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MEMO

VIA EMAIL

To:	**Mr. Chris Alexander** **Watermark Apartments**
From:	**Julie M. Kroll, PE, PTOE** **Fleis & VandenBrink**
Date:	**Revised May 28, 2019**
Re:	**Northville Downs-Watermark Apartment Development** **City of Northville, Michigan** **Parking Study**

INTRODUCTION

This memorandum presents the results of a parking evaluation for the proposed mixed-use development, located adjacent to the south side of Cady Street, between Center Street and Griswold Street, on the property that was previously occupied by Northville Downs. The proposed development includes the construction of the following land uses:

Multi-Family Residential	302	Dwelling Units
	479	Beds
Commercial	20,815	SF

The property is currently occupied by Northville Downs parking areas and City of Northville parking areas; including City Lot No.5 which provides 92 spaces of free all-day parking in a paved parking lot and an unpaved auxiliary parking lot. These existing parking facilities will be razed as part of this project.

The purpose of this study is to determine if the proposed parking supply is adequate to accommodate the projected parking demand from the existing and proposed land uses.

PARKING ANALYSIS

The parking analysis is a two-step process. The first step in determining the parking needs for a development is to calculate the projected parking *demand*. Parking demand calculations determine how much parking will be generated by the development. Step two in the parking analysis process is to determine if the proposed parking supply is adequate to accommodate the projected parking demand; and if the parking supply is not adequate, provide recommendations to accommodate the projected parking demand.

A parking lot is typically designed to accommodate 85-95% occupancy, depending on the proposed land use(s), layout, and parking management (self-parking, valet, etc.). By providing a buffer between supply and demand, it allows for easier turnover in the parking lot and less congestion, as vehicles traversing through the lot search for the open spaces or wait for vehicles to exit. For parking lots with a higher turnover (such as grocery stores and restaurants) the parking occupancy should be lower and for parking lots with less turnover (office buildings and residential) the parking occupancy can be higher. The City of Northville has indicated that they prefer their parking facilities to be designed to an 80% occupancy.

Existing Parking Demand

The proposed development is located on property that currently includes the existing City Lot No. 5. The proposed surface lot includes replacement of the 92 parking spaces that are currently provided in City Lot No.

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5. The City of Northville DDA provided parking occupancy data for Lot No. 5 that was used in the analysis to calculate the existing parking demands; the parking occupancy data for Lot No. 5 is attached.

Proposed Parking Demand

The Institute of Transportation Engineers (ITE) *Parking Generation, 5th Edition* was used to determine the parking generation for the proposed development. The ITE Parking Generation is an informational guide used by engineers and planners for the purposes of determining the parking demand associated with various land uses. For this study, the best fit land uses are Multi-Family Housing: Mid-Rise (Land Use Code 221) and Shopping Center (Land Use Code 820).

Multi-Family Housing: Mid-Rise (Land Use Code 221)
Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and with between three and 10 levels (floors) of residence.

Shopping Center (Land Use Code 820)
A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. The parking demand database includes data from strip, neighborhood, community, town center, and regional shopping centers.

The ITE *Parking Generation, 5th Edition* has data associated with this land use for urban/suburban, dense urban and center city core. In regard to parking generation, an urban/suburban area is defined by ITE as, "an *area of vehicle-centered access where nearly all person trips that enter or exit a development site are by personal passenger or commercial vehicle.*" Therefore, it was determined that the City of Northville is a typical urban/suburban environment and for this study, the parking demand calculations were based on this assumption.[1]

ITE presents two methodologies for determining parking demand; total number of units and the number of beds per unit. The projected parking demand for the site with an analysis of both methodologies variables is summarized in **Table 1**. The highest projected parking demand associated with each methodology was used to calculate the projected peak parking demand for use in this study.

Table 1: ITE Parking Generation Peak Parking Demand

Methodology	Location	Land Use	ITE Land Use Code	Size	Independent Variable	ITE Parking Generation 5th Edition			
						Peak Period Parking Demand Rates		Peak Parking Demand (veh)	
						Weekday	Weekend	Weekday	Weekend
Spaces per DU	East Side	Apartments	221	215	D. U.	1.31 space/DU	1.22 space/DU	282	262
Spaces per Bed per DU	East Side	Apartments	221	116	D. U.	0.75 space/1 bed	0.77 space/1 bed	87	89
			221	76	D. U.	1.5 space/2 bed	1.54 space/2 bed	114	117
			221	23	D. U.	2.25 space/3 bed	2.31 space/3 bed	52	53
			Total	*215*	*D. U.*	*Per Bed/Dwelling Unit*		253	*259*
East Side		**Apartments**					**Peak Parking Demand**	**282**	**262**
Spaces per DU	West Side	Apartments	221	87	D. U.	1.31 space/DU	1.22 space/DU	114	106
Spaces per Bed per DU	West Side	Apartments	221	38	D. U.	0.75 space/1 bed	0.77 space/1 bed	29	29
			221	43	D. U.	1.5 space/2 bed	1.54 space/2 bed	65	66
			221	6	D. U.	2.25 space/3 bed	2.31 space/3 bed	14	14
			Total	*87*	*D. U.*	*Per Bed/Dwelling Unit*		*108*	*109*
West Side		**Apartments**					**Peak Parking Demand**	**114**	**109**
West Side		**Commercial**	820	20,815	SF	1.95 space/kGFA	2.91 space/kGFA	**41**	**61**
							Total Site Peak Parking Demand	**437**	**432**

[1] The primary difference between urban/suburban, dense urban and city core is the presence of transit. ***General Urban/Suburban****-an area associated with almost homogeneous vehicle-centered access.* ***Dense Multi-Use Urban****— a fully developed area (or nearly so), with diverse and interacting complementary land uses, good pedestrian connectivity, and convenient and frequent transit.* ***Center City Core****— the downtown area for a major metropolitan region at the focal point of a regional light- or heavy-rail transit system.*

PROPOSED PARKING SUPPLY

The proposed development includes the addition of 746 parking spaces as summarized in **Table 2**. The proposed parking garage will provide parking for the proposed multi-family residential units on the east side of the development. The off-street parking and the on-street parking will accommodate the proposed multi-family residential units on the west side of the development, the proposed commercial land uses, the existing parking demand for Lot No. 5, and the new location of the Farmer's Market (seasonal, Thursdays only).

Table 2: Proposed Parking Supply

Proposed Parking Supply (spaces)	
371	Parking Garage
299	Off-Street Parking
76	On-Street Parking
746	*Total Parking Spaces*

SHARED PARKING ANALYSIS

The east side of the development includes 215 apartment units and the parking demand for these units will be accommodated in the adjacent parking garage. The west side of the development will utilize surface parking; which will be shared by the apartments, the proposed commercial, the existing parking demand for Lot No. 5, and the Farmers Market.

A shared parking analysis was performed for the west side of the development to determine if the proposed parking supply of 375 spaces (299 off-street and 76 on-street) is adequate to accommodate the projected parking demand. The shared parking methodology as outlined in ULI in *Shared Parking, 2nd Edition* assumes that a single parking space may be utilized by two or more individual land uses without conflict, based on the hourly, daily, and seasonal variations in parking demand. The parking demand for the west side of the development as summarized in **Table 1**, was distributed according to the ULI distributions by month, day, and hour to determine the hourly peak parking demand for the site.

In addition, the City of Northville DDA provided parking occupancy data for Lot No. 5 that was used in the analysis to consider the existing parking demand for the proposed parking lot. Additional analysis was also performed to consider the impact of the Farmer's Market occupying a portion of the west parking lot. Through discussions with the City and the DDA, the Farmer's Market identified the west side of the proposed surface parking lot as their preferred location. This location would occupy 95 spaces of the proposed parking lot and would need to be reserved starting on Wednesday night; in order to accommodate a Thursday morning opening at 7:00 AM, based on the current operations. The proposed Farmer's Market location is shown in **Figure 1**.

Figure 1: Proposed Farmers Market Location

SUMMARY

The parking calculations for both the east and west sides of the development are summarized in **Table 3** and the east side shared parking analysis is shown on the attached charts. Additional ULI Shared Parking analysis tables are attached.

The results of the analysis show that the proposed parking garage (371 spaces) and the surface parking (375 spaces) provides adequate parking to accommodate the projected parking demand. The projected peak parking demand generated by the proposed development occurs at 7:00 PM on both the weekday and weekends.

The peak occupancy of the parking garage is expected to be 76% and the surface parking is expected to have a peak occupancy of 65% with the Farmer's Market, providing a surplus of 132 spaces to accommodate the parking generated by the Farmer's Market. Both of the proposed parking facilities will have a surplus of parking to accommodate all of the existing and proposed land uses; therefore, there will be adequate parking to accommodate the projected demand.

Table 3: Shared Parking Summary

Land Use	Land Use	ITE Land Use Code	Size	Unit Type	Independent Variable	City of Northville Ordinance Rates Number of Spaces/Ordinance	ITE Parking Generation/ ULI Shared Parking Peak Parking Demand		
							Weekday (7:00 PM)	Weekend (7:00 PM)	Weekday Farmers Mkt
East Side	Multi-Family Housing: Mid-Rise	221	116	1 Bed	D. U.	232			
			76	2 Bed	D. U.	190			
			23	3 Bed	D. U.	69			
			215	*Total*	*D. U.*	*491*	282	262	282
						Proposed Parking Supply	371	371	371
						Peak Parking Surplus	89	109	89
						Peak Parking Occupancy	**76%**	**71%**	**76%**
West Side	Multi-Family Housing: Mid-Rise	221	38	1 Bed	D. U.	76			
			43	2 Bed	D. U.	108			
			6	3 Bed	D. U.	18			
			87	*Total*	*D. U.*	*202*	111	106	111
	Retail	820	20,815	GLA	SF	104	32	46	32
					Existing Parking Lot No. 5	92	5	5	5
					Farmers Market	95	0	0	95
						Total Parking Demand	*148*	*157*	*243*
						Proposed Parking Supply	375	375	375
						Peak Parking Surplus	227	218	132
						Peak Parking Occupancy	**39%**	**42%**	**65%**

CONCLUSIONS

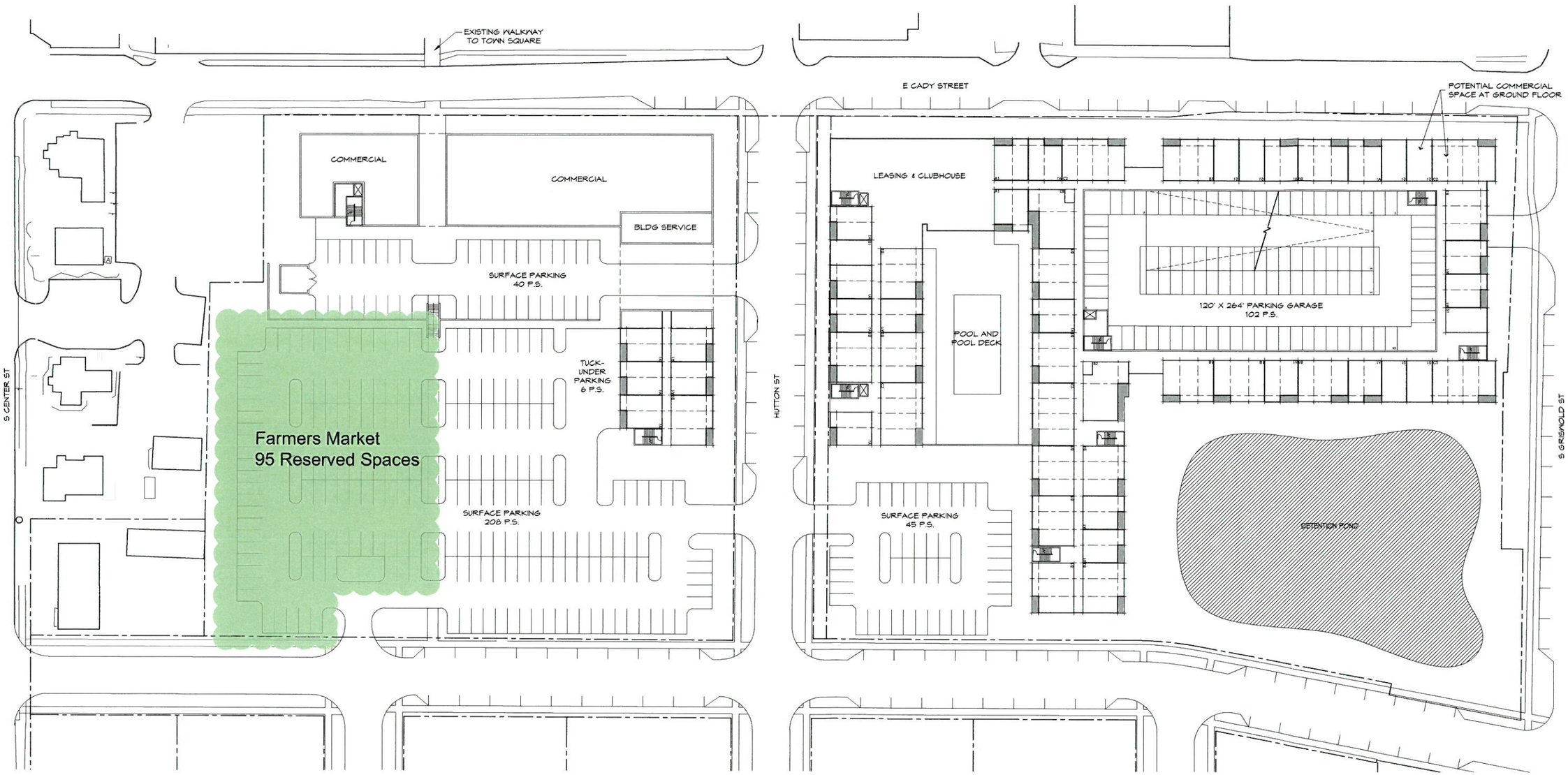
The conclusions of this parking evaluation are as follows:

1. The total surface parking will be shared by the west side residential units, proposed commercial uses, the existing City Lot No. 5 parking demands, and the Farmer's Market. The results of analysis show the surface parking will be adequate to accommodate the projected parking demand for all land uses; with a peak parking occupancy of 65%, providing a surplus of 132 spaces to accommodate the parking generated by the Farmer's Market.
2. The proposed parking garage (371 spaces) is expected to have a peak parking utilization of 76% and parking surplus of 89 spaces.
3. These projected occupancy rates for both the surface parking lot and the parking garage are below the City of Northville desirable 80% occupancy; therefore, there will be adequate parking to accommodate the projected demand.

Any questions related to this memorandum, study, analyses, and results should be addressed to Fleis & VandenBrink.

Attached: Site Plan
Shared Parking Summary Tables & Charts
ULI Shared Parking Analysis

JMK:jmk



01 CONCEPTUAL SITE PLAN

SCALE: 1" = 80'-0"

PLAN NORTH

STUDIO M
ARCHITECTURE & PLANNING

Watermark
RESIDENTIAL

CONCEPTUAL DESIGN
MAY 28, 2019

NORTHVILLE DOWNS
NORTHVILLE, MI

S1

Parking Statistics	CBD Zoning	CBD Zoning	RTD Zoning	RTD Zoning	Total Req'd.
Replace Existing Parking					92
General Retail	1 per 250sf	63	1 per 200sf	15	78
Multifamily - Studio & One Bedroom	1 per unit	6	2 per unit	290	296
Multifamily - Two Bedroom	2 per unit	72	2.5 per unit	208	280
Multifamily - Three Bedroom	3 per unit	9	3 per unit	75	84
Parking Required					829

Street Parking	76
Garage Parking	371
Tuck-Under Parking	6
Surface Parking	293
Total On-Site Parking	746

Garage Area	GSF	Spaces	sf/space
Ground -2	32,452	63	
Ground -1	32,452	102	
Ground	32,452	102	
Second	32,452	104	
	129,808	371	350

Housing Area	GSF
Ground -2	25,071
Ground -1	36,790
Ground	69,305
Second	101,074
Third	77,547
Fourth	68,113
	377,900

Unit Matrix

Unit Type	Unit NSF	Unit GSF	Total	Beds	Total NSF	Total GSF	%
Unit S1	605	605	32	32	19,360	19,360	11%
Unit A1	738	803	122	122	90,036	97,966	40%
Unit B1	1,143	1,205	103	206	117,729	124,115	34%
Unit B2	1,261	1,431	16	32	20,176	22,896	5%
Unit C1	1,487	1,613	0	0	0	0	0%
Unit C2	1,455	1,518	29	87	42,195	44,022	10%
Average SF/Unit	959		302	479	289,496	308,359	100%

SubTotal Housing GSF	377,900	GSF
Garage Area	129,808	GSF
Commercial West	18,700	GSF
Commercial East	0	GSF
Clubhouse/Leasing	6,390	GSF
Tuck-Under Parking & Storage	7,048	GSF
TOTAL PROJECT AREA	539,846	GSF
Potential Commercial East	2,115	GSF

West Site

Unit Type	Floor						Totals
	G-2	G-1	G	2	3	4	
Unit S1							0
Unit A1			5	11	11	11	38
Unit B1			1	13	13	13	40
Unit B2				1	1	1	3
Unit C1							0
Unit C2				2	2	2	6
Totals	0	0	6	27	27	27	87

East Site

Unit Type	Floor						Totals
	G-2	G-1	G	2	3	4	
Unit S1	3	7	8	8	5	1	32
Unit A1	5	8	17	22	16	16	84
Unit B1	8	11	16	16	7	5	63
Unit B2	1	1	3	3	3	2	13
Unit C1							0
Unit C2	1	2	5	6	5	4	23
Totals	18	29	49	55	36	28	215

STUDIO M
ARCHITECTURE & PLANNING

Watermark
RESIDENTIAL

CONCEPTUAL DESIGN
MAY 28, 2019

NORTHVILLE DOWNS
NORTHVILLE, MI

A11

From Shared Parking

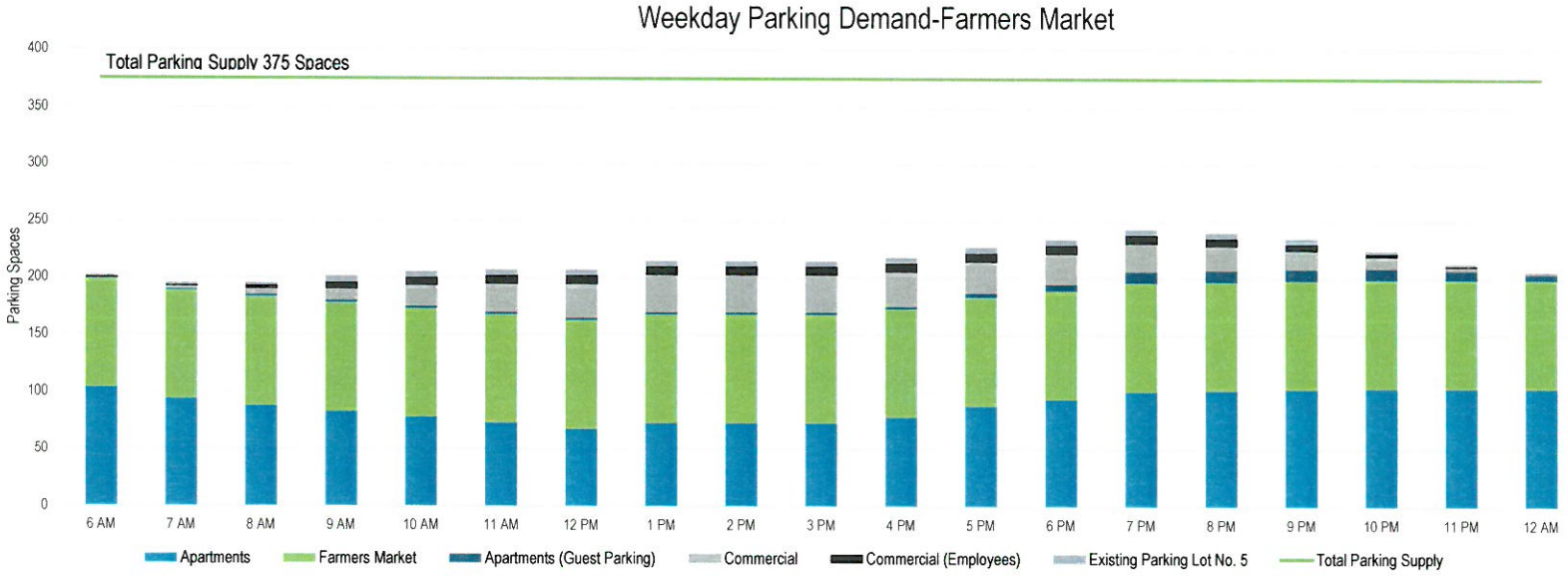
Peak Hour	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 AM
Apartments	104	94	88	83	78	73	68	73	73	73	78	88	94	101	102	103	104	104	104
Apartments (Guest Parking)	0	1	2	2	2	2	2	2	2	2	2	4	6	10	10	10	10	8	5
Commercial	0	2	5	10	18	24	29	32	32	32	30	27	26	24	21	16	10	3	0
Commercial (Employees)	1	1	3	6	7	8	8	8	8	8	8	8	8	8	7	6	3	1	0
Existing Parking Lot No. 5	2	2	2	5	5	5	5	5	5	5	5	5	5	5	5	5	2	2	2
Total Parking Demand	*107*	*100*	*100*	*106*	*110*	*112*	*112*	*120*	*120*	*120*	*123*	*132*	*139*	*148*	*145*	*140*	*129*	*118*	*111*
Proposed Off-Street Parking Supply	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299
Proposed On-Street Parking Supply	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
Total Parking Supply	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*
Difference	268	275	275	269	265	263	263	255	255	255	252	243	236	227	230	235	246	257	264
Percent Occupancy	29%	27%	27%	28%	29%	30%	30%	32%	32%	32%	33%	35%	37%	39%	39%	37%	34%	31%	30%

From Shared Parking

Peak Hour	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 AM
Apartments	101	91	86	81	76	71	66	71	71	71	76	86	91	98	99	100	101	101	101
Apartments (Guest Parking)	0	2	2	2	2	2	2	2	2	2	2	3	5	8	8	8	8	6	4
Commercial	0	2	5	17	29	34	41	46	48	48	46	43	38	36	31	24	17	7	0
Commercial (Employees)	1	2	5	9	10	11	12	12	12	12	12	11	10	10	9	8	5	2	0
Existing Parking Lot No. 5	2	2	2	5	5	5	5	5	5	5	5	5	5	5	5	5	2	2	2
Total Parking Demand	*104*	*99*	*100*	*114*	*122*	*123*	*126*	*136*	*138*	*138*	*141*	*148*	*149*	*157*	*152*	*145*	*133*	*118*	*107*
Proposed Off-Street Parking Supply	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299
Proposed On-Street Parking Supply	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
Total Parking Supply	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*
Difference	271	276	275	261	253	252	249	239	237	237	234	227	226	218	223	230	242	257	268
Percent Occupancy	28%	26%	27%	30%	33%	33%	34%	36%	37%	37%	38%	39%	40%	42%	41%	39%	35%	31%	29%

From Shared Parking

Peak Hour	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 AM
Apartments	104	94	88	83	78	73	68	73	73	73	78	88	94	101	102	103	104	104	104
Apartments (Guest Parking)	0	1	2	2	2	2	2	2	2	2	2	4	6	10	10	10	10	8	5
Commercial	0	2	5	10	18	24	29	32	32	32	30	27	26	24	21	16	10	3	0
Commercial (Employees)	1	1	3	6	7	8	8	8	8	8	8	8	8	8	7	6	3	1	0
Existing Parking Lot No. 5	2	2	2	5	5	5	5	5	5	5	5	5	5	5	5	5	2	2	2
Farmers Market	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Total Parking Demand	*202*	*195*	*195*	*201*	*205*	*207*	*207*	*215*	*215*	*215*	*218*	*227*	*234*	*243*	*240*	*235*	*224*	*213*	*206*
Proposed Off-Street Parking Supply	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299
Proposed On-Street Parking Supply	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
Total Parking Supply	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*	*375*
Difference	173	180	180	174	170	168	168	160	160	160	157	148	141	132	135	140	151	162	169
Percent Occupancy	54%	52%	52%	54%	55%	55%	55%	57%	57%	57%	58%	61%	62%	65%	64%	63%	60%	57%	55%



Project:
Description:

ksf = thousand square feet

Projected Parking Supply: 369					Mode Adjustment				Noncaptive Ratio			
			Max Parking Spaces		Weekday		Weekend		Weekday		Weekend	
Land Use	Quantity		Weekday	Weekend	Daytime	Evening	Daytime	Evening	Daytime	Evening	Daytime	Evening
Community Shopping Center (<400 ksf)	18.700	sf GLA	29	43	100%	100%	100%	100%	100%	100%	100%	100%
Employee			7	11	100%	100%	100%	100%	100%	100%	100%	100%
Regional Shopping Center (400 to 600 ksf)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Super Regional Shopping Center (>600 ksf)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Fine/Casual Dining Restaurant		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Family Restaurant		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Fast Food Restaurant		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Nightclub		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Cineplex		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Performing Arts Theater		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Arena		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Pro Football Stadium		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Pro Baseball Stadium		seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Health Club		sf GFA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Convention Center		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Hotel-Business		rooms	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Hotel-Leisure		rooms	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Restaurant/Lounge		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Conference Ctr/Banquet (20 to 50 sq ft/guest room)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Convention Space (>50 sq ft/guest room)		sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Rental, Shared Spaces	87	units	104	101	100%	100%	100%	100%	100%	100%	100%	100%
Reserved		sp	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Guest	87	units	10	8	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Owned, Shared Spaces		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Reserved	1	sp/unit	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Guest		units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office <25 ksf		sf GFA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office 25 to 100 ksf		sf GFA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office 100 to 500 ksf		sf GFA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office >500 ksf		sf GFA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Data Processing Office		sf GFA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Medical/Dental Office		sf GFA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Bank (Branch) with Drive-In		sf GFA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee			0	0	100%	100%	100%	100%	100%	100%	100%	100%
Subtotal Customer/Guest Spaces			39	51								
Subtotal Employee/Resident Spaces			111	112								
Subtotal Reserved Spaces			0	0								
Total Parking Spaces			150	163								

Table
Project:
Description:

3/22/2019

December
Weekday Estimated Peak-Hour Parking Demand

	Monthly Adj.	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 AM	Overall Pk 7 PM	AM Peak Hr 6 AM	PM Peak Hr 5 PM	Eve Peak Hr 7 PM	Footnote
Community Shopping Center (<400 ksf)	100%	-	1	4	9	16	22	26	29	29	29	28	25	23	22	19	15	9	3	-	22	-	25	22	1
Employee	100%	1	1	3	5	6	7	7	7	7	7	7	7	7	7	6	5	3	1	-	7	1	7	7	2
Residential, Rental, Shared Spaces	100%	104	94	88	83	78	73	68	73	73	73	78	88	94	101	102	103	104	104	104	101	104	88	101	3
Guest	100%	-	1	2	2	2	2	2	2	2	2	2	4	6	10	10	10	10	8	5	10	-	4	10	4
TOTAL DEMAND	Customer	-	2	6	11	18	24	28	31	31	31	30	29	29	32	29	25	19	11	5	32	-	29	32	
	Employee	105	95	91	88	84	80	75	80	80	80	85	95	101	108	108	108	107	105	104	108	105	95	108	
	Reserved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TOTAL DEMAND		**105**	**97**	**97**	**99**	**102**	**104**	**103**	**111**	**111**	**111**	**115**	**124**	**130**	**140**	**137**	**133**	**126**	**116**	**109**	**140**	**105**	**124**	**140**	
ULI base data have been modified from default values.																					140	105	124	140	

Footnote(s):

December
Weekend Estimated Peak-Hour Parking Demand

		6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 AM	Overall Pk 7 PM	AM Peak Hr 10 AM	PM Peak Hr 5 PM	Eve Peak Hr 7 PM	Footnote
Community Shopping Center (<400 ksf)	100%	-	2	4	15	26	30	37	41	43	43	41	39	34	32	28	22	15	6	-	32	26	39	32	1
Employee	100%	1	2	4	8	9	10	11	11	11	11	11	10	9	9	8	7	5	2	-	9	9	10	9	2
Residential, Rental, Shared Spaces	100%	101	91	86	81	76	71	66	71	71	71	76	86	91	98	99	100	101	101	101	98	76	86	98	3
Guest	100%	-	2	2	2	2	2	2	2	2	2	2	3	5	8	8	8	8	6	4	8	2	3	8	4
TOTAL DEMAND	Customer	-	4	6	17	28	32	39	43	45	45	43	42	39	40	36	30	23	12	4	40	28	42	40	
	Employee	102	93	90	89	85	81	77	82	82	82	87	96	100	107	107	107	106	103	101	107	85	96	107	
	Reserved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TOTAL DEMAND		**102**	**97**	**96**	**106**	**113**	**113**	**116**	**125**	**127**	**127**	**130**	**138**	**139**	**147**	**143**	**137**	**129**	**115**	**105**	**147**	**113**	**138**	**147**	

Table
Project:
Description:

3/22/2019

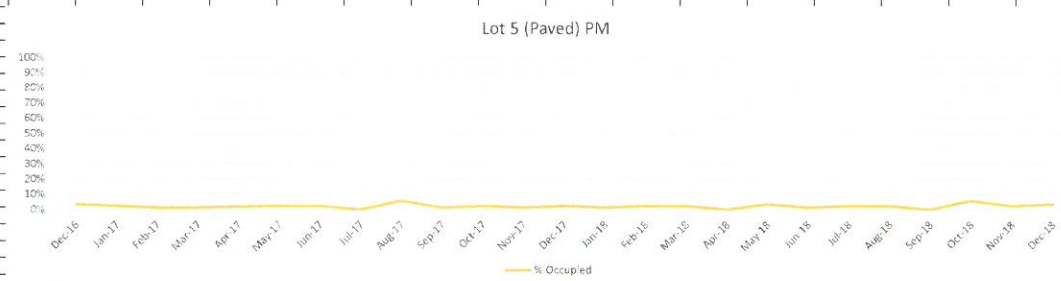
SHARED PARKING DEMAND SUMMARY

PEAK MONTH: DECEMBER -- PEAK PERIOD: 7 PM, WEEKEND

			Weekday					Weekend					Weekday			Weekend		
Land Use	Project Data Quantity	Unit	Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 7 PM	Peak Mo Adj December	Estimated Parking Demand	Peak Hr Adj 7 PM	Peak Mo Adj December	Estimated Parking Demand
Community Shopping Center (<400 ksf)	18,700	sf GLA	1.55	1.00	1.00	1.55	/ksf GLA	2.30	1.00	1.00	2.30	/ksf GLA	0.75	1.00	22	0.75	1.00	32
Employee			0.37	1.00	1.00	0.37	/ksf GLA	0.58	1.00	1.00	0.58	/ksf GLA	0.95	1.00	7	0.80	1.00	9
Residential, Rental, Shared Spaces	87	units	1.20	1.00	1.00	1.20	/unit	1.16	1.00	1.00	1.16	/unit	0.97	1.00	101	0.97	1.00	98
Reserved		sp	1	1.00	1.00	1	/unit	1	1.00	1.00	1	/unit	1.00	1.00	0	1.00	1.00	0
Guest	87	units	0	1.00	1.00	0	/unit	0	1.00	1.00	0	/unit	1.00	1.00	10	1.00	1.00	8
													Customer		32	Customer		40
													Employee		108	Employee		107
													Reserved		0	Reserved		0
													Total		140	Total		147
													Without Shared Parking		150			163
													Shared Parking Reduction		17%			13%

ULI base data have been modified from default values.

Lot 6-8p	Dec-16	Jan-17	Feb-17	Mar-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Lot #5 Paved - Available	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
Spaces Used	3	2	1	1	2	2	0	5	1	2	1	2	1	2	2	0	3	1	2	2	0	5	2	3
% Occupied	3%	2%	1%	1%	2%	2%	0%	6%	1%	2%	1%	2%	1%	2%	2%	0%	3%	1%	2%	2%	0%	6%	2%	3%
Night Spaces Used													1	2	2	0						0	2	



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