CATEGORY NOT LISTED (ENGINEER TO PROVIDE BACKUP)				0	0
OTHER CATEGORY NOT LISTED (ENGINEER TO PROVIDE BACKUP)				0	0
Summary of Average Day Wastewater and Water Demands (GPD) =				87225	113393
Summary of Average Day Wastewater and Water Demands (MGD) =				0.087	0.113

Summary of Peak Day Wastewater and Water Demands (MGD) = Average Daily Demand x 1.4 =	0.122	0.159
	(WW)	(Water)

[1] Systems serving high volume establishments, such as restaurants, convenience stores and service stations located near interstate type highways and similar high-traffic areas, require special sizing consideration due to expected above average volumes. The minimum estimated flows for these facilities shall be 3 times the volumes determined from the Demand Table Figures.



Potable Water and Sanitary Sewer Request for Confirmation of Available Capacity

Date: January 12, 2024

To: Anjuli K. Panse, P.E.
Interim Utility Director
Village of Wellington Utility Department
12300 Forest Hill Blvd.
Wellington, FL 33414

From: Sexton Engineering Associates, Inc.
110 Ponce de Leon Street, Suite 100
Royal Palm Beach, Florida 33411

Project Address:
BUILD #3 PROF CENTER AT WELLINGTON
Estimated demand base on Approved
Site Plan dated December 14, 2011

PCN: See attached.

Project Summary (Include all applicable land use, zoning, and density information)

Demand Summary

(Submit Potable Water and Sanitary Sewer Average Day Projected Demand Table Worksheet as backup)

Average Day Water Demands (MGD) =	0.013	MGD
Peak Day Water Demands (MGD) =	0.018	MGD
Average Day Wastewater Demands (MGD) =	0.010	MGD
Peak Day wastewater Demands (MGD) =	0.014	MGD

By submittal of this document and backup information, the applicant requests that the Village of Wellington review the information provided in order to confirm that Wellington can meet the proposed demands for water and sewer service as noted above. The applicant is advised that no guarantee of available capacity is expressed or implied, until such a time that the Owner has reserved capacity through payment of all applicable fees and charges. **The capacity letter shall be considered expired 90 days from the date of issuance.**

Potable Water and Sanitary Sewer Average Day Projected Demand Table Worksheet- July 2022

TYPE OF ESTABLISHMENT	Number of Units	WW demand per unit (GPD)	Water demand per unit (GPD)	Avg WW Demand (GPD)	Avg Water Demand (GPD)
Complete Green Cells to Calculate Projected Average and Peak Demands					
Water to Wastewater average day Demand Factor (12 month rolling average) Updated October 1, 2018	1.30				
COMMERCIAL:					
Barber & beauty shops per service chair		75	98	0	0
Bowling alley bathroom waste only per lane		50	65	0	0
Country Club					
(a) Per resident		100	130	0	0
(b) Add Per member or patron		25	33	0	0
(c) Add Per employee per 8 hour shift		15	20	0	0
Doctor and Dentist offices					
(a) Per practitioner		250	325	0	0
(b) Add per employee per 8 hour shift		15	20	0	0
Food operations					
(a) Restaurant operating 16 hours or less per day per seat	195	40	52	7800	10140
(b) Restaurant operating more than 16 hours per day per seat		60	78	0	0
(c) Restaurant using single service articles only and operating 16 hour or less per day per seat		20	26	0	0
(d) Restaurant using single service articles only and operating more than 16 hours per day per seat		35	46	0	0
(e) Bar and cocktail lounge per seat		20	26	0	0
1. add per pool table or video game		15	20	0	0
(f) Drive - in restaurant per car space		50	65	0	0
(g) Carry out only, including caterers					
1. Per 100 square feet of floor space		50	65	0	0
2. Add per employee per 8 hour shift		15	20	0	0
(h) Institutions per meal		5	7	0	0
(i) Food Outlets excluding deli's, bakery, or meat department per 100 square feet of floor space		10	13	0	0
1. Add for deli per 100 square feet of deli floor space		40	52	0	0
2. Add for bakery per 100 square feet of bakery floor space		40	52	0	0
3. Add for meat department per 100 square feet of meat department floor space		75	98	0	0
4. Add per water closet		200	260	0	0
Hotels					
(a) Regular per room		100	130	0	0
(b) Resort hotels, camps, cottages per room		200	260	0	0
(c) Add for establishments with self-service laundry facilities per machine		750	975	0	0
Office building					
1. per employee per 8 hour shift or		15	20	0	0
2. per 100 square feet of floor space, whichever is greater	98	15	20	1470	1911



TYPE OF ESTABLISHMENT	Number of Units	WW demand per unit (GPD)	Water demand per unit (GPD)	Avg WW Demand (GPD)	Avg Water Demand (GPD)
Service stations per water closet					
(a) Open 16 hours per day or less		250	325	0	0
(b) Open more than 16 hours per day		325	423	0	0
Shopping centers without food or laundry per square foot of floor space	6339	0.1	0.13	633.9	824.07
Stadiums, race tracks, ball park per seat		4	5	0	0
Stores per bathroom		200	260	0	0
Theatres and Auditoriums, per seat		4	5	0	0
Veterinary Clinic					
(a) Per practitioner		250	325	0	0
(b) Add per employee per 8 hour shift		15	20	0	0
(c) Add per kennel, stall or cage		20	26	0	0
Warehouse					
(a) Add per employee per 8 hour shift		15	20	0	0
(b) Add per loading bay		100	130	0	0
(c) self-storage, per unit(up to 200 units)		1	1	0	0
1. Add 1 gallon for each 2 units or fraction thereof, for over 200 units, and shall be in addition to employees, offices or living quarters flow rates.		1	1	0	0
INSTITUTIONAL:					
Churches per seat which includes kitchen wastewater flows unless meals prepared on a routine basis		3	4	0	0
1. If meals served on a regular basis add per meal prepared		5	7	0	0
Hospitals per bed which does not include kitchen wastewater flows		200	260	0	0
1. add per meal prepared		5	7	0	0
Nursing, rest homes, adult congregate living facilities per bed which does not include kitchen wastewater flows		100	130	0	0
1. add per meal prepared		5	7	0	0
Parks, public picnic					
(a) With toilets only per person		4	5	0	0
(b) With bathhouse, shower & toilets per person		10	13	0	0
Public Institutions other than schools and hospitals per person which does not include kitchen wastewater flows		100	130	0	0
1. add per meal prepared		5	7	0	0
Schools per student					
(a) Day-type		10	13	0	0
(b) Add for shower		4	5	0	0
(c) Add for cafeteria		4	5	0	0
(d) Add for day school workers		15	20	0	0
(e) Boarding -type		75	98	0	0

TYPE OF ESTABLISHMENT	Number of Units	WW demand per unit (GPD)	Water demand per unit (GPD)	Avg WW Demand (GPD)	Avg Water Demand (GPD)
RESIDENTIAL					
(a) Single or multiple family per dwelling Unit					
1 Bedroom with 750 sq. ft. or less of building area		100	130	0	0
2 Bedroom with 751 - 1200 sq. ft. of building area		200	260	0	0
3 Bedroom with 1201 - 2250 sq. ft. of building area		300	390	0	0
4 Bedroom with 2251 - 3300 sq. ft. of building area		400	520	0	0
For each additional bedroom or each additional 750 square feet of building area or fraction thereof in a dwelling unit, system sizing shall be increase by 60 gallons per dwelling unit		60	78	0	0
(b) Other per occupant		50	65	0	0
OTHER CATEGORY NOT LISTED (ENGINEER TO PROVIDE BACKUP)				0	0
OTHER CATEGORY NOT LISTED (ENGINEER TO PROVIDE BACKUP)				0	0
OTHER CATEGORY NOT LISTED (ENGINEER TO PROVIDE BACKUP)				0	0
Summary of Average Day Wastewater and Water Demands (GPD) =				9904	12875
Summary of Average Day Wastewater and Water Demands (MGD) =				0.010	0.013

Summary of Peak Day Wastewater and Water Demands (MGD) = Average Daily Demand x 1.4 =	0.014	0.018
	(WW)	(Water)

[1] Systems serving high volume establishments, such as restaurants, convenience stores and service stations located near interstate type highways and similar high-traffic areas, require special sizing consideration due to expected above average volumes. The minimum estimated flows for these facilities shall be 3 times the volumes determined from the Demand Table Figures.