FEHR PEERS

TECHNICAL MEMORANDUM

Date: September 28, 2022

To: Joseph Zawidski, Signature Homes

From: John Gard, PE, Fehr & Peers

Subject: ***Shared Parking Analysis for the Plaza at Blue Oaks Retail Center***

RS22-4222

This memorandum presents our analysis of parking required for The Plaza at Blue Oaks Retail Center located in the northeast quadrant of the intersection of Blue Oaks Boulevard & Fiddyment Road in Roseville, CA.

I. Unadjusted Parking Requirements and Proposed Supply

The City of Roseville municipal code contains minimum parking requirements for various land use types. **Table 1** shows the unadjusted (i.e., without consideration for shared parking, time-of-day variations in demand, or seasonal adjustments) parking requirements for the center's existing and planned tenants.

Table 1 – The Plaza at Blue Oaks Retail Center Unadjusted Minimum Parking Requirements

Land Use	Amount	Required Parking	Parking Spaces Required
Retail	20,473 sq. ft.	1 space per 300 sq. ft.	69
Supermarket	35,000 sq. ft.	1 space per 300 sq. ft.	117
Fast Casual / Fast Food	20,804 sq. ft.	1 space per 100 sq. ft.	212 [1]
Day Care	12,852 sq. ft.	See Note [2]	47
Health Club	2,500 sq. ft.	1 space per 300 sq. ft.	38 [3]
Medical Office	3,500 sq. ft.	1 space per 150 sq. ft.	23
Park & Ride	-	-	20
Total	95,129 sq. ft.	Not Applicable	526

Notes:
1 Includes 4 additional spaces for 420 sq. ft. of outdoor covered patio for Habit Burger Restaurant and 7 additional spaces for 728 sq. ft. of outdoor covered patio for Garden of Eat'n.
2 Based on 1 space per employee, 1 space per company vehicle, plus loading space for every 8 persons.
3 Based on 1,864 sq. ft of aerobics area and 155 sq. ft. of office.
Source: *Information provided by Signature Homes and City of Roseville Municipal Code.*

Table 2 compares the unadjusted minimum parking requirement against the parking supply provided at the site. As shown, a deficit of 74 spaces would occur based on the mix of tenants, the available supply, and the City's (unadjusted) parking requirements.

Table 2 – The Plaza at Blue Oaks Retail Center Unadjusted Minimum Parking Requirements and Available Parking Supply	
Land Use Type	**Amount**
Unadjusted Minimum Parking Requirement	
Retail, Supermarket, Fast Casual / Fast Food, Day Care, Health Club, and Medical Office	506 spaces
Park & Ride	20 spaces
Total	526 spaces
Available Parking Supply	
Project Site Plan	452 spaces
Parking Deficit	-74 spaces
Source: *Information provided by Signature Homes and City of Roseville Municipal Code.*	

II. Shared Parking Methodology

The parking requirements in Table 1 are based on each use's individual parking needs. The summed values do not consider the fact that some uses have different temporal peak parking characteristics than others. Similarly, they do not account for customers that park at the site and visit multiple tenants (e.g., day care then a restaurant). To consider these and other factors, we utilized the Urban Land Institute/ICSC/National Parking Association's *Shared Parking* Excel spreadsheet tool, described below.

ULI/ICSC/NPA Shared Parking Spreadsheet

This spreadsheet was published in 2020 in conjunction with the *Shared Parking* (ULI/ICSC/NPA) report. The spreadsheet utilizes the 85th percentile parking demand values from the *Parking Generation Manual* (Institute of Transportation Engineers, 2019). The spreadsheet allows the user to adjust the proportion of customers who drive to the center and park. It also allows for "captive ratio adjustments," related to the degree in which a motorist parks at the project site to sequentially visit separate businesses as well as situations in which occupants of a vehicle split up and visit multiple venues. The *Shared Parking* report recommends that the shared parking outputs be considered the recommended supply so as to provide "just enough" parking supply.[1]

Due to the site's suburban setting, no reductions in driving mode split were made. [2]

[1] This means that an effective parking supply factor (typically 5% to 10%) above a peak observed parking demand is not necessary.

[2] This approach is consistent with the *Shared Parking* report that specifies that unless a considerable amount of travel to the site would be made by non-auto modes, it is recommended to maintain a 100% drive mode share.

III. Data Collection

Several land uses contributing to the overall parking needs of the center likely do not have peak overlapping parking demands. Accordingly, we conducted parking occupancy observations at the following four existing restaurants, stores, and facilities that would be tenants in the center:

- Chipotle Restaurant with drive-through lane on Washington Boulevard in Roseville
- Goddard School (day care) on Wildcat Boulevard in Rocklin
- Autozone auto parts store on Harding Boulevard in Roseville
- Habit Burger restaurant with drive-through lane on Main Street in Woodland

These four uses represent 25% of the total parking required for the site, which means they influence the retail center's overall parking supply. These uses were specifically chosen over other planned tenants (e.g., Pacific Dental, Rockbox Fitness, and Garden of Eat'n) because they are local and can be accurately counted. In contrast, other planned tenants are either not local and/or part of larger retail center for which parking demand associated with the specific business could not be determined.

Through preliminary analysis, it was determined that the project's most likely peak hour of parking demand would occur on a weekday either at noon, 1 PM, 2 PM, or 6 PM. Accordingly, parking observations were made at the four locations listed above on each of these hours on Wednesday, August 31, 2022 or Thursday, September 1, 2022. The results are shown in **Table 3.**

Table 3 – Parking Demand at Comparable Restaurants, Stores, and Facilities

Land Use	Location	Square Feet[1]	Occupied Spaces [2]			
			12 PM	1 PM	2 PM	6 PM
Chipotle restaurant with drive-through lane	Washington Boulevard in Roseville	3,600	54	31	23	24
Goddard School (day care)	Wildcat Boulevard in Rocklin	10,800	24	21	19	21
Autozone auto parts store	Harding Boulevard in Roseville	7,100	14	11	10	10
Habit Burger restaurant with drive-through lane	Main Street in Woodland	2,400	13	16	10	10

Notes:
1 Estimated using aerial imagery (or a site plan if available).
2 Counts conducted on Wednesday, August 31, 2022, and Thursday, September 1, 2022. In all instances, peak parking occupancy did not exceed available supply. Additionally, observations were made by Fehr & Peers staff to confirm that parking (which was disaggregated at each site into a series of small zones) was only associated with the specified land use.
Source: *Fehr & Peers, 2022.*

Table 3 indicates that the Chipotle restaurant on Washington Boulevard experienced a large surge in parking demand during the lunch hour, resulting in a peak parking demand of 15 spaces per thousand square feet (KSF) of restaurant space. This exceeds the City's parking requirement of 10 spaces per KSF for restaurants. The planned Chipotle restaurant is 28% smaller than the Chipotle restaurant that was surveyed. This decrease in size and in-person dining space would result in a commensurate reduction in parking demand.

The existing and planned Autozone store sizes were nearly identical. The planned Goddard Day Care facility and Habit Burger restaurant are 19% and 17% greater, respectively, than the existing sites that were surveyed. The analyses in the following section consider these increases.

IV. Shared Parking Analysis Results

The following four-step process was undertaken to determine the project's parking needs:

- Step 1: Enter project land use data into the ULI/ICSC/NPA shared parking spreadsheet.
- Step 2: Calibrate (via minor land use quantity adjustments) the shared parking spreadsheet so that each use type has a peak individual parking requirement that matches City of Roseville standards.
- Step 3: Enter captive ratio adjustments based on professional engineering judgment.
- Step 4: Account for the specific parking demands of the four sites with comparable uses that were surveyed.

Regarding Step 2, retail and fast casual/fast food restaurants have slightly greater parking requirements for weekends versus weekdays. In contrast, day care and medical office are busy during weekdays, but have almost no weekend demand. The shared parking spreadsheet takes these day-of-week factors into consideration.

The shared parking spreadsheet indicates that the project site would have the greatest parking demand on weekdays at 1 PM. During this time period, a 15% shared parking reduction is expected. Secondary peaks occur on weekdays at 12 PM, 2 PM, and 6 PM.

Table 4 shows how the data collected (documented in Table 3) at the four comparable stores, restaurants, and facilities results in net increases or decreases in parking demand during the four busiest weekday hours. The footnotes in the table describe the technical methods utilized to arrive at these parking demand adjustments.

Table 4 – Itemized Adjustments for Surveyed Restaurants, Stores, and Facilities

Land Use[1]	Sq. Ft.[2]	Time of Day Factors (as % of max)[3] Unadjusted Parking Demand[4]				Adjustment in Parking Demand[5]			
		12 PM	1 PM	2 PM	6 PM	12 PM	1 PM	2 PM	6 PM
Chipotle restaurant with drive-through	2,600	100%	100%	90%	85%	+13	-4	-7	-5
		26	26	24	22				
Goddard School (day care)	12,852	55%	55%	55%	67%	+3	-1	-3	-6
		26	26	26	31				
Autozone auto parts store	7,360	100%	100%	95%	90%	-11	-14	-14	-13
		25	25	24	23				
Habit Burger restaurant with drive-through	2,800	100%	100%	90%	85%	-13	-9	-13	-12
		28	28	25	24				
Net Effect on Parking Demand						-8	-28	-37	-36

Notes:

1 Only project land uses studied during data collection (in Section III) listed here.

2 Square footage planned for comparable facility at The Plaza at Blue Oaks Retail Center.

3 Time of day factors based on ULI/ICSC/NPA Shared Parking spreadsheet.

4 Unadjusted parking demand multiplies the parking requirement from the City of Roseville municipal code with the time-of-day factor for each of the four hours shown.

5 Net increase or decrease in parking need resulting from the observations in Table 3 (and in consideration of comparable site versus project size and time of day factors).

Source: *Fehr & Peers, 2022*.

Most adjustments result in a decrease in parking demand, most notably for the Autozone auto parts store and Habit Burger restaurant with drive-through lane. The Chipotle restaurant results in an increase in parking demand of 13 spaces at 12 PM due to the peak surge observed at the comparable facility on Washington Boulevard.

Table 5 shows the combined parking requirement for all project land uses in consideration of shared parking adjustments as well as the adjustments for the four specific stores, restaurants, and facilities described previously.

Table 5 – Weekday Peak Hour Parking Required at The Plaza at Blue Oaks Retail Center				
Land Use	**Parking Required**			
	12 PM	**1 PM**	**2 PM**	**6 PM**
Retail, Supermarket, Fast Casual/Fast Food, Day Care, Health Club, and Medical Office with Shared Parking Adjustments [1]	400	422	412	399
Adjustments for specific Retail, Fast Casual/Fast Food, and Day Care uses [2]	-8	-28	-37	-36
Park & Ride Lot	20	20	20	20
Total	**412**	**414**	**395**	**383**
Parking Supply	452	452	452	452
Percent of Capacity	91%	92%	87%	85%
Notes: 1 From ULI/ICSC/NPA Shared Parking spreadsheet. 2 From calculations shown in Table 4. Source: *Fehr & Peers, 2022.*				

According to Table 5, the Plaza at Blue Oaks Retail Center would experience its peak parking demand on a weekday at noon or 1 PM. The project site plan shows 452 parking spaces, which would exceed the parking supply recommended for the site using the ULI/ICSC/NPA Shared Parking spreadsheet by about 40 spaces. Therefore, assuming the existing and proposed tenants, a parking shortfall is not expected within The Plaza at Blue Oaks Retail Center under typical conditions.[3]

[3] This study should not be misconstrued to reach a conclusion that there will never be a parking shortfall on the site. Individual uses could have surges in parking demand not captured by this study. Surges in parking demand may also occur during ultra-peak conditions (e.g., leading up to Thanksgiving). And finally, local conditions in this area of West Roseville could result in temporary high parking demands due to the large number of residences and relatively few retail centers in the area to serve them. This situation will be abated over time as more retail centers are constructed in West Roseville.

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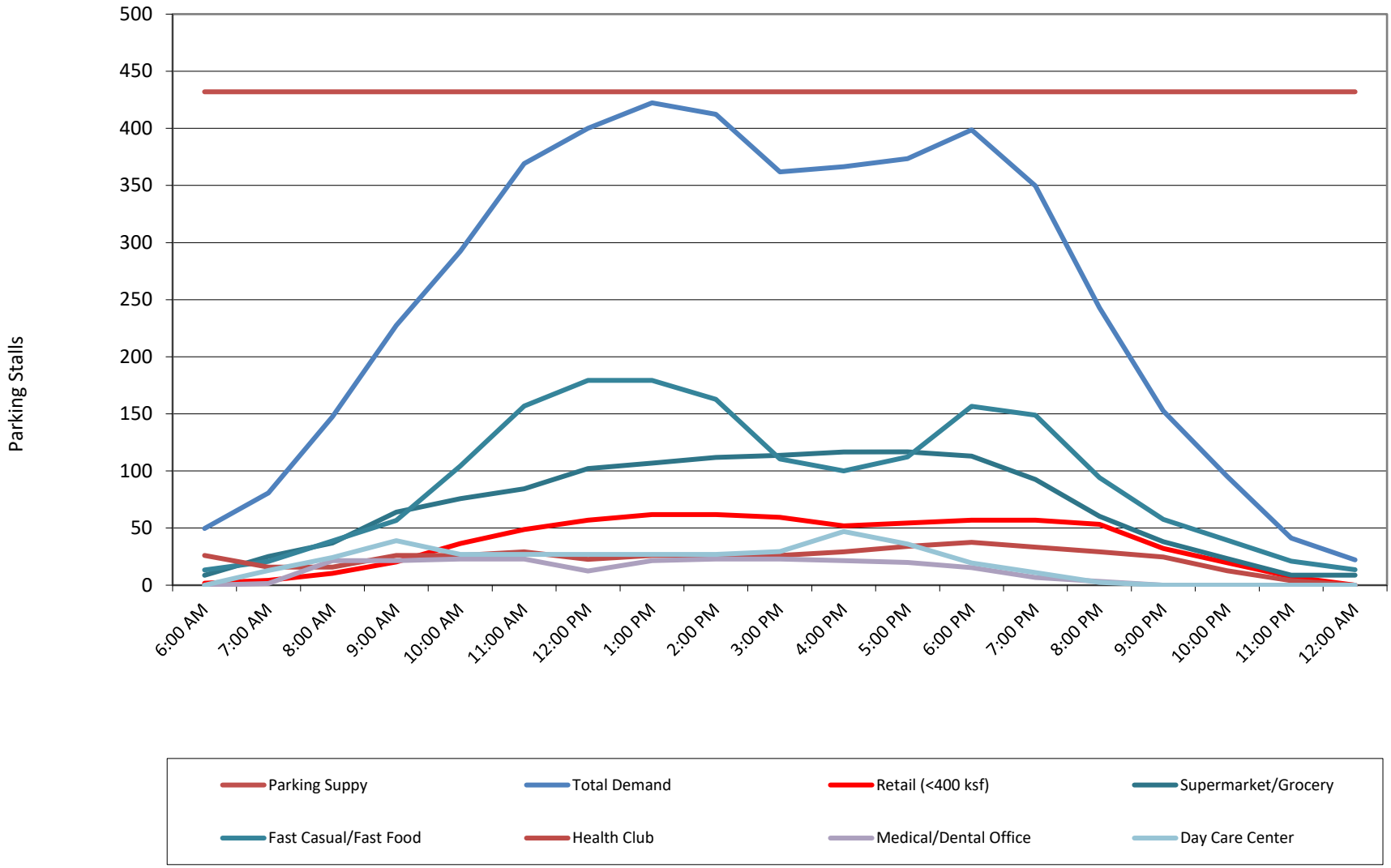
Appendix A – Shared Parking Plots

Note: These plots are valuable in understanding weekday and weekend time-of-day trends, and parking needs for individual use types. These plots do not take into consideration the net increase/decrease in parking associated with the observations made at local Chipotle, Habit Burger, Goddard School, and Autozone sites. They also do not illustrate parking demand and supply associated with the Park & Ride lot.

Peak Month Daily Parking Demand by Hour (Weekday)



Peak Month Daily Parking Demand by Hour (Weekend)