WALKER CONSULTANTS

MEMORANDUM
Cityline Parking Study
33-002075.03

DATE:	March 23, 2021
TO:	Shaunn Mendrin
COMPANY:	City of Sunnyvale Community Development Department
ADDRESS:	456 W. Olive Ave
CITY/STATE:	Sunnyvale, CA
FROM:	Chrissy Mancini Nichols, Shannon Edwin
PROJECT NAME:	Cityline Parking Study
PROJECT NUMBER:	33-002075.03

The City of Sunnyvale engaged Walker Consultants ("Walker") to conduct a parking study for the proposed projects of the Cityline development, located in Block 18 of the City's downtown. Several projects within the Cityline development were constructed and operational prior to this analysis within the following subblocks of Block 18:

- Subblock 1: A 74-unit residential development on S. Taaffe Street and W. McKinley Avenue
- Subblock 2: Approximately 316,000 square foot office development on Mathilda Avenue and a 124-unit residential development on Taaffe Street and McKinley Avenue
- Subblock 4: Approximately 173,000 square foot retail development (Target)

Parking demand from those existing sites was captured as part of the analysis in Walker's 2019 City of Sunnyvale Downtown Parking Study. Further, subblock 6 was modeled as public parking, as there is currently no proposed project for this site.

This study includes the parking demand analysis from the existing sites as well as an analysis of future parking needs generated upon completion and occupancy of the proposed Cityline development.

Summary of major findings include the following (details for each finding can be found in the following sections of this memo):

Summary of Findings

- Block 18 of the Cityline development is within both the Downtown Specific Plan Area and the Parking Management Assessment District. There is no requirement to build on-site parking for new or intensified developments in this location. Therefore, it is likely that new developments within this area would build parking based on the need to market their developments as well as use public parking within the Parking Management Assessment District.

- Within Block 18, there is currently a significant amount of public parking available during peak parking times, as found during parking utilization field data collection conducted by Walker in 2019. For example, Walker's field data collection found during the peak hour, the PD-1 Garage (Pear) was only 7% utilized and the PD-2 Garage (Orange), 33% utilized.

- Given these factors, Walker modeled the future parking demand of the proposed Cityline development of Block 18 and performed an analysis of how completion of the proposed projects will affect the public parking supply. After completion of the proposed projects, modeling finds that during the peak parking

time, the proposed Cityline development will use an additional 1,618spaces from the public supply within Block 18.

  - This will increase the public parking utilization rate on Block 18 to 81%, leaving 559 parking spaces available to the public during the peak.

Overview of Block 18 Proposed Projects

- The Cityline development is comprised of six subblocks of Block 18 in Downtown Sunnyvale. It is bordered by Washington Avenue to the north, Iowa Avenue to the South, Mathilda Avenue to the west, and Sunnyvale Avenue to the east.
- The development includes new retail, restaurants, office space, residential units, a Whole Foods grocery store, and an AMC movie theater (please see the Project Description on page 4 for more details).
- Cityline plans to provide a mix of reserved parking (for residential and office uses) and publicly available parking to accommodate all land uses within the development.

Parking Management Assessment District (PMAD)

- Cityline is located in Block 18 of Zone 1 of the City's Parking Management Assessment District (PMAD).
- Zone 1 does not have parking facilities that are maintained by PMAD funds and therefore properties within this zone have a yearly assessment of $0.00, including Cityline.
- This analysis assumes that any parking demand generated by Zone 1 would be maintained within the public parking facilities located within Zone 1 and not spill over into any PMAD-maintained facilities in Zones 2, 3, and 4.

Shared Parking Analysis

- Within Sunnyvale's Downtown Block 18, there are six subblocks. Some of the developments for these subblocks have been constructed and are operational. For these locations, parking demand has been captured as part of field data counts of parking utilization in Downtown Sunnyvale collected by Walker in January 2019.
- For proposed new developments, Walker conducted a shared parking analysis for each subblock of Block 18 to understand the parking needs for each proposed land use by subblock (see Figure 2). This analysis will then be used to determine how parking demand is spread across the entire block. Parking demand by subblock is as follows:

  - Subblock 1: The period of peak demand is projected to occur at 2 p.m. on a weekday. The recommended parking supply to serve the project at this time is approximately 639 spaces. Weekend peak demand is expected to occur at noon, with a recommended parking supply of approximately 517 spaces.
  - Subblock 2: Peak parking demand is projected to occur at noon on weekends. The recommended supply for peak weekend parking is approximately 141 spaces. Weekday peak parking demand is projected to occur at 1 p.m. with a recommended supply of 134 spaces.
  - Subblock 3: Peak parking demand is projected to occur at 2 p.m. on a weekday. During this time, the recommended supply to serve the site is approximately 1,986 spaces. Weekend peak parking

demand is expected to occur at noon, with a recommended supply of approximately 1,090 spaces.

- Subblock 4: Block 4 is projected to experience peak parking demand on weekends at 2 p.m. with a recommended supply of approximately 117 spaces. Weekend peak parking demand would also occur at 2 p.m. with a recommended supply of 106 spaces.
- Subblock 5: Peak parking demand is projected to occur at 3 p.m. on a weekend. At this time, a supply of approximately 486 spaces is recommended to serve the area. On weekdays, peak parking demand is projected to occur at 3 p.m. with a recommended supply of 421 spaces
- Subblock 6: Plans for this block include a surface lot with 130 publicly available spaces.

Overall Impacts to Public Parking

- Existing peak public parking demand, based on parking field data counts of Downtown Sunnyvale collected by Walker in January 2019, occurred between noon and 2 p.m. on weekdays, with a demand for 818 spaces in Block 18.
- Parking demand for completion of the proposed Cityline development for the projects included in this analysis on Block 18 is expected to occur at 2 p.m. on weekdays with demand for an additional 1,618 public parking spaces.
- Combining the existing demand of 818 spaces with the future demand of 1,618 parking spaces, there is a total demand of 2,436 public parking spaces in Block 18.
- Upon completion of the proposed projects, there will be 2,995 publicly available spaces in Block 18. With a demand of 2,436 spaces, 81% of the spaces will be utilized with a surplus of 559 spaces available to the public.

Recommendations

- Ensure a balanced distribution of parking demand in the PD-1, PD-2, and PD-5 Garages.
  - Employees parking in PD-1, PD-2, and PD-5, should be directed or assigned to park in the top levels of the parking garages as well as instructed which garage to park based on the number of employee parking spaces needed and spaces available. This will help ensure an even distribution of employee parking demand in each garage and maintain the most desirable spaces on lower level floors for customer public parking.
    - The existing Advanced Parking Guidance System (APGS) will also assist in distribution as users will be able to see how full the garages are upon arrival. Cityline should ensure these are calibrated regularly for accuracy of space count.
- Ensure parking demand does not spill over into public surface lots outside of PMAD Zone 1. This may require regular utilization surveys compared to a baseline as well as increased enforcement and management of the public surface lots.

Project Description

The planned Cityline development is located within Block 18 of the City's Downtown Specific Plan boundaries (see Figure 1). This includes six subblocks, bounded by Washington Avenue to the north, Iowa Avenue to the south, Mathilda Avenue to the west, and Sunnyvale Avenue to the east.

Some of this development has already been constructed, is occupied, and creating parking demand that was quantified during Walker parking occupancy data counts of all public parking in downtown Sunnyvale in January 2019.. Therefore, as part of this analysis, any development that was constructed at the time of this data collection was not analyzed as part of this study. Any parking demand of the public supply generated by these constructed and occupied uses would already be accounted for from the 2019 data collection effort.

This analysis of the proposed Cityline development includes all new development that is either under construction, planned, or constructed but unoccupied.

Figure 1: Downtown Specific Plan Boundaries

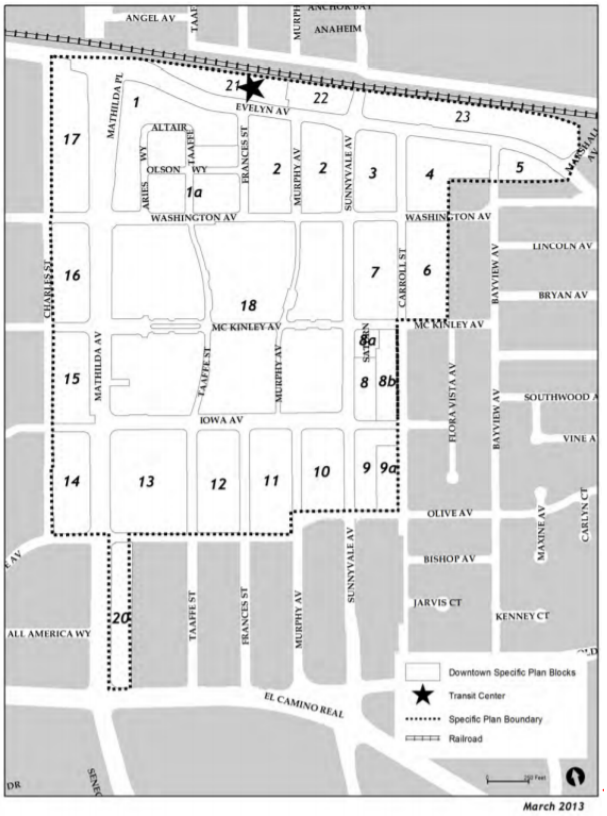


Table 1 on page 5 and 6 provides a summary of the Cityline development and is also graphically summarized in Figure 2 on page 7. Development that is already constructed and occupied is shown in *grey italics.* All remaining uses were analyzed as part of this study. This summary also includes Cityline's plans for parking for each development and block.

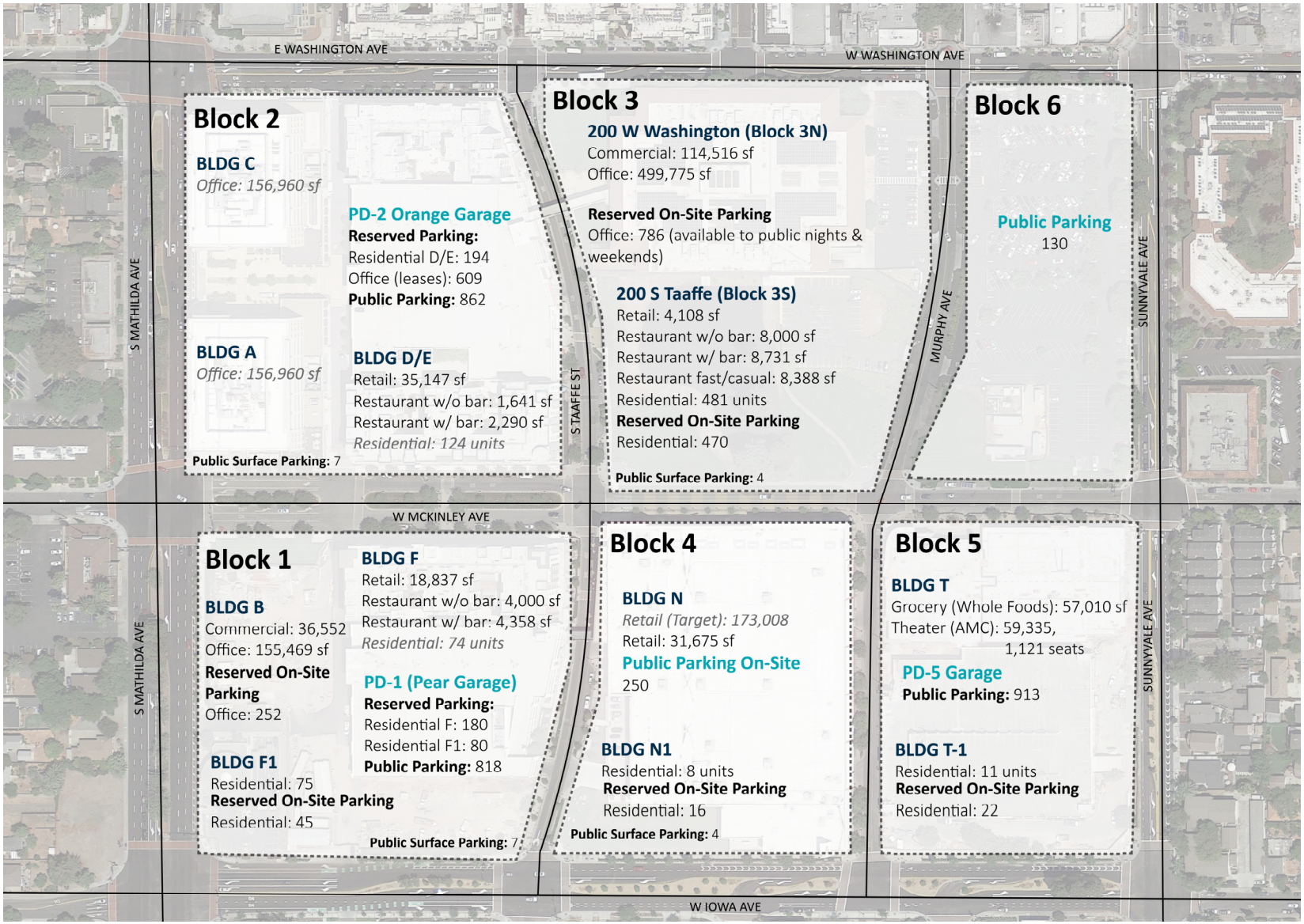
Table 1: Cityline Land Use Program

Subblock	Commercial (square feet)	Residential (dwelling unit)	Office (square feet)	Parking On-Site	Parking PD-1	Parking PD-2	Parking PD-5
Block 1 Building B (305 S Mathilda)	Retail: 8,732 Maker's Space: 4,003 Shared Services: 4,980	-	155,469	Reserved Office: 252	-	-	-
Building F	Retail: 18,837 Restaurant w/o bar: 4,000 Restaurant w/ bar: 4,358	*74* *1-bdr: 10* *2-bdr: 56* *3-bdr: 8*	-	-	Reserved Residential: 180	-	-
Building F1	-	75 Studio: 4 1-bdr: 46 2-bdr: 25	-	Reserved Residential: 45	Reserved Residential: 80	-	-
Public Parking				7 surface spaces	818	-	-
Block 2 Building A	-	-	*156,960*	-	-	-	-
Building C			*156,960*				
Building D/E	Retail: 35,147 Restaurant w/o bar: 1,641 Restaurant w/ bar: 2,290	*124* *1-bdr: 24* *2-bdr: 84* *3-bdr: 16*	-	-	-	Reserved Residential: 194 Reserved Office (per leases): 609	-
Public Parking	-	-		7 surface spaces	-	862	-
Block 3 200 W Washington (Block 3N)	Retail: 50,892 Flex Space: 22,103 Shared Services: 37,413	-	499,775	Reserved Office (Business Hours): 786	-	-	-
200 S Taaffe St (Block 3S)	Retail: 4,108 Restaurant w/o bar: 8,000 Restaurant Fast/Casual: 8,388 Restaurant w/ bar: 8,731	481 Studio: 39 1-bdr: 279 2-bdr: 139 3-bdr: 24	-	Reserved Residential: 470	-	-	-

Subblock	Commercial (square feet)	Residential (dwelling unit)	Office (square feet)	Parking On-Site	Parking PD-1	Parking PD-2	Parking PD-5
Public Parking	-	-	-	14 surface spaces; Nights & Weekends: 928	-	-	-
Block 4 Building N	*Retail (Target): 173,008* Retail: 31,675	-	-		-	-	-
Building N-1	-	8, all 3-bdr	-	Reserved Residential: 16	-	-	-
Public Parking	-	-	-	4 surface spaces; 250 (Building N)	-	-	-
Block 5 Building T	Theater (AMC): 59,335 Market (Whole Foods): 57,010	-	-	-	-	-	
Building T-1	-	11, all 3-bdr		Reserved Residential: 22	-	-	-
Public Parking	-	-		-	-	-	913
Block 6 Public Parking	-	-		130	-	-	-

Note: All land uses shown in *grey italics* were constructed and occupied in January 2019, at the time Walker collected parking occupancy data for the Downtown Sunnyvale Parking Study. Demand generated by these uses that would impact the existing public parking supply would already be reflected and accounted from this data collection effort. All remaining uses were analyzed as part of this study.
Source: Cityline Parking Overview, August 12, 2020; Table crated by Walker, 2020

Figure 2: Cityline Land Use Program



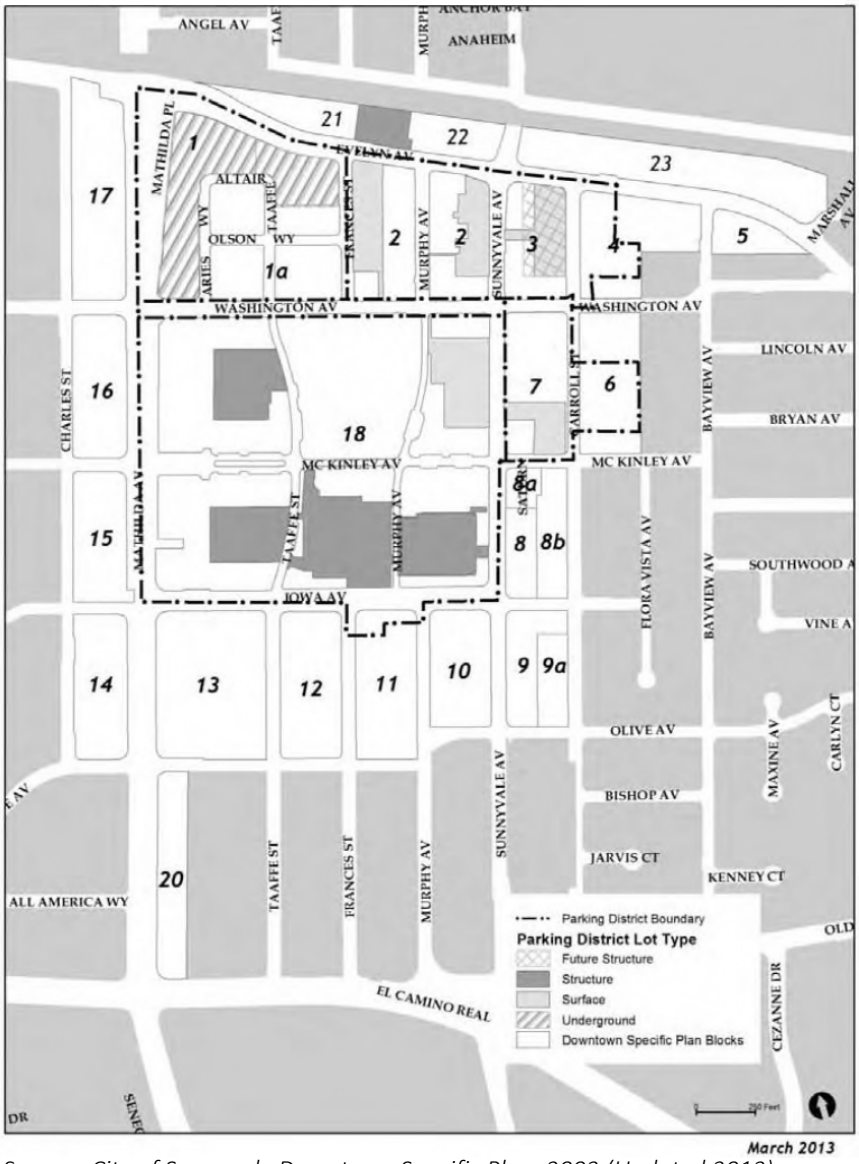
Note: Uses shown in *grey and italicized* are already constructed and occupied.
Source: Development information provided by Cityline, August 2020; Graphic by Walker, 2020; Base Aerial Image – Google Earth Professional, 2020

Parking Management Assessment District

The proposed project is located within the City's Parking Management Assessment District (PMAD), which supplies, operates, and maintains shared public parking for downtown businesses that do not have sufficient on-site space to build parking. The PMAD facilitates development in downtown and helps achieve goals to reduce space dedicated to parking by reducing the number of parking spaces that would typically be required by current regulations. Instead of providing the entirety of their required parking, these owners pay an assessment based on their parking deficit — the amount of parking they provide compared to the parking demand generated by their site. A parcel is considered to be at a deficit if it does not provide sufficient parking to meet the City's demand guidelines.[1] The annual assessment funds the operation and maintenance of existing public parking facilities and the debt service payments from the acquisition and construction of various public-parking facilities within the boundaries of the PMAD.[2]

The PMAD allows property owners to maximize the value of their land, facilitates more dense development, and lowers development costs and rents. An oversupply of parking consumes valuable real estate, decreasing the amount of land dedicated to purposes that serve people. Further, building parking has been found to incentivize people to drive instead of riding transit, walking, and biking, which increases traffic congestion, greenhouse gas emissions, and minimizes investments in pedestrian centered infrastructure. A map of the PMAD is shown in Figure 3.

Figure 3: Downtown Specific Plan Blocks and Parking Management Assessment District Boundaries



Source: *City of Sunnyvale Downtown Specific Plan, 2003 (Updated 2013).*

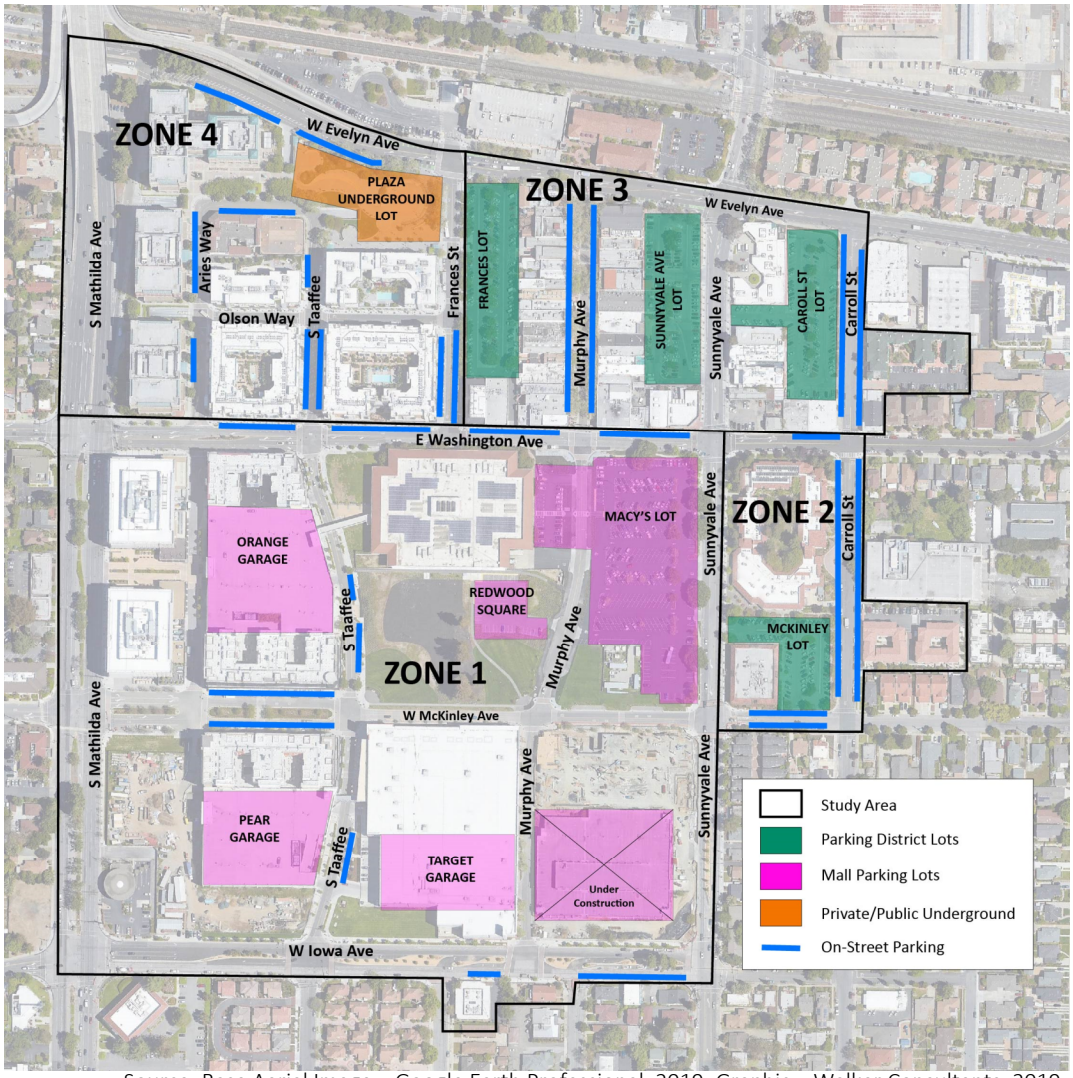
[1] The methodology for calculating a property's parking demand, parking deficit, and assessment within the PMAD is provided in an annual report, titled, "Downtown Parking Maintenance District Preliminary Engineer's Report."

[2] Each year in May all parcels within the boundaries of the Maintenance District are analyzed to determine their current use.

While property owners pay an annual assessment for deficit parking spaces, those deficit spaces are not owned or tied to the property. Public parking spaces in the PMAD are shared by all properties. Payment for deficit spaces is to account for a property's difference in the parking demand compared to the on-site supply and the right to access and use PMAD shared public parking to make up any shortfall. Property owners are paying for deficit spaces that are shared by all.

Since parking facilities within the District vary in size and location, special benefit zones have been established to accurately track the operation and maintenance costs and assess only those properties that benefit from the improvements located within their respective benefit zone. The PMAD is broken up into four benefit zones, Benefit Zone No. 1, 2, 3, or 4. The properties located within each benefit zone are only required to pay for the operation and maintenance of the parking facilities located within their respective benefit zone.

Figure 4: PMAD Benefit Zones



Source: Base Aerial Image – Google Earth Professional, 2019; Graphic – Walker Consultants, 2019

The proposed CityLine development is located in Zone 1 of the PMAD. Zone 1 does not have parking facilities that are maintained by District funds and therefore properties within this zone have a yearly assessment of $0.00. The existing public parking supply in Zone 1 is on city-owned land but was constructed and continues to be maintained by the property owner, not the City. It is assumed that any parking demand generated by Zone 1 would be maintained within the public parking facilities located within Zone 1 and not spill over into any District-maintained facilities in Zones 2, 3, and 4. Figure 4 shows the four benefit zones.

Shared Parking Analysis

To provide an understanding of how much parking would be needed to adequately accommodate the proposed projects, a parking needs analysis was conducted using the shared parking methodology.

Shared parking allows for the sharing of parking spaces among uses in a mixed-use environment—instead of providing a minimum number of parking spaces for each use. Shared parking commonly results in a reduction in the total need for parking spaces. This reduction, which is sometimes significant, depends on the quantities and mix of uses.

The key goal of a shared parking analysis is to find the balance between providing adequate parking to support development from a commercial and operational standpoint and protect the interests of neighboring property owners while minimizing the negative aspects of excessive land area or resources devoted to parking. The ultimate goal of a shared parking analysis is to find a peak period, reasonably predictable worst-case scenario, or design day condition.

Shared parking offers numerous benefits to a community at large, not the least of which is the cost savings and environmental benefit of significantly reducing the amount of parking provided necessary to serve commercial development. Sharing parking also promotes optimal use of land, as more people-oriented uses are built that generated economic development, tax revenues, and improve the overall atmosphere of an area.

Allowing multiple land uses and entities to share parking spaces has allowed for and led to the creation of many popular real estate developments and districts, resulting in the combination of office, residential, retail, hotel, and entertainment districts that rely heavily on shared parking for economic viability while providing parking accommodations to meet the actual demand generated by the development. Traditional downtowns in large and small cities alike have depended on this practice in order to be compact, walkable, and economically viable.

In the same way, mixed-use projects have also benefited from the shared-parking principle, which offers multiple benefits to a community, not the least of which is a lesser environmental impact due to the reduction in required parking needed to serve commercial developments, as well as the ability to create a more desirable mix of uses at one location, all the while ensuring that parking supply is designed for the busiest hour of the year, the busiest day of the year, and busiest month of the year, at an 85th percentile relative to similar properties.

The ability to share parking spaces is the result of two conditions:

1. Variations in the accumulation of vehicles by the hour, by day, or by season at the individual land uses.

2. Relationships among the land uses that result in visiting multiple land uses on the same auto trip. For example, a substantial percentage of patrons at one business (restaurant) may be visitors at the hotel. This is referred to as the "effects of the captive market." These patrons are already parking and contribute only once to the number of peak hour parkers. In other words, the parking demand ratio for individual land uses should be factored downward in proportion to the captive market support received from neighboring land uses.

The shared parking methodology was developed in the 1980s and has been a widely accepted industry standard for rightsizing parking facilities over the past 30+ years. Applied to mixed-use development and cities throughout the U.S., and codified in zoning ordinances as an acceptable practice, shared parking is endorsed by the Urban Land Institute (ULI), the American Planning Association (APA), the National Parking Association (NPA), and the International Council of Shopping Centers (ICSC) as an acceptable method of parking planning and management.

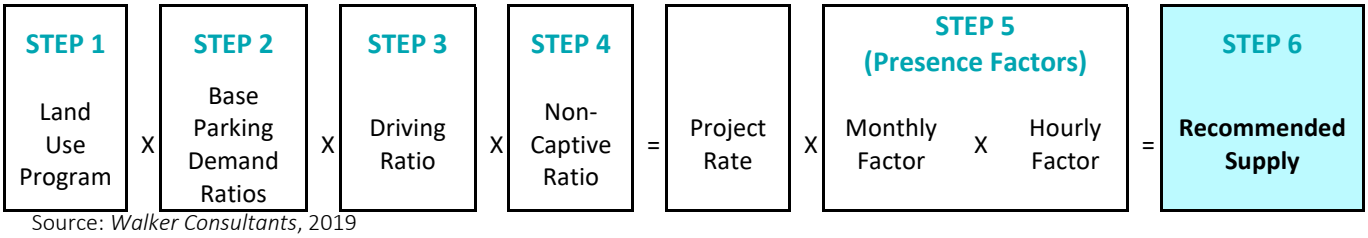
This shared parking analysis using Walker's Shared Parking Model considers the types, quantities, and user groups of land uses for the development, as well as site-and market-specific characteristics of parking and travel behavior in Sunnyvale. Walker's Shared Parking Model is based on the Urban Land Institute (ULI) and the International Council of Shopping Center's (ICSC) *Shared Parking* publication[3]. Walker led a team of consultants in writing the updated Shared Parking Third Edition and features the most up-to-date parking demand model. The model is designed to project the parking needs of various types of development from 6:00 a.m. to 12:00 midnight on a typical weekday and a weekend for every month of the year.

A shared parking analysis begins first by taking the land use quantities of the project, e.g., the number of hotel rooms, and multiplying by a base parking demand ratio and monthly and hourly adjustment factors. All base ratios and hourly and monthly adjustments are industry standards that are based on thousands of parking occupancy studies, vetted by leading parking consultants and real estate professionals, and documented within the Third Edition of ULI/ICSC's *Shared Parking*.

Walker, in accordance with standard shared-parking methodology, applies two additional adjustments to the base parking demand ratios, one to reflect an estimate of the local transportation modal split (called the driving ratio) and another to account for the best estimate of captive market effects[4] (called the non-captive ratio).

The following graphic, Figure 5, provides an illustrative view of the steps involved in the shared parking analysis. This graphic is used within this document to help the reader understand the shared parking process and to also assist in communicating the step of the analysis that is being described within this report. The Shared Parking Analysis section of this report follows this graphic in consecutive order, moving from left to right.

Figure 5: Steps of Shared Parking Analysis



Source: *Walker Consultants*, 2019

Land Use Program

The planned Cityline development analyzed in this study is summarized in Table 1 on Page 5 and 6 of this memo.

Cityline's proposed developments within Block 18 include plans for restaurants with and without bars. For the purposed of this analysis, and direction from Cityline, all restaurants with a bar were considered "Fine/Casual Dining" within the Shared Parking Model, as this use fits most closely to this type of restaurant. For restaurants

[3] Shared Parking (Third Edition), 2019, The Urban Land Institute, Washington, D.C.

[4] Captive market means attendees who are on-site for more than one reason and are not creating additive parking demand.

without a bar, it was assumed that one-half of the proposed square footage would be "Family Restaurant" (e.g. diners, cafeteria-style dining), and the other one-half would be "Fast/Casual" (e.g. fast food, counter service).

Drive Ratio Adjustment

A driving ratio adjustment is the percentage of patrons and employees that are projected to drive to the site in a personal vehicle expressed as a ratio. This excludes all non-driving modes of transportation including public transportation, walking, bicycling, taxi, ride-hailing (Lyft/Uber), and carpooling passengers.

Walker conducted a downtown parking study for the City of Sunnyvale that was approved in August 2020. This study included modeling future demand and incorporated the CityLine development. The drive ratio assumptions used in the greater downtown study were also utilized for this analysis for consistency.

Walker utilized the U.S. Census American Community Survey (ACS) 5-year estimates to determine drive ratios for service employees, including retail and dining, as well as residents. Journey-to-work data from the ACS shows that 10% of Sunnyvale workers bike, walk, ride transit, or carpool to work (one-half of the percent of those carpooling was used to account for some cars still needing to be parked, despite carpooling). This 10% reduction was applied to the drive ratio for service employees.

For residents, ACS data shows that approximately 5% of Sunnyvale residents do not own a car. Additionally, the proposed project plans to offer parking unbundled. This means that a parking space will not be included in the renter's lease but be optional and purchased separately by the tenant. This would likely result in some residents deciding to not purchase a space and park a vehicle. To account for this potential reduction, Walker reviewed data from TransForm, a non-profit focused on improving transportation options in Oakland, California.

TransForm collected parking data for 68 multi-family residential sites (as of March 2015). This data showed that overall, residences with unbundled parking experienced 4% lower parking occupancies than residences without unbundled parking. Therefore, when considering parking ownership in Sunnyvale, the option to unbundle parking, as well as downtown's general walkability and access to transit, a 10% reduction was applied to residential land uses.

All retail/dining, and miscellaneous customers are assumed to primarily drive, therefore only a 1% reduction is applied. This assumption was also used in the downtown study.

For office employees, it is anticipated that a higher percentage of office employees will commute via Caltrain. A 23% reduction was applied to the drive ratio due to the proximity to Caltrain. This estimate was developed using the California Air Pollution Control Officers Association's (CAPCOA) document *Quantifying Greenhouse Gas Mitigation Measures*, 2010. This document provides methodologies for determining the percent of transit users for projects located close to transit. While typically applied to determine reductions in Vehicle Miles Traveled (VMT), based on the proximity to Caltrain, the value is expected to provide a reasonable estimate for those who will access the office uses by non-single occupancy driving

A summary of the drive ratios used for this analysis is provided in Table 2 on page 13.

Table 2: Drive Ratio Assumptions

Land Use	Drive Ratio	
	Weekday	Weekend
Retail & Dining		
Customer	99%	99%
Employee	90%	90%
Residential	90%	90%
Office		
Visitor	99%	99%
Employee	77%	77%

Source: Walker Consultants, 2020

Non-Captive Adjustments

A shared parking analysis recognizes that people often visit two or more land uses housed within the same development site, without increasing their on-site parking use. For example, an office employee who has lunch at one of the project's restaurants and arrived by automobile creates parking demand for one, not two parking spaces. A non-captive ratio allows for an adjustment to the parking needs analysis by taking into account the portion of on-site visitors who are already accounted for as office or resident parking demand and are therefore not creating additional parking demand. This double counting is avoided by applying what is referred to as a "non-captive ratio," the inverse of a captive ratio, and which therefore only counts those cars parked specifically for the intended uses.

Non-captive ratios can vary from one property to the next and from one function to the next within the same property. Typically, a reduction ranging from 20 to 70 percent has been used by parking and transportation professionals to fine-tune the parking requirements for mixed-use projects with primary attractors and secondary attractors.

A non-captive rate of 75% was used for all retail and dining customers. This means that it is assumed that 25% of retail and dining customers will be from the planned residential component of the projects. Non-captive adjustments for employees were calculated in the model based on the size and mix of uses of the development.

The non-captive ratios included herein are intended to be reasonable and appropriate adjustments.

Presence Factors

Adjustments to account for parking demand variability by the hour of day and month of the year. Presence is expressed as a percentage of peak potential demand modified for both times of day and month of the year. The fact that parking demand for each component may peak at different times generally means that fewer parking spaces are needed for the project than would be required if each component were a freestanding development

Shared Parking Analysis Results

Block 1

Based on the land use program and adjustments described in the previous section, the period of peak demand is projected to occur at 2 p.m. on a weekday in Block 1. The recommended parking supply to serve the project at this time is approximately 639 spaces. Weekend peak demand is expected to occur at noon, with a recommended parking supply of approximately 517 spaces.

These results are summarized in Table 3 and Table 4 on pages 15 and 16.

Block 2

With the mix of land uses planned for Block 2, and adjustments described previously, peak parking demand is expected to occur at noon on weekends. The recommended supply for peak weekend parking is approximately 141 spaces. Weekday peak parking demand is projected to occur at 1 p.m. with a recommended supply of 134 spaces.

These results are summarized in Table 5 and Table 6 on pages 17 and 18.

Block 3

The planned land use program for Block 3 is projected to experience peak parking demand at 2 p.m. on a weekday. During this time, the recommended supply to serve the site is approximately 1,986 spaces. Weekend peak parking demand is expected to occur at noon, with a recommended supply of approximately 1,090 spaces.

These results are summarized in Table 7 and Table 8 on pages 19 and 20.

Block 4

The planned mix of land uses for Block 4 is projected to experience peak parking demand on weekends at 2 p.m. with a recommended supply of approximately 117 spaces. Weekend peak parking demand would also occur at 2 p.m. with a recommended supply of 106 spaces.

These results are summarized in Table 9 and Table 10 on pages 21 and 22.

Block 5

Peak parking demand is projected to occur at 3 p.m. on a weekend for the mix of uses planned for Block 5. At this time, a supply of approximately 486 spaces is recommended to serve the area. On weekdays, peak parking demand is projected to occur at 3 p.m. with a recommended supply of 421 spaces

These results are summarized in Table 11 and Table 12 on pages 23 and 24.

Table 3: Block 1 Weekday Peak Recommended Parking Supply

Land Use	Quantity	Unit	Base Ratio	Driving Ratio	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 2PM	Peak Mo Adj December	Recommended Supply
Retail										
Customers	36,552	sf GLA	2.90	99%	75%	2.15	ksf GLA	100%	100%	79
Employees			0.70	90%	99%	0.62		100%	100%	23
Fine/Casual Dining										
Customers	4,358	sf GLA	13.25	99%	75%	9.84	ksf GLA	65%	100%	28
Employees			2.25	90%	99%	2.01		90%	100%	8
Family Restaurant										
Customers	2,000	sf GLA	15.25	99%	75%	11.32	ksf GLA	50%	100%	12
Employees			2.15	90%	99%	1.92		100%	100%	4
Fast Food/Casual										
Customers	2,000	sf GLA	12.40	99%	10%	1.23	ksf GLA	90%	96%	2
Employees			2.00	90%	99%	1.78		95%	100%	3
Residential										
Studio	4	units	0.00	90%	100%	0.00	unit	50%	100%	-
1-bdr	46	units	0.00	90%	100%	0.00	unit	50%	100%	-
2-bdr	25	units	0.00	90%	100%	0.00	unit	50%	100%	-
Reserved	100%	res spaces	1.15	90%	100%	1.03	unit	100%	100%	78
Visitor	75	units	0.10	99%	100%	0.10	unit	20%	100%	2
Office										
Visitor	155,469	sf GFA	0.24	99%	100%	0.24	ksf GFA	95%	100%	36
Reserved	1	emp	2.10	77%	100%	1.62		100%	100%	252
Employee			0.97	77%	100%	0.75		95%	100%	111
									Customer/Visitor	159
									Employee/Resident	150
									Reserved	330
									Total	639

Source: *Walker Consultants*, 2020

Table 4: Block 1 Weekend Peak Recommended Parking Supply

Land Use	Quantity	Unit	Base Ratio	Driving Ratio	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 12PM	Peak Mo Adj December	Recommended Supply
Retail										
Customers	36,552	sf GLA	3.20	99%	75%	2.38	ksf GLA	100%	100%	87
Employees			0.80	90%	99%	0.71		100%	100%	27
Fine/Casual Dining										
Customers	4,358	sf GLA	15.25	99%	75%	11.32	ksf GLA	50%	100%	25
Employees			2.50	90%	99%	2.22		75%	100%	7
Family Restaurant										
Customers	2,000	sf GLA	15.00	99%	75%	11.14	ksf GLA	100%	100%	22
Employees			2.10	90%	99%	1.87		100%	100%	4
Fast Food/Casual								100%		
Customers	2,000	sf GLA	12.70	99%	25%	3.12	ksf GLA		96%	4
Employees			2.00	90%	99%	1.78		100%	100%	5
Residential										
Studio	4	units	0.00	90%	100%	0.00	unit	50%	100%	-
1-bdr	46	units	0.00	90%	100%	0.00	unit	50%	100%	-
2-bdr	25	units	0.00	90%	100%	0.00	unit	50%	100%	-
Reserved	100%	res spaces	1.15	90%	100%	1.03	unit	100%	100%	78
Visitor	75	units	0.15	99%	100%	0.15	unit	20%	100%	2
Office										
Visitor	155,469	sf GFA	0.03	99%	100%	0.03	ksf GFA	90%	100%	4
Reserved	1	emp	2.10	77%	100%	1.62		100%	100%	252
Employee			0.00	77%	100%	0.00		90%	100%	-
									Customer/Visitor	144
									Employee/Resident	43
									Reserved	330
									Total	**517**

Source: *Walker Consultants*, 2020

Table 5: Block 2 Weekday Recommended Parking Supply

Land Use	Quantity	Unit	Base Ratio	Driving Ratio	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 1PM	Peak Mo Adj December	Recommended Supply
Retail							ksf			
Customers	35,147	sf GLA	2.90	99%	75%	2.15	GLA	100%	100%	76
Employees			0.70	90%	100%	0.63		100%	100%	23
Fine/Casual Dining							ksf			
Customers	2,290	sf GLA	13.25	99%	75%	9.84	GLA	75%	100%	17
Employees			2.25	90%	99%	2.01		90%	100%	5
Family Restaurant							ksf			
Customers	820	sf GLA	15.25	99%	75%	11.32	GLA	90%	100%	9
Employees			2.15	90%	99%	1.92		100%	100%	2
Fast Food/Casual							ksf			
Customers	821	sf GLA	12.40	99%	10%	1.23	GLA	100%	96%	1
Employees			2.00	90%	100%	1.80		100%	100%	2
									Customer/Visitor	103
									Employee/Resident	31
									Reserved	-
									Total	**134**

Table 6: Block 2 Weekend Peak Recommended Parking Supply

Land Use	Quantity	Unit	Base Ratio	Driving Ratio	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 12PM	Peak Mo Adj December	Recommended Supply
Retail							ksf			
Customers	35,147	sf GLA	3.20	99%	75%	2.38	GLA	100%	100%	84
Employees			0.80	90%	100%	0.72		100%	100%	26
Fine/Casual Dining							ksf			
Customers	2,290	sf GLA	15.25	99%	75%	11.32	GLA	50%	100%	13
Employees			2.50	90%	99%	2.22		75%	100%	4
Family Restaurant							ksf			
Customers	820	sf GLA	15.00	99%	75%	11.14	GLA	100%	100%	10
Employees			2.10	90%	99%	1.87		100%	100%	2
Fast Food/Casual							ksf			
Customers	821	sf GLA	12.70	99%	10%	1.26	GLA	100%	96%	1
Employees										
									Customer/Visitor	108
									Employee/Resident	34
									Reserved	-
									Total	**141**

Table 7: Block 3 Weekday Peak Recommended Parking Supply

Land Use	Quantity	Unit	Base Ratio	Driving Ratio	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 2PM	Peak Mo Adj December	Recommended Supply
Retail							ksf			
Customers	114,516	sf GLA	2.90	99%	75%	2.15	GLA	100%	100%	247
Employees			0.70	90%	98%	0.62		100%	100%	72
Fine/Casual Dining							ksf			
Customers	8,731	sf GLA	13.25	99%	75%	9.84	GLA	65%	100%	56
Employees			2.25	90%	99%	2.01		90%	100%	16
Family Restaurant							ksf			
Customers	8,000	sf GLA	15.25	99%	75%	11.32	GLA	50%	100%	45
Employees			2.15	90%	99%	1.92		100%	100%	16
Fast Food/Casual							ksf			
Customers	8,388	sf GLA	12.40	99%	10%	1.23	GLA	90%	96%	9
Employees			2.00	90%	98%	1.77		95%	100%	14
Residential										
Studio	39	units	0.00	90%	100%	0.00	unit	50%	100%	-
1-bdr	279	units	0.00	90%	100%	0.00	unit	50%	100%	-
2-bdr	84	units	0.00	90%	100%	0.00	unit	50%	100%	-
3-bdr	16	units	0.00	90%	100%	0.00	unit	50%	100%	-
Reserved	100%	res spaces	1.11	90%	100%	1.00	unit	100%	100%	417
Visitor	418	units	0.10	99%	100%	0.10	unit	20%	100%	8
Office							ksf			
Visitor	499,775	sf GFA	0.20	99%	100%	0.20	GFA	95%	100%	94
Reserved	1	emp	2.41	77%	100%	1.86		100%	100%	786
Employee			0.19	77%	100%	0.15		95%	100%	205
									Customer/Visitor	460
									Employee/Resident	323
									Reserved	1,203
									Total	**1,986**

Table 8: Block 3 Weekend Peak Recommended Parking Supply

Land Use	Quantity	Unit	Base Ratio	Driving Ratio	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 12PM	Peak Mo Adj December	Recommended Supply
Retail							ksf			
Customers	79,433	sf GLA	3.20	99%	75%	2.38	GLA	100%	100%	272
Employees			0.80	90%	98%	0.70		100%	100%	81
Fine/Casual Dining							ksf			
Customers	8,731	sf GLA	15.25	99%	75%	11.32	GLA	50%	100%	50
Employees			2.50	90%	99%	2.22		75%	100%	15
Family Restaurant							ksf			
Customers	8,000	sf GLA	15.00	99%	75%	11.14	GLA	100%	100%	89
Employees			2.10	90%	99%	1.87		100%	100%	15
Fast Food/Casual							ksf			
Customers	8,388	sf GLA	12.70	99%	34%	4.27	GLA	100%	96%	24
Employees			2.00	90%	98%	1.76		100%	100%	15
Residential										
Studio	39	units	0.00	90%	100%	0.00	unit	68%	100%	-
1-bdr	279	units	0.00	90%	100%	0.00	unit	68%	100%	-
2-bdr	84	units	0.00	90%	100%	0.00	unit	68%	100%	-
3-bdr	16	units	0.00	90%	100%	0.00	unit	68%	100%	-
Reserved	100%	res spaces	1.11	90%	100%	1.00	unit	100%	100%	417
Visitor	418	units	0.15	99%	100%	0.15	unit	20%	100%	12
Office							ksf			
Visitor	499,775	sf GFA	0.02	99%	100%	0.02	GFA	90%	100%	9
Reserved	1	emp	0.00	77%	100%	0.00		100%	100%	-
Employee			0.26	77%	100%	0.20		90%	100%	90
									Customer/Visitor	457
									Employee/Resident	216
									Reserved	417
									Total	**1,090**

Table 9: Block 4 Weekday Peak Recommended Parking Supply

Land Use	Quantity	Unit	Base Ratio	Driving Ratio	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 2PM	Peak Mo Adj December	Recommended Supply
Retail							ksf			
Customers	31,675	sf GLA	2.90	99%	75%	2.15	GLA	100%	100%	68
Employees			0.70	90%	100%	0.63		100%	100%	21
Residential										
3-bdr	8	units	0.25	90%	100%	0.23	unit	50%	100%	1
Reserved	90%	res spaces	2.25	90%	100%	2.03	unit	100%	100%	16
Visitor	8	units	0.10	99%	100%	0.10	unit	20%	100%	-
									Customer/Visitor	69
									Employee/Resident	22
									Reserved	16
									Total	**106**

Table 10: Block 4 Weekend Peak Recommended Parking Supply

Land Use	Quantity	Unit	Base Ratio	Driving Ratio	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 2PM	Peak Mo Adj December	Recommended Supply
Retail							ksf			
Customers	31,675	sf GLA	3.20	99%	75%	2.38	GLA	100%	100%	76
Employees			0.80	90%	100%	0.72		100%	100%	23
Residential										
3-bdr	8	units	0.25	90%	100%	0.23	unit	68%	100%	1
Reserved	90%	res spaces	2.25	90%	100%	2.03	unit	100%	100%	16
Visitor	8	units	0.15	99%	100%	0.15	unit	20%	100%	-
									Customer/Visitor	76
									Employee/Resident	25
									Reserved	16
									Total	**117**

Table 11: Block 5 Weekday Peak Recommended Parking Supply

Land Use	Quantity	Unit	Base Ratio	Driving Ratio	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 5PM	Peak Mo Adj December	Recommended Supply
Grocery Store							ksf			
Customers	57,010	sf GLA	4.00	99%	100%	3.96	GLA	100%	95%	215
Employees			0.75	90%	100%	0.68		100%	100%	39
Theater										
Customers	1,121	seats	0.15	100%	95%	0.14	seat	80%	100%	131
Employees			0.01	90%	100%	0.01		100%	100%	11
Residential										
3-bdr	11	units	0.33	90%	100%	0.29	unit	65%	100%	2
Reserved	87%	res spaces	2.18	90%	100%	1.96	unit	100%	100%	22
Visitor	11	units	0.10	99%	100%	0.10	unit	40%	100%	1
									Customer/Visitor	347
									Employee/Resident	52
									Reserved	22
									Total	**421**

Table 12: Block 5 Weekend Peak Recommended Parking Supply

Land Use	Quantity	Unit	Base Ratio	Driving Ratio	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj 3PM	Peak Mo Adj December	Recommended Supply
Grocery Store			4.00	99%	100%	3.96	ksf GLA	100%	95%	215
Customers	57,010	sf GLA								
Employees			0.75	90%	100%	0.68		75%	100%	29
Theater			1,121	seats	0.24	100%	97%	0.23	seat	80%
Customers	1,121	seats								
Employees					0.01	90%	100%	0.01		75%
Residential			0.33	90%	100%	0.29	unit	55%	100%	2
3-bdr	11	units								
		res	2.18	90%	100%	1.96	unit	100%	100%	22
Reserved	87%	spaces								
Visitor	11	units	0.15	99%	100%	0.15	unit	20%	100%	-
									Customer/Visitor	425
									Employee/Resident	39
									Reserved	22
									Total	**486**

Overall Impacts to Public Parking

Walker conducted a downtown parking study for the City of Sunnyvale in 2019, which was approved in August 2020. As part of this study, Walker collected parking occupancy counts for all parking in downtown, including the existing parking facilities within Block 18. This included PD-1, the Pear Garage, PD-2, the Orange Garage, the public lot on Block 4 adjacent to Target, and the surface lot in Block 6.

Methodology

In order to garner an understanding of the overall impacts to the public parking from the Cityline development that has yet to be constructed or is constructed but not yet occupied, Walker utilized data collected as part of this 2019 study to determine how utilization of the existing public parking supply in Block 18 might change upon completion of the proposed Cityline development.

In 2019, data was collected in the Block 18 parking facilities on a weekday between 10 a.m. and noon, noon and 2 p.m., and 6 p.m. to 8 p.m. Existing peak parking demand occurred during the noon to 2 p.m. period. The existing counts include public parking demand generated by Cityline development, such as Target, and some residential uses, as they were constructed and occupied at the time of data collection.

Since peak demand on individual blocks varies by time of day and day of the week, in order to determine the peak future demand for the entire Block 18 development, Walker reviewed the hourly demand of each use throughout the day between 6 a.m. and midnight, provided in the Shared Parking Model. The hourly demand for each use in each subblock was then summed to determine the peak hour of demand for all future Cityline development. Based on this review, future development in Block 18 is projected to experience peak parking demand at 2 p.m. on weekdays.

Once a future Block 18 peak was established, it was combined with the peak weekday existing demand to determine the total public parking demand for existing and future Block 18.

As part of this analysis, all reserved parking demand was removed from the calculation. It is assumed in the model that these spaces would fill first with their designated use (e.g. reserved residential or office), and any overflow parking demand would then utilize available public spaces. Since Walker only collected data for publicly available parking, and not existing reserved spaces, this analysis reflects overall impacts on public parking in Block 18.

Results & Findings

Based on hourly parking demand results from the Shared Parking Model, during the weekday peak, at 2 p.m., 1,618 publicly available spaces would be needed to accommodate the planned Cityline development. Data collected in January 2019 revealed a peak parking demand of 818 in the Block 18 facilities. The combination of these two values indicates an overall demand of 2,436 public parking space to accommodate existing and future demand.

Cityline's Block 18 plans include 2,995 publicly available spaces during the weekday (an additional 786 spaces will be publicly available on Block 3 on nights and weekends). This equates to an overall utilization for public spaces of 81%, with 559 spaces available. This calculation is shown in the following tables on page 27:

Table 13: Future New Public Parking Demand Calculation

	(Spaces)
Total Future Peak Demand (2 p.m.) with Reserved Parking	3,189
Total Future Reserved Parking	*-1,571*
Total Future Public Parking Demand	**1,618**

Table 14: Existing Parking Demand (January 2019)

Existing Weekday Peak Demand	(Spaces)
PD-1	52
PD-2	280
PD-5	-
Block 4 (Target) Public Lot	117
Block 6 Lot	309
Additional Public Surface Spaces	-
Total Existing Demand	818

Table 15: Future Public Supply Calculation

Future Public Parking Facilities	(Spaces)
PD-1	818
PD-2	862
PD-5	913
Block 4 (Target) Public Lot	250
Block 6 Lot	130
Additional Public Surface Spaces	22
Total	**2,995**

Table 16: Future Public Parking Utilization Calculation

Future Utilization Calculation	
Future Public Parking Demand	1,618 spaces
Existing Public Parking Demand	818 spaces
Total Block 18 Public Parking Demand	**2,436 spaces**
Total Future Supply	2,995 spaces
Total Utilization	**81%**
Total Available Spaces During Peak	559 spaces

This is also shown graphically by block in Table 6 on page 27.

Figure 6: Existing & Future Peak Parking Demand by Block, Weekdays 2 p.m.

Source: Base Aerial Image – Google Earth Professional, 2020; Graphic – Walker Consultants, 2020

Typically, parking is considered "full" when it reaches a utilization rate of 85%. Off-street parking facilities can have an acceptable parking occupancy rate of 90%, or higher for facilities where employees regularly park because they are accustomed to the facility. Although 85% for off-street parking simply represents a higher level of service to the driver (more regular availability is provided).

Upon completion of the proposed Cityline development, during the peak, with 81% of public spaces utilized, there would still be an ample surplus of 559 parking spaces available when compared to this 85% threshold.

Recommendations

1. Ensure a balanced distribution of parking demand among Block 18 parking facilities

The parking supply in the PD-1 and PD-2 garages is currently underutilized and when the proposed projects are opened, there will still be significant parking availability. Cityline should monitor utilization in these garages over time to ensure an equal distribution of parking use. This should also be considered in PD-5 when it reopens. Potential methods to manage the distribution of demand include:

Direct or Assign Employee Parking

Employees parking in PD-1, PD-2, and PD-5 should be directed or assigned to park in the top levels of the parking garages as well as instructed which garage to park based on the number of employee parking spaces needed and spaces available. This will help ensure an even distribution of employee parking demand in each garage and also maintain the most desirable spaces on lower level floors for public parking.

Advanced Parking Guidance System

Both PD-1 and PD-2 are currently equipped with Advanced Parking Guidance Systems (APGS). This includes electric signage that displays the number of parking spaces available on the outside of the garage, as well as APGS signs on each level of the garages. The APGS system will likely help manage parking demand in these garages as they are more utilized because users will see how much availability is in each garage before deciding where to park. This will also help users find spaces more quickly, allow for greater utilization of the garages, and reduce instances of users circling the garage to find a space.

Cityline should ensure readings on these garages are calibrated regularly to confirm parking availability is being read and displayed accurately to users. This will become even more important as occupancies increase in these garages.

2. Ensure parking demand does not spill over into public surface lots outside of PMAD Zone 1

As stated previously in this study, the planned Cityline development is located in Zone 1 and does not contribute funds to the Parking District. It is anticipated that all parking demand generated by land uses within Zone 1 can be accommodated by parking within Zone 1. Therefore, Cityline should reasonably ensure that parking demand generated by their projects does not spill over into public lots in the other zones.

While some spillover may naturally occur as visitors and customers visit multiple downtown businesses (e.g. new retail in the 200 West Washington as well as Murphy Avenue), and goal for parking in Downtown Sunnyvale is “park once” and walk to several locations, to the extent possible, tenants of the CityLine development should encourage patrons, employees, and visitors to utilize the PD-1, PD-2, and PD-5.

As stated in Recommendation 1, this could be managed by assigning employee parking for the Cityline developments at the top levels of PD-1, PD-2, and PD-5.

COVID-19 Considerations

This memorandum and analysis were conducted during the response and recovery of the COVID-19 pandemic. As a response to health directives resulting from the pandemic, more office workers are being instructed or voluntarily working from home. It is currently unknown to what degree office workers will continue to work from home upon recovery and reopening, however, it is anticipated that at least a portion of workers will continue to work from home for the foreseeable future. While Walker is closely monitoring predictions from experts, it is currently unclear how this may directly impact parking demand for office land uses. These numbers may change depending on how work from home and commuter trends adapt prior to the availability of a vaccine, and working from home becomes a more viable option for office workers.