



PLANNING
ENGINEERING
IMPLEMENTATION

Date: November 10, 2025

From: Doug Ubben, P.E., Phelps Engineering, Inc.

Re: 151st & Mur-Len Mixed Use
PEI # 250409

Shared Parking Analysis

The proposed mixed-use development is located at the southeast corner of 151st and Murlen Road and will include two buildings; Building A consists of retail and a quick service end cap restaurant while Building B consists of a vertically integrated mixed-use building with retail and residential apartments. With a mixed-use development, peak parking demand between the different uses occurs at different times of the day and the analysis below has been completed to calculate the peak parking demand for the development.

The parking requirement ratios set with the City's UDO only account for the peak parking demand for each use and don't account for the time of day in which that peak occurs. The peak parking demand for the residential component occurs in the overnight hours when most of the residents are home for the night, while peak parking demand for the retail components occurs during the daytime hours when the stores are open. If following the City's UDO requirements, the retail space requires 1 parking space for every 300 S.F., 1.5 parking spaces per residential unit (multifamily, more than 4 units), and 1 parking space for every 3 seats in the restaurant area. With 207 residential units being proposed, 311 parking spaces are required for the residential component. The 30,300 S.F. retail area requires 101 parking spaces for the retail component. Finally, the 2,100 S.F. quick service restaurant area will have a maximum of 50 seats, which requires 17 parking spaces. Summing each of the uses by their individual peak parking demands amounts to a requirement of 429 parking spaces per the city's UDO parking ratios.

As previously mentioned, evaluating the parking required by summing the peak demand from each use does not account those peak demands that occur at different times of the day. To calculate the peak demand of the development as a whole, the Shared Parking, 3rd Edition manual by the Urban Land Institute (ULI) was used to complete a shared parking analysis. This manual contains data for percentage adjustments on the required parking for shared parking between mixed uses. A peak demand for each hour on both the weekdays and weekends is shown below. The required parking for the site as a whole is determined by finding the time, by the hour, during the week and weekend that has the peak demand between the shared uses. It was determined that the highest demand occurred on the weekends at 8:00 p.m. with a peak parking stall demand of 331 stalls. Therefore, for this proposed development, 331 parking stalls are required to be provided to meet the parking demand of the development. A shared parking agreement between the two properties will be required, so that users of the development can park anywhere within the development.

2025 Plan																				
Use	Parking Required	<u>Weekday</u>																		
		6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 AM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 PM
Apartment	311	295.45	248.8	208.37	171.05	155.5	139.95	124.4	124.4	124.4	124.4	139.95	155.5	186.6	217.7	284.8	264.35	295.45	301.67	311
Small Restaurant	10	0.5	1	2	3	5.5	8.5	10	10	9	6	5.5	6	8.5	8	5	3	2	1	0.5
Retail (excluding shopping center)	104	1.04	5.2	15.6	36.4	62.4	78	104	104	98.8	88.4	88.4	88.4	93.6	83.2	67.6	46.8	15.6	5.2	0
Total	425	296.99	255	255.97	210.45	223.4	226.45	238.4	238.4	232.2	218.8	233.85	249.9	288.7	308.9	321.4	314.15	313.05	307.87	311.54

2025 Plan																				
Use	Parking Required	<u>Weekend</u>																		
		6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 AM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 PM
Apartment	311	311	295.45	273.68	248.8	233.25	217.7	211.48	202.15	202.15	211.48	220.81	230.14	239.47	248.8	258.13	267.46	276.79	286.12	311
Small Restaurant	10	0.5	1	2	3	5.5	8.5	10	10	9	6	5.5	6	8.5	8	5	3	2	1	0.5
Retail (excluding shopping center)	104	1.04	5.2	31.2	52	72.8	93.6	98.8	104	104	98.8	93.6	83.2	78	72.8	67.6	52	31.2	10.4	0
Total	425	312.54	301.65	306.88	303.8	311.55	319.8	320.28	316.15	315.15	316.28	319.91	319.34	325.97	329.6	330.73	322.46	309.99	297.52	311.5

Please feel free to contact me at (913) 393-1155 if you require additional information.

Sincerely,



Phelps Engineering, Inc.

Douglas E. Ubben, Jr., P.E.