MEMORANDUM

То:	Marla Molina Senior City Planner, Winter Springs
From:	James M. Taylor, PE Kimley-Horn and Associates, Inc.
Date:	December 15, 2020
Subject:	Winter Springs Marketplace Parking Demand Study



Introduction

Kimley-Horn and Associates, Inc. has undertaken the following review and analysis to evaluate the anticipated parking needs for the proposed shopping center (Winter Springs Marketplace) located in the southwest corner of SR 434 & Tuskawilla Road in the City of Winter Springs, Florida. The site is zoned as Town Center District (T-C).

As stated in Section 20-324 of the City's Land Development Code (LDC), there are no minimum parking requirements in the town centers; therefore, a parking analysis shall be performed justifying the proposed parking solution. This study provides a comparison between the City's code-required parking for each land use within the site, Urban Land Institute (ULI) *Shared Parking 3rd Edition*, and the Institute of Transportation Engineers (ITE) *Parking Generation Manual 5th Edition*. The study also includes the required bicycle parking demand for the site based on other municipalities' industry standards.

The proposed shopping center will consist of the following uses, as shown in the site plan provided in **Attachment A**:

- 4,280 square feet of medical/dental office (Building A)
- 5,381 square feet of fast-food restaurant with drive-through window (Buildings B and C), and
- 48,409 square feet of retail (Buildings, D, E, and F).

The total gross floor area for Winter Springs Marketplace is 58,070 square feet.

Code Parking Requirements

Section 9-277 of the City's LDC defines the off-street parking requirements for specific land uses. The following minimum parking ratios for the land uses within the Winter Springs Marketplace are defined in the code:

- Medical or dental clinics: three (3) parking spaces for doctors, plus one (1) additional parking space for every two (2) employees,
- Restaurants: one (1) parking space for each one hundred (100) square feet of floor space for patron use in the building, and
- Retail commercial: one (1) parking space for each three hundred (300) square feet of floor space in the building exclusive of storage space.

As shown in **Table 1** below, a total parking supply of 226 spaces at a parking ratio of 3.89 spaces per a thousand square feet would be needed to serve the proposed shopping center's demand with each land use as stand-alone.

		Size [SF] Employees		City's Code		
Building	Land Use			Minimum Requirements	Spaces	
А	Medical/Dental Office	4,280	10	3 spaces for doctors and 1 space per 2 employees	8	
В	Fast-Food Restaurant w/ Drive-through Window	2,325	-	1 space per 100 SF	24	
С	Fast-Food Restaurant w/ Drive-through Window	3,056	-	1 space per 100 SF	31	
D	Retail	19,200	-	1 space per 300 SF	64	
E	Retail	10,000	-	1 space per 300 SF	34	
F	Retail	19,209	-	1 space per 300 SF	65	
	Total	58,070	-	Parking Ratio = 3.89	226	

ITE's Parking Generation Manual, 5th Edition Evaluation

A calculation of the anticipated parking demand was undertaken using data published by the Institute of Transportation of Engineers (ITE) *Parking Generation Manual 5th Edition*. For each land use defined in this publication, empirical parking data that has been collected on sites throughout the country is compiled to develop rates and/or equations to estimate parking demand at similar sites. ITE statistics include the 85th-percentile peak parking demand for each land-use code that has sufficient empirical data available. The Urban Land Institute (ULI) *Shared Parking 3rd Edition* generally recommends the 85th-percentile parking demand to provide parking supply for.

As described in the ITE *Trip Generation Manual, 10th Edition*, a shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Shopping centers also include outparcel that typically develop drive-in banks, restaurants, retail, or small offices. Due to the characteristics of the proposed development, Land Use Code (LUC) 820 – Shopping Center was used to determine the peak period parking demand for the proposed shopping center. The LUC 820 data was collected on a Saturday during December (peak day during peak season). Data included in **Attachment B**. Per ULI's recommendation to provide a parking supply equal to a site's 85th-percentile parking demand, the relevant peak parking demand for the shopping center is calculated as follows:

• Recommended design parking demand = 5.90 spaces per a thousand square feet x 58,070 square feet = 342 spaces

As shown above, a total parking supply of 342 spaces at a parking ratio of 5.90 spaces per thousand square feet would be needed to serve the proposed shopping center's demand.

ULI Shared Parking, 3rd Edition Evaluation

A calculation of the anticipated parking demand was undertaken using data published by ULI *Shared Parking 3rd Edition*. ULI recommends a parking ratio of 4.0 spaces per thousand square feet for shopping centers less than 400,000 square feet. Based on the ULI base parking ratio, a total parking supply of 232 spaces would be needed to serve the proposed shopping center's demand.

Peak Parking Demand Assessment

As shown in the previous sections, both ITE and ULI parking ratios for the shopping center are higher than the overall parking ratio based on the City's minimum requirements for stand-alone land uses. The ULI Shared Parking provides monthly adjustment factors and weekend time-of-day adjustment factors, which show the peak season and peak time-of-day for multiple land uses, respectively. As anticipated, the peak season and peak time-of-day for retail land use occurs during December during the afternoon. Therefore, since the ITE data represents the parking demand on a weekend during December, the parking supply that meets the anticipated demand throughout the year is 342 spaces. As shown in the table below, the proposed Winter Springs Marketplace will provide 341 parking spaces at a parking ratio of 5.87 spaces per thousand square feet.

	Parking Ratio (spaces/ KSF)	Spaces
City's Code	3.89	226
ITE 85 th - Percentile	5.90	342
ULI	4.00	232
Provided (per Site Plan)	5.87	341

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Bicycle Parking

The City of Winter Springs does not provide minimum requirements for bicycle parking facilities. However, it strongly encourages developments within the SR 434 corridor to provide parking facilities for bicycles. The City of Cambridge, Massachusetts, is recognized as one of the top municipal codes for bicycle parking requirements. Their code provides guidance for long-term and short-term bicycle parking spaces required per land-use. Short-term parking spaces is defined as parking facilities located in a publicly accessible space near pedestrian entrances to the uses they are intended to serve; typically intended to serve visitors, such as retail patrons. Long-term parking spaces are defined as parking facilities located within an enclosed, limited-access areas. These type of parking spaces are intended to primarily serve residents, employees, or other person who require bicycle storage for a substantial portion of the day. The City of Cambridge provides the following guidance for short-term parking spaces applicable to Winter Springs Marketplace:

- General or professional offices: 0.06 spaces per thousand square feet,
- Retail: 0.60 spaces per thousand square feet, and
- Restaurants: 1.0 space per thousand square feet.

The City of Cambridge code was utilized to determine the required bicycle parking spaces for the site. The total recommended bicycle parking spaces for the proposed shopping center should be 38 spaces.

Table 3 summarizes the parking spaces recommended at each building. As shown in the site plan (**Attachment A**) the proposed shopping center will provide 38 bicycle parking spaces.

Building	Land Use	Size [SF]	Ratio [sapces per KSF]	Bicycle Spaces
А	Medical/Dental Office	4,280	0.06	1
В	Fast-Food Restaurant w/ Drive- through Window	2,325	1.00	3
С	Fast-Food Restaurant w/ Drive- through Window	3,056	1.00	4
D	Retail	19,200	0.60	12
E	Retail	10,000	0.60	6
F	Retail	19,209	0.60	12
	Total	58,070	Total	38

Conclusion

Upon review of ULI and ITE industry guidance, the proposed parking supply of 341 spaces will be sufficient for parking demand at the proposed Winter Springs Marketplace. Additionally, it is recommended that 38 bicycle parking spaces be provided based on review of nationally recognized municipal code for bicycle parking requirements.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

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James M. Taylor, P.E.

ATTACHMENT A

Site Plan



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## ATTACHMENT B

ITE Parking Generation Manual Land Use 820 – Shopping Center

# Shopping Center - December (820) Peak Period Parking Demand vs: 1000 Sq. Ft. GLA On a: Saturday Setting/Location: General Urban/Suburban Peak Period of Parking Demand: 11:00 a.m. - 5:00 p.m. Number of Studies: 93 Avg. 1000 Sq. Ft. GLA: 560

#### Peak Period Parking Demand per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)	
4.58	1.56 - 7.50	3.97 / 5.90	4.31 - 4.85	1.33 (29%)	

#### **Data Plot and Equation**



Parking Generation Manual, 5th Edition • Institute of Transportation Engineers