Appendix C

Transportation Supporting Information

C1 Travel Demand Memorandum
C2 Transit Assessment Memorandum
C3 Freight Loading Data

C1 Travel Demand Memorandum

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FINAL MEMORANDUM

Date:	April 29, 2019	Case No.: 2018-007883ENV
To:	Liz White; Wade Wietgrefe, San Francisco Planning Department	
From:	Amanda Leahy, AICP; Mike Alston; Kevin Yost, Kittelson & Associates, Inc.	
Project:	Balboa Reservoir	
Subject:	Travel Demand Memorandum – Final	

INTRODUCTION

Kittelson & Associates, Inc. (Kittelson) has prepared this memorandum to present the travel demand and freight and passenger loading demand methodology and estimates for use in the transportation assessment for the proposed Balboa Reservoir Project (Case No. 2018-007883ENV) in San Francisco, California.

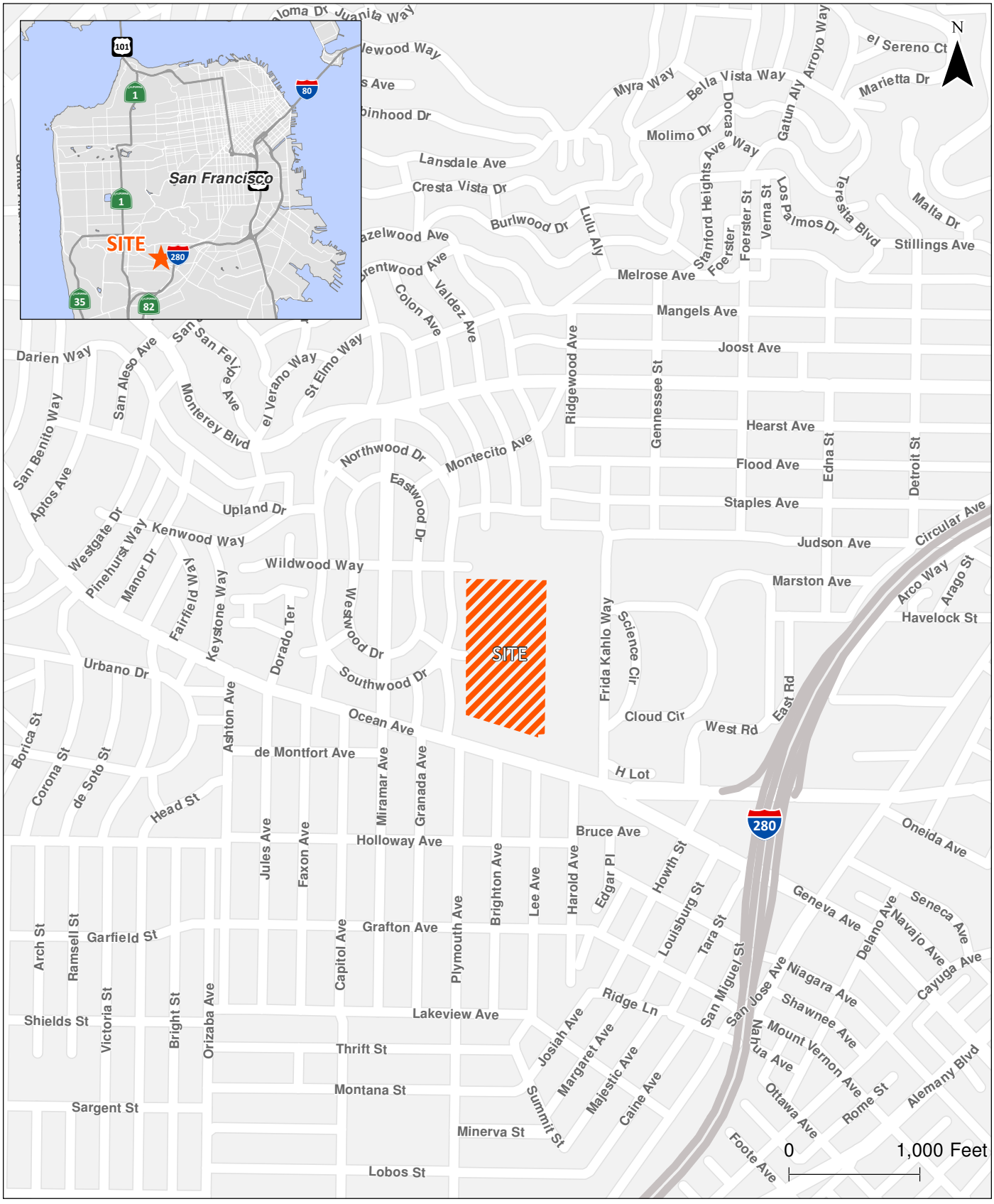
This memorandum is organized into the following sections:

- Project Description
- Project Travel Demand
- Vehicle Trip Assignment
- Freight and Passenger Loading Demand
- Existing Vehicle Activity at the Project Site

PROJECT DESCRIPTION

The project site is the 17.4-acre parcel located across Frida Kahlo Way (formerly Phelan Avenue) from the City College of San Francisco (City College) campus and adjacent to a City College parking lot that fronts onto Frida Kahlo Way. The parcel (Lot 190 of Assessor's Block 3180) is within Traffic Analysis Zone (TAZ) 915. The property is located within the P (Public) Zoning District, and the 65-A, 55-X, and 40-X Height and Bulk Districts. The project site is currently used as an approximately 1,000-space surface parking lot (known as the "Lower Lot") for City College, supplementing the 1,167 vehicle parking spaces in the Upper Lot.[1] The project site is shown in Figure 1.

[1] The parking supply data is based on counts conducted in December 2017, January 2018, and April 2018.



Project Location

Figure **1**

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

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Travel demand estimates for the following two proposed project options are presented in this memorandum:

- **Developer's Proposed Option**. The Developer's Proposed Option would include 1,100 dwelling units in 1,283,000 gross square feet, approximately 50 percent of which would be designated affordable. The housing will be composed of studios and one-, two- and three-bedroom units in flats and townhomes in buildings ranging in height from east to west within the site.[2] The Developer's Proposed Option would include 750 new public, non-accessory parking spaces in a 198,900 gross square foot garage. In addition to the public parking, accessory parking may be provided at a ratio of up to 0.5 spaces per unit throughout the site (up to 550 total spaces). Residential accessory parking would be provided in an additional 141,000 gross square feet of parking podiums beneath buildings onsite. Blocks A through I would allow one below-grade level for vehicle parking spaces. Buildings on the site would range from 2 stories (25 feet) to 7 stories (75 feet), and Blocks A through I would include ground floor building lobbies and common space.
- **Additional Housing Option.** The Additional Housing Option would include 1,550 dwelling units and 650 residential parking spaces.[3] There would be no public parking provided under this option. The Additional Housing Option would have a reduced average unit size and buildings on the site would generally be one story taller compared to the Developer's Proposed Option.[4]

Both project options would include 7,500 square feet of commercial (retail) use and 10,000 square feet of on-site childcare (daycare) and approximately four acres of publicly accessible open space. Three project variants to the Developer's Proposed Option are under consideration: Variant 1: Above-Ground Public Parking, Variant 2: South Street Alignment and Below-Ground Public Parking at North End of Site, and Variant 3: No Pedestrian or Bicycle Access at San Ramon Way. These project variants do not include changes to the proposed land use programs and therefore will not be presented or evaluated in this Travel Demand Memorandum. The proposed land use and parking program for the Developer's Proposed Option and Additional Housing Option are summarized in Table 1.

[2] Based on discussions with the development team, the following unit mix assumptions were analyzed: 40 percent one-bedroom, 30 percent two-bedroom, and 30 percent three-bedroom units.
[3] The number of units in the Additional Housing Option is based on information presented by the City and County of San Francisco at the internal transportation scoping meeting on August 16, 2018.
[4] The transportation analysis presented in this memorandum conservatively assumes the same unit size and mix as the Developer's Proposed Option.

Table 1: Proposed Land Use Program

Land Use	Unit of measurement	Options	
		Developer's Proposed Option	Additional Housing Option
Residential[1]	Total Dwelling Units	1,100	1,550
	Total Square Feet	1,283,000	1,547,000
General Retail	Gross Square Feet	7,500	7,500
Childcare & Community Room	Gross Square Feet	10,000	10,000
Residential Vehicle Parking	Spaces	Up to 550	Up to 650
Public Vehicle Parking	Spaces	750	0

Source: Reservoir Community Partners, LLC
Notes:
[1] Based on information provided by Reservoir Partners LLC, the analysis assumes the following bedroom unit mix: 40% one-bedroom, 30% two-bedroom, 30% three-bedroom units.

PROJECT TRAVEL DEMAND

Trip Generation Estimates

The travel demand for the proposed project options was estimated for weekday daily, weekday a.m., and weekday p.m. peak hours. The person trip generation rates include trips made by residents, employees, and visitors to the proposed development. Trip generation rates presented in the SF Planning Trip Generation Workbook (SF Workbook) were applied to estimate person trips generated by the residential and retail uses for the weekday daily and weekday p.m. peak hour.

The SF Workbook does not include weekday a.m. peak hour rates, or a rate for the proposed daycare land use. Therefore, the Institute of Transportation Engineers' Trip Generation Manual (ITE, 10th Edition (Land Use Code 565) rates were applied to estimate the daily, weekday a.m. and weekday p.m. peak hour person trips generated by the daycare use. Trip generation rates for the weekday a.m. peak hour were developed using a ratio comparison of the ITE weekday a.m. peak hour and weekday p.m. peak hour rates for each proposed land use and applying that ratio to the weekday p.m. peak hour SF Guidelines rates to derive SF Guidelines-equivalent shares of daily trips for the weekday a.m. peak hour. Table 2 presents the trip generation rates used for the proposed land uses.

Table 3 presents the daily, weekday a.m. peak hour, and weekday p.m. peak hour person trip estimates for the Developer's Proposed Option and Additional Housing Option.

Table 2: Trip Generation Rates

Land Use	Time Period	Trip Generation Rate	Unit of measurement
Residential	Daily	4.5	Per Bedroom
	Weekday a.m. Peak Hour	0.3	
	Weekday p.m. Peak Hour	0.4	
Retail - General	Daily	150	Per 1,000 square feet
	Weekday a.m. Peak Hour	10.3	
	Weekday p.m. Peak Hour	13.5	
Daycare[1]	Daily	47.6	Per 1,000 square feet
	Weekday a.m. Peak Hour	11.7	
	Weekday p.m. Peak Hour	11.8	

Source: SF Workbook, 2018. ITE, 10th Edition, 2012.
Notes: The daily and weekday p.m. peak hour trip generation rates were obtained from the SF Planning Trip Generation Workbook. Trip generation rates for the weekday a.m. peak hour were developed using a ratio comparison of the ITE weekday a.m. peak hour and weekday p.m. peak hour rates for each proposed land use and applying that ratio to the weekday p.m. peak hour SF Workbook rates to derive SF Workbook-equivalent shares of daily trips for the weekday a.m. peak hour.
[1] The ITE rate for daycare was applied to estimate person trips generated by the daycare use for daily, weekday a.m. and weekday p.m. peak hour.

Table 3: Person Trip Estimates by Land Use

Land Use	Daily	Weekday a.m. Peak Hour			Weekday p.m. Peak Hour		
		In	Out	Total	In	Out	Total
Developer's Proposed Option							
Residential	9,386	148	486	635	639	195	834
Retail	1,123	47	30	77	39	62	101
Daycare	476	61	56	117	57	61	118
Total Person-Trips	**10,985**	**256**	**573**	**829**	**735**	**318**	**1,053**
Additional Housing Option							
Residential	13,226	209	685	895	901	275	1,176
Retail	1,123	47	30	77	39	62	101
Daycare	476	61	56	117	57	61	118
Total Person-Trips	**14,825**	**317**	**772**	**1,089**	**997**	**398**	**1,395**

Source: Kittelson & Associates, Inc. 2018. SF Workbook, 2018. ITE, 10th Edition, 2012.
Notes: Totals may not sum due to rounding.
[1] Inbound/outbound distribution of weekday p.m. peak hour trips in and out of the project are obtained from the SF Workbook. The distribution of weekday a.m. peak hour trips in and out of the project are the inverse of the weekday p.m. peak hour trips for each land use.
[2] Weekday a.m. peak hour values are calculated using the ITE Trip Generation Handbook 10th edition ratios for a.m. to p.m. for each use.
[3] Daycare trips in and out of project are based on the in and out proportions of retail from the SF Workbook.

As shown in Table 3, the Additional Housing Option would generate 31 to 34 percent more person trips on a daily, weekday a.m., and weekday p.m. peak hour basis when compared to the Developer's Proposed Option. The Developer's Proposed Option would generate 10,985 daily person trips for all land uses, 829 person trips in the weekday a.m. peak hour, and 1,053 person trips in the weekday p.m. peak hour. The Additional Housing Option would generate 14,825 total daily person trips, 1,395 in the weekday p.m. peak hour, and 1,089 in the weekday a.m. peak hour. The person trip generation estimates for retail and daycare land uses are the same for both options. Detailed travel demand calculations are included as Appendix A.

Mode Share

Mode share (the share of individuals using each of the modes presented in the travel survey) was calculated for the extended weekday p.m. peak period (3:00 to 7:00 p.m.) and aggregated at the individual trip level, based on land use and location within San Francisco. As discussed in the San Francisco Transportation Impact Analysis Guidelines Travel Demand Update Memorandum (June 29, 2018), the extended weekday p.m. peak period mode splits can apply throughout the day.

Person trips generated by the Developer's Proposed Option and Additional Housing Option were distributed to twelve districts of the San Francisco Bay Area[5] and then assigned to travel modes based on mode shares presented in the SF Workbook in order to determine the number of auto, taxi/Transportation Network Company (TNC), transit, walk, and bike trips. The mode split for the residential and retail land uses were obtained directly from the SF Workbook, which takes into account the transportation analysis zone, district, and place type of that land use. The SF Workbook does not include the daycare land use. The daycare mode split was estimated as the average of the retail and residential uses. The overall project average vehicle occupancy calculated in the SF Workbook was applied to the daycare. The ITE Trip Generation rate was assumed to represent the total person trips generated by the daycare land use. The average vehicle occupancy for the weekday p.m. peak hour was applied to the weekday a.m. peak hour.

The person trips shown as "auto" person trips reflect the total number of persons traveling by automobile. Given that some automobiles transport multiple people, each of whom is making one person trip, vehicle trips are calculated as the number of auto-person trips divided by the average vehicle occupancy. The Average Vehicle Occupancy is the total number of person trips and total number of vehicle trips calculated for each land use.[6] The resulting mode split for each land use is the same for the Developer's Proposed Option and Additional Housing Option and is presented in Table 4. Table 5 presents the person trips by mode and the total vehicle trips for each land use and both proposed project options. Table 6 presents the vehicle trips generated by land use for both proposed project options.

Table 4: Mode Split by Land Use

Mode	Residential	Retail	Daycare
Auto	40%	54%	42%
Taxi / TNC	4%	1%	3%
Transit	19%	16%	19%
Walk	34%	28%	33%
Bike	4%	1%	4%
Total	**100%**	**100%**	**100%**

Source: Kittelson & Associates, Inc. 2018. SF Guidelines, 2018. ITE, 10th Edition, 2012.

[5] The twelve districts are defined as follows: Downtown/North Beach, South of Market (SoMa), Marina/Western Market, Mission/Potrero, Outer Missions/Hills, Bayshore, Richmond, Sunset, Islands, South Bay, East Bay, and North Bay

[6] The SF Planning Trip Generation Workbook applies an Average Vehicle Occupancy of 1.67 to all taxi/TNC trips and Community Household Travel Survey (CHTS) data for other modes.

Table 5: Person Trip Estimates by Mode and Land Use

Mode	Weekday a.m. Peak Hour				Weekday p.m. Peak Hour			
	Retail	Daycare	Residential	Total	Retail	Daycare	Residential	Total
Developer's Proposed Option								
Auto	42	48	254	344	55	49	334	437
Taxi / TNC	1	4	22	27	1	4	29	34
Transit	12	22	120	153	16	22	157	195
Walk	21	39	215	275	28	39	283	349
Bike	1	4	24	29	1	4	32	37
Total Person-Trips	77	116	635	828	101	117	834	1,052
Total Auto Person Trips	43	52	276	371	56	53	363	471
Average Vehicle Occupancy	1.87	1.87	1.52	1.60	1.87	1.87	1.52	1.59
Vehicle Trips	**24**	**30**	**195**	**249**	**31**	**30**	**257**	**318**
Additional Housing Option								
Auto	42	48	358	448	55	49	470	574
Taxi / TNC	1	4	31	36	1	4	41	46
Transit	12	22	169	202	16	22	221	259
Walk	21	39	303	363	28	39	398	465
Bike	1	4	34	39	1	4	45	50
Total Person-Trips	77	116	895	1,088	101	117	1,176	1,394
Total Auto Person Trips	43	52	389	484	56	53	511	620
Average Vehicle Occupancy	1.87	1.87	1.52	1.58	1.87	1.87	1.52	1.57
Vehicle Trips	***24***	***30***	***275***	***329***	***31***	***30***	***362***	***423***

Source: Kittelson & Associates, Inc. 2018. SF Workbook, 2018. ITE, 10th Edition, 2012.
Notes: TNC = Transportation Network Company

As shown in Table 5 and Table 6, the Additional Housing Option would generate about 35 percent more vehicle trips than the Developer's Proposed Option as a result of the 80 and 105 additional vehicle trips generated by the residential land use during the weekday a.m. and p.m. peak hours, respectively. The Developer's Proposed Option would generate 249 weekday a.m. peak hour vehicle trips (24 retail, 30 daycare, and 195 residential) and 318 weekday p.m. peak hour vehicle trips (31 retail, 30 daycare, and 257 residential). The Additional Housing Option would generate 329 weekday a.m. peak hour vehicle trips (24 retail, 30 daycare, and 275 residential) and 423 weekday p.m. peak hour vehicle trips (31 retail, 30 daycare, and 362 residential).

Table 6: Vehicle Trip Estimates by Land Use

Land Use	Daily	Weekday a.m. Peak Hour			Weekday p.m. Peak Hour		
		In	Out	Total	In	Out	Total
Developer's Proposed Option							
Residential	2,842	62	133	195	175	82	257
Retail	192	13	11	24	14	17	31
Daycare	134	16	14	30	14	16	30
Total Vehicle Trips	***3,168***	***92***	***157***	***249***	***203***	***115***	***318***
Additional Housing Option							
Residential	4,116	88	187	275	246	116	362
Retail	192	13	11	24	14	17	31
Daycare	134	16	14	30	14	16	30
Total Vehicle Trips	***4,442***	***117***	***212***	***329***	***274***	***149***	***423***

Source: Kittelson & Associates, Inc. 2018. SF Workbook, 2018. ITE, 10th Edition, 2012.
Notes: Totals may not sum due to rounding.
[1] Inbound/outbound distribution of weekday p.m. peak hour trips in and out of the project are obtained from the SF Workbook. The distribution of weekday a.m. peak hour trips in and out of the project are the inverse of the weekday p.m. peak hour trips for each land use.
[2] Weekday a.m. peak hour values are calculated using the ITE Trip Generation Handbook 10th edition ratios for a.m. to p.m. for each use.
[3] Daycare trips in and out of project are based on the in and out proportions of retail from the SF Workbook.

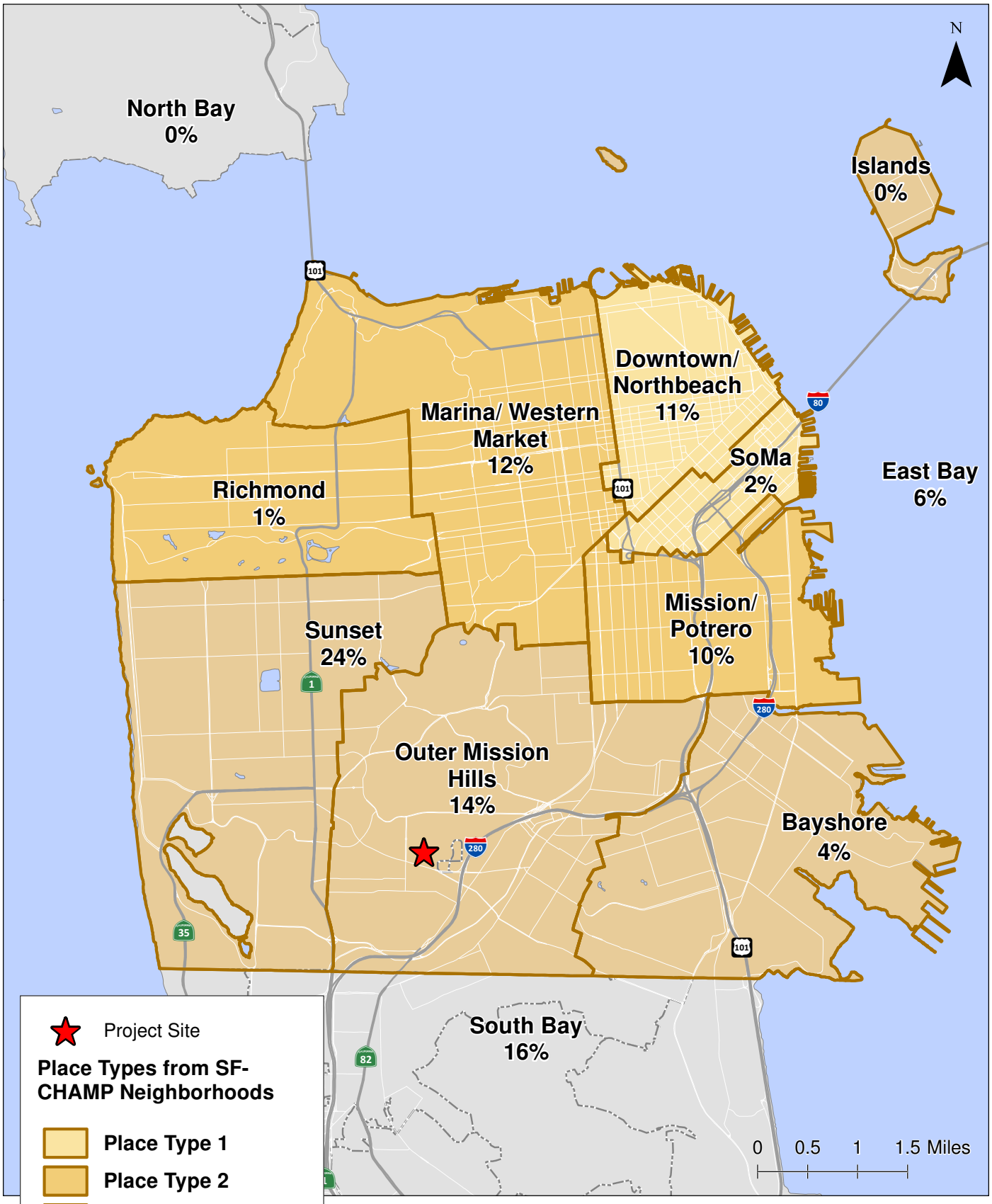
Vehicle Trip Distribution

Vehicle trips were distributed to 12 districts in the San Francisco Bay Area based on the project location and proposed land use types included in the SF Workbook. As shown in Figure 2, the project site is located within the Outer Mission/Hills district. The weekday a.m. peak period distribution to each district was assumed to be the same as the weekday p.m. peak hour distribution. Given that there are no weekday a.m. peak hour inbound/outbound splits in the SF Workbook, the weekday p.m. peak hour splits were reversed and applied for the weekday a.m. peak hour. Project vehicle trip distribution is presented in Table 7 and Figure 2 and is the same for the Developer's Proposed Option and Additional Housing Option.

Table 7: Project Vehicle Trip Distribution

District Origin/Destination	Distribution
Downtown/North Beach	11%
South of Market (SoMa)	2%
Marina/Western Market	12%
Mission/Potrero	10%
Outer Mission/Hills	14%
Bayshore	4%
Richmond	1%
Sunset	24%
Islands	0%
South Bay	16%
East Bay	6%
North Bay	0%
Total	**100%**

Source: Kittelson & Associates, Inc. 2018. SF Workbook, 2018. ITE, 10th Edition, 2012.



Project Vehicle Trip Distribution

Figure **2**

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Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

FREIGHT AND PASSENGER LOADING DEMAND

Freight Loading Demand

Freight loading demand consists of the number of delivery and service vehicle-trips generated by a project. The number of daily delivery/service vehicle trips is estimated based on the size of each land use and a truck trip generation rate specific to each land use. The number of freight loading spaces necessary to accommodate this demand is based on the anticipated hours of operation, turnover of loading spaces, and an hourly distribution of trips. The information and rates used in the loading demand analysis were obtained from the SF Guidelines (2002) for the proposed land uses. Table 8 presents the estimated demand of freight loading spaces for the Developer's Proposed Option and Additional Housing Option.

Table 8: Freight Loading Demand

Land Use	Size (Square Feet)	Turnover Rate	Delivery/Service Vehicle Trips		
			Daily	Average Hour	Peak Hour
Developer's Proposed Option					
Residential	1,283,000	0.03	38.5	1.8	2.2
Retail	7,500	0.22	1.7	0.1	0.1
Daycare	10,000	0.1	1.0	0.0	0.1
Total	***1,300,500***	**-**	***41.1***	***1.9***	***2.4***
Additional Housing Option					
Residential	1,547,000	0.03	46.4	2.1	2.7
Retail	7,500	0.22	1.7	0.1	0.1
Daycare	10,000	0.10	1.0	0.0	0.1
Total	***1,564,500***	-	***49.1***	***2.2***	***2.9***

Source: Kittelson & Associates, Inc, 2018. SF Guidelines, 2002.
Notes:
- The peak period of loading demand typically occurs between 10:00 a.m. and 1:00 p.m. and does not coincide with the weekday a.m. and p.m. peak periods.
- Loading Demand Equation: Daily Trips = (SF / 1,000) * R; Average Hour = (SF / 1,000) * R / 9 / 2.4; Peak Hour = (GSF / 1,000) * (R * 1.25) / 9 / 2.4

As summarized in Table 8, the Additional Housing Option would generate more delivery/service vehicle trips on a daily, weekday a.m. and weekday p.m. peak hour basis as a result of the larger residential use. The Developer's Proposed Option would generate about 41 daily delivery and service vehicle trips and about two trips during the average hour and three trips during the peak hour of freight loading activity. The Additional Housing Option would generate about 49 daily delivery and service vehicle trips and about three trips during the average and peak hour of freight loading activity.

Passenger Loading Demand

Passenger loading demand is estimated for the proposed project options to evaluate whether adequate space to accommodate curbside passenger loading is provided. The extent of curbside space needed to accommodate this demand is based on the trip generation rates and the passenger loading demand methodology outlined in Passenger Loading Demand SF TIA Guidelines, 2018.

- The weekday a.m. and p.m. peak hour person trips for passenger loading are produced from the total person trips (in and out) in Table 3.
- Multiply the number of person trips by the passenger loading percentage for each land use.
- Multiple the number of passenger loading trips by the average stop duration (assumed to be 1 minute) for each passenger loading trip
- Divide the average stop duration by 60 for the peak hour spaces of passenger loading demand, with the spaces rounded up to the nearest integer.

The passenger loading demand and curbside loading space need calculations are summarized in Table 9.

Table 9: Passenger Loading Demand

Step Description	Weekday a.m. Peak Hour				Weekday p.m. Peak Hour			
	Daycare	Retail	Residential	Total	Daycare	Retail	Residential	Total
Additional Housing Option								
a Person Trips	117	77	895	**1,089**	118	101	1,176	**1,395**
b Percentage	3.0%	3.0%	7.2%	-	3.0%	3.0%	7.2%	-
c Passenger Loading Trips	3.5	2.3	64.4	**70.2**	3.5	3.0	84.6	**91.2**
d Average Stop Duration (Min)	3.5	2.3	64.4	**70.2**	3.5	3.0	84.6	**91.2**
e Peak Hour Spaces of Passenger Loading Demand	0.06	0.04	1.07	**1.17**	0.06	0.05	1.41	**1.52**
f Peak Hour Demand (Rounded)	1.0	1.0	2.0	**4.0**	1.0	1.0	2.0	**4.0**
Developer's Proposed Option								
a Person Trips	117	77	635	**829**	118	101	834	**1,054**
b Percentage	3.0%	3.0%	7.2%	-	3.0%	3.0%	7.2%	-
c Passenger Loading Trips	3.5	2.3	45.7	**51.5**	3.5	3.0	60.1	**66.7**
d Average Stop Duration (Minutes)	3.5	2.3	45.7	**51.5**	3.5	3.0	60.1	**66.7**
e Peak Hour Spaces of Passenger Loading Demand	0.06	0.04	0.76	**0.86**	0.06	0.05	1.00	**1.11**
f Peak Hour Demand (Rounded)	1.0	1.0	1.0	**3.0**	1.0	1.0	2.0	**4.0**

Source: SF TIA Guidelines, 2018, Kittelson & Associates, Inc., 2018.
Notes: Equations/calculation:

a) Person-trips from Table 3
b) Passenger Loading Percentage for each land use from Table 3 of 2018 SF Planning Passenger Loading TIA Guidelines
c) Multiply by a * b
d) Multiply (c) by 1
e) Divide (d) by 60
f) Round up to nearest integer

As summarized in Table 9, the Additional Housing Option and Developer's Proposed Option would generate a peak hour demand for up to four passenger loading spaces. Passenger loading demand at each individual building would be less than one space and would round up to one space. Therefore, one passenger loading space should be provided near the lobby entrance of each building to accommodate anticipated demand.

EXISTING VEHICLE ACTIVITY AT THE PROJECT SITE#

As previously noted, the project site is currently occupied by an approximately 1,000-space surface parking lot ("Lower Lot") accessed by two driveways on Frida Kahlo Way. The Lower Lot serves as overflow parking for the City College's 1,167-space Upper Lot. Both parking lots are accessible from two driveways located on Frida Kahlo Way – City College Lot North Entrance and City College Lot South Entrance. The City College Lot North Entrance also serves vehicles exiting the adjacent Archbishop Riordan High School. During the first week of the school year, City College provides free parking. The analysis performed in this memo assumes the year-round condition where parking at City College is not free.

Driveway counts and parking occupancy counts were collected to understand the existing vehicle activity at the site. Driveway counts were collected during the weekday a.m. and p.m. peak periods on Thursday, December 7, 2017 and parking inventory and occupancy data was collected on Thursday, December 7, 2017, Wednesday, January 31, 2018, and Wednesday, April 18, 2018. Both driveway counts and parking inventory and occupancy data were collected when City College was in session. Parking data was collected on an hourly basis between 7:00 a.m. and 9:00 p.m. Driveway count data is summarized in Table 10 and parking supply and average occupancy data are summarized in Table 11. Detailed driveway count data is included as Appendix B. Detailed parking inventory and occupancy data is included as Appendix C.

Table 10: Driveway Counts

City College Lot Entrance	Weekday a.m. Peak Hour[1]			Weekday p.m. Peak Hour[2]		
	Inbound	Outbound	Total	Inbound	Outbound	Total
North	141	144	285	83	130	213
South	194	20	214	121	153	274
Total	**335**	**164**	**499**	**204**	**283**	**487**

Sources: Kittelson & Associates, Inc. 2018; Quality Counts, 2017.
Notes: Data collected on Thursday, December 7, 2017.
[1] The weekday a.m. peak hour of vehicle activity occurred between 7:35 a.m. and 8:35 a.m.
[2] The weekday p.m. peak hour of vehicle activity occurred between 5:00 p.m. and 6:00 p.m.

As shown in Table 10, based on vehicle turning movement counts collected at the site driveways (City College Lot North Entrance and City College Lot South Entrance), there were a total of 499 vehicles (335 inbound, 164 outbound) and 487 vehicles (204 inbound, 283 outbound) observed during the weekday a.m. and p.m. peak hours, respectively.

As shown in Table 11, the peak hourly utilization of both the Lower Lot and Upper Lot occurs between 11:00 a.m. and 12:00 p.m. in both the Lower Lot and Upper Lot. During this time, there were 335 cars parked (672 spaces available) in the Lower Lot and 1,071 cars parked (96 spaces available) in the Upper Lot. The facility (Upper Lot and Lower Lot) was 65 percent occupied during this peak utilization time with a total of 1,406 vehicles parked and 768 vacant spaces available.

Table 11: City College Upper and Lower Lot Parking Supply and Occupancy Count

	Lower Lot (1,007 Spaces)			Upper Lot (1,167 Spaces)			Combined (2,174 Spaces)		
Time	Parked	Available	Utilization	Parked	Available	Utilization	Parked	Available	Utilization
7 a.m.	1	1,006	0%	58	1,109	5%	59	2,115	3%
8 a.m.	4	1,003	0%	248	919	21%	252	1,922	12%
9 a.m.	53	954	5%	759	408	65%	812	1,362	37%
10 a.m.	222	785	22%	1,006	161	86%	1,228	946	57%
11 a.m.	335	672	33%	1,071	96	92%	1,406	768	65%
12 p.m.	306	701	30%	1,046	121	90%	1,352	822	62%
1 p.m.	217	790	22%	987	180	85%	1,204	970	55%
2 p.m.	124	883	12%	827	340	71%	951	1,223	44%
3 p.m.	96	911	10%	684	483	59%	780	1,394	36%
4 p.m.	52	955	5%	522	645	45%	574	1,600	26%
5 p.m.	34	973	3%	431	736	37%	465	1,709	21%
6 p.m.	14	993	1%	513	654	44%	527	1,647	24%
7 p.m.	6	1,001	1%	537	630	46%	543	1,631	25%
8 p.m.	2	1,005	0%	445	722	38%	447	1,727	21%
9 p.m.	1	1,006	0%	184	983	16%	185	1,989	9%

Sources: Kittelson & Associates, Inc. 2018; Quality Counts, 2017 & 2018.
Notes: Data presented represents the average across three days of data collection: Thursday, December 7, 2017, Wednesday, January 31, 2018, and Wednesday, April 18, 2018.

The ability of the Upper Lot to accommodate the total demand for parking during the weekday a.m. and p.m. peak vehicular travel hours was evaluated to determine whether vehicles would be displaced and need to find parking in other off-street or on-street facilities during the peak travel periods. Table 12 summarizes the combined Lower Lot and Upper Lot parking occupancy and utilization based on the capacity of the Upper Lot.

Table 12: Existing City College Upper/Lower Lot Parking Occupancy and Upper Lot Supply

Time Period	Time (Hour Beginning)	Combined Occupancy[1]		
		Parked Vehicles	Available Spaces	Utilization
Weekday a.m. Peak Period	7 a.m.	59	1,108	5%
	8 a.m.	252	915	22%
Weekday Midday Peak Period	10 a.m.	1,228	-61	105%
	11 a.m.	1,406	-239	120%
	12 p.m.	1,352	-185	116%
Weekday p.m. Peak Period	5 p.m.	465	702	40%
	6 p.m.	527	640	45%

Sources: Kittelson & Associates, Inc. 2018; Quality Counts, 2017 & 2018.
Notes: Data presented represents the average across three days of data collection: Thursday, December 7, 2017, Wednesday, January 31, 2018, and Wednesday, April 18, 2018.
[1] Parked vehicles calculated as the sum of the number of vehicles parked in the Lower Lot and Upper Lot. Available spaces and utilization rate calculated based on the Upper Lot supply of 1,167 parking spaces.

As shown in Table 12, the Upper Lot would be able to accommodate the total combined number of vehicles parked in both the Lower Lot (project site) and the Upper Lot during the weekday a.m. and p.m. peak vehicular travel periods. With the combined number of parked vehicles, there would be almost between 915 and 1,108 parking spaces available during the weekday a.m. peak period and between 640 and 702 parking spaces available during the weekday p.m. peak period, such that no vehicles would be displaced and need to find parking in other off-street or on-street facilities. During the weekday midday peak period demand for parking would exceed supply and there would be a maximum shortfall of 239 spaces occurring between 11 a.m. and 12 p.m.

Developer's Proposed Option

Under the Developer's Proposed Option, a 750-space public parking garage would be constructed on the site and would help to offset the loss of the approximately 1,000-space surface parking lot ("Lower Lot"). The public parking garage would be located on the southern end of the site and would be accessible from Lee Avenue. Under the Developer's Proposed Option, vehicle trips associated with the existing parking lot will be reassigned to the public parking garage. The trips will be redistributed from the north entrance to the new access point at Ocean Avenue/Lee Avenue based on existing travel patterns.

The weekday a.m. and p.m. peak hour activity (inbound and outbound vehicle trips) at the Lower Lot was estimated using the parking occupancy and accumulation data collected at the site (Table 11) and the vehicle turning movement counts collected at the north entrance driveway (Table 10). As shown in Table 11, a total of 53 vehicles were parked in the Lower Lot during the peak hour of the weekday a.m. peak period and 48 of those vehicles arrived during the peak hour of the weekday a.m. peak period. During the weekday p.m. peak hour, a total of 52 vehicles were parked in the Lower Lot during the peak hour of the weekday p.m. peak period and 44 vehicles exited during the peak hour of the weekday p.m. peak period.

The inbound/outbound splits from turning movement counts collected at the driveway were applied to estimate the outbound volume during the a.m. peak hour and inbound volume during the p.m. peak hour. According to the turning movement counts collected at the site access driveways, approximately 49 percent of vehicles (48 vehicles) were traveling inbound to the site during the weekday a.m. peak hour. According to the turning movement counts, approximately 61 percent of vehicles (44 vehicles) were traveling outbound from the site during the weekday p.m. peak hour. Therefore, there were a total of 97 vehicle trips (48 inbound, 49 outbound) and 72 vehicle trips (28 inbound, 44 outbound) traveling to/from the Lower Lot.

Additional Housing Option

Under the Additional Housing Option, the project would not provide any replacement public parking. As summarized in the Balboa Reservoir Travel Demand Memorandum, the Upper Lot would have sufficient capacity to accommodate the total number of parked vehicles during the weekday a.m. and p.m. peak hour, such that no vehicles would be displaced and need to find parking in other off-street or on-street

facilities. Therefore, the existing trips destined for the Lower Lot would be expected to find available parking spaces within the Upper Lot and these trips are included as part of the existing traffic volumes. These vehicle trips will remain part of the background traffic for purposes of the analysis.

Appendix A – Travel Demand Assumptions & Calculations

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MEMORANDUM

Date:	December 10, 2018	Case No.: 2018-007883ENV
To:	Liz White & Wade Wietgrefe, San Francisco Planning Department	
From:	Amanda Leahy, AICP; Mike Alston; Kevin Yost, Kittelson & Associates, Inc.	
Project:	Balboa Reservoir	
Subject:	Travel Demand Assumptions Memorandum – Final	

Kittelson & Associates, Inc. (Kittelson) has prepared this memorandum to describe the assumptions and methodologies used to estimate the travel demand for use in the transportation assessment for the proposed Balboa Reservoir (Case No. 2018-007883ENV) project in San Francisco, California.

TRAVEL DEMAND ASSUMPTIONS

The San Francisco Planning Departments' Trip Generation Workbook (SF Workbook) was applied with the following key assumptions related to the land use program, trip generation rates, trip distribution, mode split, average vehicle occupancy, and taxi/TNC trips. An assumptions tracker is included as an attachment to this memorandum.

Land Use Program

- Unit Mix – Based on information provided by Reservoir Partners LLC, the analysis assumes the following unit mix: 40% one-bedroom, 30% two-bedroom, 30% three-bedroom units.

Trip Generation Rates

- Daycare Land Use – There is no daycare land use in the workbook. The Daycare Center rate from the ITE Trip Generation Manual, 10th Edition (ITE Land Use Code 565) was applied
- Weekday a.m. Peak Hour Rates – The San Francisco Travel Demand Update: Data Collection and Analysis Summary (June 29, 2018) includes weekday a.m. person-trip generation rates for office, retail, residential, and hotel land uses. Substantial variability in trip generation rates was observed for all land uses with the 75th percentile rate equaling approximately two to three times the 25th percentile rate for the office, residential, and hotel uses. Additionally, given that many sites were not open during the weekday a.m. peak period, a 25th percentile value was not calculated for the retail land use. As such, the ITE Trip Generation Manual estimates were considered more reliable for the weekday a.m. peak hour and the ratio of a.m. to p.m. peak hour trips from ITE was applied to develop a.m. peak hour rates for each land use

- Inbound/Outbound Splits – There are no weekday a.m. peak hour inbound/outbound splits in the SF Workbook.
    - Residential and Retail Land Uses – The weekday p.m. peak hour splits were reversed and applied for the weekday a.m. peak hour
    - Daycare Land Use – The retail inbound/outbound splits were used for the weekday p.m. peak hour and reversed and applied for the weekday a.m. peak hour

Trip Distribution

The project site is located in District 11 and Place Type 3 using the new SF Planning District Map. The SF Planning Workbook allows distribution to be distributed using a project's place type, district, or the City of San Francisco as a whole. The trip distribution for each district or place type is based on Community Household Travel Survey data. A project's district does not affect distribution when distributing by place type, and likewise, a project's place type does not affect the distribution when distributing by district. This section summarizes a distribution comparison using the initial version of the SF Workbook and the updated version provided by SF Planning in November 2018.

Initial Version

When distributing the trips using the project's conditions (District 11) within the SF Workbook, the SF Workbook did not provide realistic results for distribution. Under these parameters, 91% of all project vehicle trips were distributed to the South Bay region. Distributing trips using the project's place type (Place Type 3), the SF Workbook produced similar results where 80% of all trips were distributed to East or South Bay. Table 1 displays the trip distribution under different distribution parameters. As shown in Table 1, the project trips were distributed using the conditions of several different place types and districts using the SF Workbook. Table 1 displays the project trip distribution using different districts or place types for the weekday p.m. peak hour.

Table 1: Distribution of Project Trips using Different Distribution Parameters

District Origin/Destination	Distribution Method			
	Place Type 2	District 10	District 11	Place Type 3
Downtown/Northbeach	13%	3%	5%	5%
SoMa	8%	1%	1%	1%
Marina/Western Market	13%	1%	1%	1%
Mission/Potrero	9%	1%	0%	1%
Outer Mission/Hills	11%	0%	0%	0%
Bayshore	3%	0%	0%	0%
Richmond	4%	0%	0%	0%
Sunset	21%	1%	0%	1%
Islands	0%	0%	0%	0%
South Bay	11%	91%	5%	40%
East Bay	6%	2%	86%	40%
North Bay	1%	0%	1%	12%
Total	**100%**	**100%**	**100%**	**100%**

As Table 1 shows, distributing project trips using District 10 and 11, or Place type 3, led to unrealistic results. The majority of project trips (more than 85%) under these parameters were not distributed to the districts within SF and were distributed to East or South Bay districts. Distributing using Place Type 3, the project's place type, 40% of project trips were distributed to East Bay, and 40% were distributed to South Bay. These results varied greatly from distributing trips using Place Type 2, which provided a much more balanced distribution. Distributing trips using Place Type 2 produced the most realistic distribution across the updated districts. As a result, the project trips were distributed using Place Type 2. The trip distribution achieved through the SF Workbook using Place Type 2 was then compared to the trip distribution using the SF Guidelines (2002). The SF Guidelines use a different set of districts than the SF Workbook, identified as superdistricts.

Table 2 outlines how the updated districts were compiled into the superdistricts to make the trip distribution comparison. Table 3 displays the distribution resulting from using the methodology outlined in the SF guidelines, which uses a combination of data from the project's census tract for the project's non-work trips, and superdistrict-specific trip distribution for work-trips. The Noe/Glen/Bernal area is included as a part of Superdistrict 3 in the Outer Mission/Hills district.

Table 2: Superdistrict Equivalents to Updated Districts

Superdistrict	SF Workbook Districts
Superdistrict 1	Downtown/Northbeach
	SoMa
Superdistrict 2	Marina/Western Market
	Richmond
Superdistrict 3	Mission/Potrero
	Outer Mission/Hills
	Bayshore
Superdistrict 4	Sunset
South Bay	South Bay
East Bay	East Bay
North Bay	North Bay
Other	Islands + 1% of North/South/East Bays

As shown in Table 2, the North, South, and East Bay districts all have equivalencies in the updated district map. Superdistrict 4 is equivalent to the Sunset District, and Superdistricts 1 through 3 were made up of two or more of the districts identified in the SF Workbook. The "Other" Superdistrict was made up of the Islands district and one percent of the distributions from the South, North, and East Bays. Overall, the distribution is comparable to the distribution resulting from Place Type 3 in the updated SF Workbook. The North Bay and Superdistrict 4 are higher in the updated TIA Guidelines, while Superdistrict 1 is moderately lower.

Table 3: Vehicle Trip Distribution Comparison

Origin / Destination	SF Workbook (Place Type 2)	2002 Guidelines
Superdistrict 1	20%	32%
Superdistrict 2	17%	11%
Superdistrict 3	22%	22%
Superdistrict 4	21%	9%
South Bay	9%	8%
East Bay	5%	6%
North Bay	1%	10%
Other	3%	1%
Total	**100%**	**100%**

Updated Version

On November 9, 2018, SF Planning provided Kittelson with an updated version of the workbook to calculate project travel demand. Using the updated workbook, distributing project trips using the project's district (Outer Mission/Hills) gave more reasonable results than using the initial version of the workbook. Table 4 displays the project trip distribution using Outer Mission/Hills district in the updated version of the workbook compared to distributing using Place Type 2 in the initial version of the workbook. Distributing trips using the Outer Mission/Hills district in the updated version of the workbook shows similar distribution to each district as Place Type 2. Project trips are distributed using the updated version of the workbook and Outer Mission/Hills district distribution.

Table 4: Vehicle Trip Distribution – Place Type 2 and Outer Mission/Hills District

District Origin / Destination	Outer Mission/Hills District (Updated Version)	Place Type 2 (Initial Version)
Downtown/North Beach	11%	13%
SoMa	2%	8%
Marina/Western Market	12%	13%
Mission/Potrero	10%	9%
Outer Mission/Hills	14%	11%
Bayshore	4%	3%
Richmond	1%	4%
Sunset	24%	21%
Islands	0%	0%
South Bay	16%	11%
East Bay	6%	6%
North Bay	0%	1%
Total	**100%**	**100%**

Daycare Land Use

The SF Workbook does not provide a way to distribute trips to and from the daycare land use. Vehicle trip distribution was estimated using the combined distribution from the residential and the retail land uses, as the daycare would serve both uses. Table 5 displays the distribution breakdown for the residential and retail land uses, and the distribution for both land uses combined.

Table 5: Vehicle Trip Distribution using SF Guidelines and updated SF Workbook

District Origin / Destination	Residential Distribution	Retail Distribution	Residential and Retail Distribution Combined
Downtown/North Beach	12%	8%	13%
SoMa	2%	2%	8%
Marina/Western Market	12%	8%	13%
Mission/Potrero	9%	13%	9%
Outer Mission/Hills	12%	20%	11%
Bayshore	4%	2%	3%
Richmond	1%	7%	4%
Sunset	26%	16%	21%
Islands	0%	0%	0%
South Bay	16%	15%	11%
East Bay	6%	7%	6%
North Bay	0%	2%	1%
Total	**100%**	**100%**	**100%**

Daycare trips were then distributed using the combined residential and retail distribution, which, due to the higher number of residential trips for the project, skew towards the distribution of residential trips. The Daycare trips were then added to the combined residential and retail trip distribution and split into different modes.

Mode Split

- Daycare Land Use – The ITE Trip Generation rate was assumed to be represent the total person trips generated by the daycare land use. The overall mode split estimated for the residential and retail land uses was applied to the daycare

Average Vehicle Occupancy

- Daycare Land Use – The overall project average vehicle occupancy calculated in the SF Workbook was applied to the daycare
- Weekday a.m. Peak Hour – The average vehicle occupancy for the weekday p.m. peak hour was applied to the weekday a.m. peak hour

Taxi/TNC Trips

On November 27, 2018, Kittelson was given guidance to double the taxi/TNC vehicle trips so that each taxi/TNC trip was equivalent to one inbound and one outbound trip. The average vehicle occupancy remains 1.67. The adjustments to the taxi/TNC trips are shown in Table 6.

Table 6: Taxi/TNC Trip Estimates

Scenario	Weekday a.m. Peak Hour			Weekday p.m. Peak Hour		
	In	Out	Total	In	Out	Total
Initial Taxi/TNC Trips						
Developer's Proposed Option	5	11	**16**	14	6	**20**
Additional Housing Option	6	16	**22**	20	8	**28**
Updated Taxi/TNC Trips						
Developer's Proposed Option	16	16	**32**	20	20	**40**
Additional Housing Option	22	22	**44**	28	28	**56**

Balboa Reservoir

Travel Demand Assumptions Tracker

Topic	Reference Source
Daily, PM Trip Generation Rates - Retail	2018 Guidelines
Daily, PM Trip Generation Rates - Residential	2018 Guidelines
Daily, PM Trip Generation Rates - Daycare	2002 Guidelines
AM Trip Generation Rates - Retail	2018 Guidelines & ITE Manual
AM Trip Generation Rates - Residential	2018 Guidelines & ITE Manual
AM Trip Generation Rates - Daycare	2002 Guidelines & ITE Manual
Trip Distribution - All Land Uses	2018 Guidelines
Mode Split - All Land Uses	2018 Guidelines
Average Vehicle Occupancy - All Land Uses	2018 Guidelines
Freight Loading Demand	2018 Guidelines
Passenger Loading Demand	2018 Guidelines

Trips by Mode
Based on Static Export of Sf Planning Workbook on 11/30/18
Daycare mode share based on Summary of all modes
Note: AM Average Passenger Rate is same as PM
AM and PM Based on AM/PM Ratios from ITE Trip Gen

Total AVO is based on weighted average of AVO for the weight of each land use

	Daily	Weekday a.m. Peak Hour				Weekday p.m. Peak Hour			
Mode	**Total**	**Retail**	**Daycare**	**Residential**	**Total**	**Retail**	**Daycare**	**Residential**	**Total**
Developer's Proposed Option									
Auto	4,245	42	48	254	344	55	49	334	437
Taxi / TNC	361	1	4	22	27	1	4	29	34
Transit	1,989	12	22	120	153	16	22	157	195
Walk	3,984	21	39	215	275	28	39	283	349
Bike	406	1	4	24	29	1	4	32	37
Total Person-Trips	10,985	77	116	635	828	101	117	834	1,052
Total Vehicle-Person Trips	4,606	43	52	276	371	56	53	363	471
Average Vehicle Occupancy	**1.56**	**1.87**	**1.87**	**1.52**	**1.60**	**1.87**	**1.87**	**1.52**	**1.59**
Unadjusted TNC Vehicle Trips	**216**	**1**	**2**	**13**	**16**	**1**	**2**	**18**	**21**
TNC Vehicle Trips	**216.00**	**2**	**4**	**26**	**32**	**2**	**4**	**36**	**42**
Updated Vehicle Trips	**3,168**	**24**	**30**	**195**	**249**	**31**	**30**	**257**	**318**
Vehicle Trips	***2,952***	***23***	***28***	***182***	***232***	***30***	***28***	***239***	***297***
Additional Housing Option									
	Daily	**AM**				**PM**			
Mode	**Total**	**Retail**	**Daycare**	**Residential**	**Total**	**Retail**	**Daycare**	**Residential**	**Total**
Auto	5,781	42	48	358	448	55	49	470	574
Taxi / TNC	495	1	4	31	36	1	4	41	46
Transit	2,713	12	22	169	202	16	22	221	259
Walk	5,284	21	39	303	363	28	39	398	465
Bike	552	1	4	34	39	1	4	45	50
Total Person-Trips	14,825	77	116	895	1,088	101	117	1,176	1,394
Total Vehicle-Person Trips	6,276	43	52	389	484	56	53	511	620
Average Vehicle Occupancy	**1.51**	**1.87**	**1.87**	**1.52**	**1.58**	**1.87**	**1.87**	**1.52**	**1.57**
Unadjusted TNC Vehicle Trips	**297**	**1**	**2**	**19**	**22**	**1**	**2**	**25**	**28**
TNC Vehicle Trips	**297.00**	**2**	**4**	**38**	**44**	**2**	**4**	**50**	**56**
Adjusted Vehicle Trips	**4,442**	**24**	**30**	**275**	**329**	**31**	**30**	**362**	**423**
Vehicle Trips	**4,144**	**23**	**28**	**256**	**307**	**30**	**28**	**337**	**394**

Overall Mode Split for Developer's Proposed Option PM Peak Period			
Mode	**Residential**	**Retail**	**Daycare**
Auto Person Trips	40%	54%	42%
Taxi TNC Person Trips	4%	1%	3%
Public Transit	19%	16%	19%
Walk	34%	28%	33%
Bike	4%	1%	4%
Total	**100%**	**100%**	**100%**

Overall Mode Split for Developer's Proposed Option PM Peak Period		
Mode	**Share**	**Percent**
Auto Person	389	42%
Taxi TNC Person Trips	30	3%
Public Transit	173	19%
Walk	310	33%
Bike	33	4%
Total	**935**	**100%**

Trips by Land Use

From Static Worksheets PM Residential and Retail 11-30

Note: Peak Hour Trips from Trips By Mode Worksheet

Assumption AM Trip Rate is based on the ratio of total AM to total PM for each land use

Assumption AM Peak Hour In/Out Ratios is based on the inverse of the PM Peak Hour In/Out Ratios

TNC Vehicle Trips are doubled

Land Use	Daily	Weekday a.m. Peak Hour			Weekday p.m. Peak Hour		
		In	Out	Total	In	Out	Total
Developer's Proposed Option							
Residential	9,386	148	486	635	639	195	834
Retail	1,123	47	30	77	39	62	101
DayCare	476	61	56	117	57	61	118
Total Person-Trips	**10,985**	**256**	**573**	**829**	**735**	**318**	**1,053**
Additional Housing Option							
Residential	13,226	209	685	895	901	275	1,176
Retail	1,123	47	30	77	39	62	101
DayCare	476	61	56	117	57	61	118
Total Person-Trips	**14,825**	**317**	**772**	**1,089**	**997**	**398**	**1,395**

Mode	Residential			Retail		
	Out	In	Total	Out	In	Total
Auto Person Trips	7.1	98.8	105.9	1.9	3.7	5.6
	126.6	237.5	364.1	28.0	21.4	49.4
Taxi / TNC Person Trips (unadjusted	11.7	29.5	41.2	0.6	0.5	1.0
Taxi / TNC Person Trips Adjusted	46.0	46.0	92.1	1.0	1.0	2.0
Transit Person Trips	7.0	131.8	138.8	6.5	0.8	7.3
	18.9	63.8	82.7	7.0	1.6	8.6
Total	**171.2**	**561.5**	**732.7**	**44.0**	**27.9**	**71.9**
Person Trip Split	**23%**	**77%**	**100%**	**61%**	**39%**	**100%**
Total Auto Person Trips	**180**	**382**	**562**	**31**	**26**	**57**
Total Auto Vehicle Trips	**114**	**243**	**358**	**17**	**14**	**30**
TNC / Auto Person Trip Split	**32%**	**68%**	**100%**	**54%**	**46%**	**100%**

Note: TNC Person trips are adjusted in this table to account for the addition of an outbound vehicle trip for all inbound TNC trips

ITE Trip Generation Handbook Reference	Land Use Code	Land Use	Weekday PM Peak Hour	Weekday AM Peak hour	AM to PM Ratio
General Urban Suburban pg. 228-229	565	Daycare	11.82	11.73	0.992
Multi-Use Urban pg. 72	221	Mid Rise Residential	2.08	1.9	0.913
Multi Use Urban pg. 285 to 286	231	Mid Rise Residential with Ground Floor Retail	0.46	0.35	0.761

Option	Total Am to PM Ratio
Developer's Proposed Option	78.68%
Additional Housing Option	78.05%

Proportion of Person Trips in Daycare Land Use - Additional	Proportion of Person Trips in Daycare Land Use - Developer
8.48%	11.22%

Vehicle Trips using in/out splits

Land Use	Daily	Weekday a.m. Peak Hour			Weekday p.m. Peak Hour		
		In	Out	Total	In	Out	Total
Developer's Proposed Option							
Residential	2,842	62	133	195	175	82	257
Retail	192	13	11	24	14	17	31
Daycare	134	16	14	30	14	16	30
Total Vehicle Trips	**3,168**	**92**	**157**	**249**	**203**	**115**	**318**
Additional Housing Option							
Residential	4,116	88	187	275	246	116	362
Retail	192	13	11	24	14	17	31
Daycare	134	16	14	30	14	16	30
Total Vehicle Trips	**4,442**	**117**	**212**	**329**	**274**	**149**	**423**

Daycare In/Out Splits Using 2002 Guidelines			
Trip Type	In	Out	Total
Person Trips	48.0%	52.0%	100.0%
Vehicle Trips	47.6%	52.4%	100.0%

TNC Trips

	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Current TNC Trips						
Developer's Proposed	5	11	16	14	6	20
Additional Housing	6	16	22	20	8	28
Updated TNC Trips						
Developer's Proposed	16	16	32	20	20	40
Additional Housing	22	22	44	28	28	56
Difference Developers Proposed	11	5	16	6	14	20
Additional Housing Difference	16	6	22	8	20	28

Note: Peak Hour Trips from Trips By Mode Worksheet

Land Use	Size (Square Feet)	Turnover Rate	Delivery/Service Vehicle Trips		
			Daily	Average Hour	Peak Hour
Person Trips					
Residential	1,283,000	0.03	38.5	1.8	2.2
Retail	7,500	0.22	1.7	0.1	0.1
Daycare Center	10,000	0.1	1.0	0.0	0.1
Total	***1,300,500***	**-**	***41.1***	***1.9***	***2.4***
Additional Housing Option					
Residential	1,547,000	0.03	46.4	2.1	2.7
Retail	7,500	0.22	1.7	0.1	0.1
Daycare Center	10,000	0.10	1.0	0.0	0.1
Total	***1,564,500***	-	***49.1***	***2.3***	***2.8***

Bedroom Mix

Option	SF	Units	1 Bedroom Units	2 Bedroom Units	3 Bedroom Units	Total Bedrooms	Average SF per Unit
Developer's Proposed Option	1,283,000	1,100	440	330	330	2,945	1,166
Additional Housing Option	1,547,000	1,550	620	465	465	2,090	1,166

Assumption is being made that the size of each unit for the Additional Housing Option is the same as the Developer's Proposed Option

Bedroom Mix for Both Options	
Bedroom Type	Percent
1 Bedroom	40%
2 Bedroom	30%
3 Bedroom	30%

Passenger Loading

Step Description	Weekday a.m. Peak Hour				Weekday p.m. Peak Hour			
Land Use	**Daycare**	**Retail**	**Residential**	**Total**	**Daycare**	**Retail**	**Residential**	**Total**
Additional Housing Option								
Person Trips	117	77	895	1,089	118	101	1,176	1,395
Loading Percentage	3.0%	3.0%	7.2%	-	3.0%	3.0%	7.2%	-
Passenger Loading Trips	3.5	2.3	64.4	70.2	3.5	3.0	84.6	91.2
Average Stop Duration (Minutes)	3.5	2.3	64.4	70.2	3.5	3.0	84.6	91.2
Peak Hour Spaces of Passenger Loading Demand	0.06	0.04	1.07	1.17	0.06	0.05	1.41	1.52
Peak Hour Spaces of Passenger Loading Demand (Rounded)	**1.0**	**1.0**	**2.0**	**4.0**	**1.0**	**1.0**	**2.0**	**4.0**
Developer's Proposed Option								
Person Trips	117	77	635	829	118	101	834	1,054
Loading Percentage	3.0%	3.0%	7.2%	-	3.0%	3.0%	7.2%	-
Passenger Loading Trips	3.5	2.3	45.7	51.5	3.5	3.0	60.1	66.7
Average Stop Duration (Minutes)	3.5	2.3	45.7	51.5	3.5	3.0	60.1	66.7
Peak Hour Spaces of Passenger Loading Demand	0.06	0.04	0.76	0.86	0.06	0.05	1.00	1.11
Peak Hour Spaces of Passenger Loading Demand (Rounded)	**1.0**	**1.0**	**1.0**	**3.0**	**1.0**	**1.0**	**2.0**	**4.0**

Trip Generation Rates

Note: Peak Hour Trips from Trips By Mode Worksheet

AM rates use the ratio of the PM to AM ratio of each land use from ITE Trip Generation Manual 10th edition

Land Use	Period	Average	Unit
Residential	Daily	4.5	Per Bedroom
	PM Peak	0.4	
	AM Peak	0.3	
Retail - General	Daily	150	Per 1k sq ft of land use
	PM Peak	13.5	
	AM Peak	10.3	
Daycare	Daily	47.6	Per 1k sq ft of land use
	PM Peak	11.8	
	AM Peak	11.7	

Daycare Trips

Assumption: ITE Trip rate is same as person-trips

Note: Peak Hour Trips from Trips By Mode Worksheet

PM Daycare Trips		
Method	**ITE Trip Gen**	**Students / sqft**
Square Feet	10.00	10000.00
ITE Trip PM Trip Generation Rate	11.82	
Students per sqft		88.00
Student Estimate		113.64
Driving Mode Share		0.70
Student-based Trips		79.55
Staff per Student		0.20
Staff Total		22.73
Retail Auto Share		0.40
Staff Based Trips		9.09
PM Trips	**118.20**	**88.64**

Daily Daycare Trips	
Method	**ITE Trip Gen**
Sqft (1000)	10.00
ITE Trip PM Trip Generation Rate	47.62
Daily	**476.20**

All distribution sheets From Static Export of SF Guidelines Workbook on 11-30
Daycare trip distribution based on summary of PM Peak Period trip distribution
Retail trip distribution for Additional Housing Option is identical to Developer's Proposed Option for PM peak period and daily.

AM Distibution is assumed to be same as PM for all land uses. In and Out is assumed to be inversed

Origin/Destination	Developer's Proposed Option		Additional Housing Option	
	Weekday AM Peak Hour	Weekday PM Peak Hour	Weekday AM Peak Hour	Weekday PM Peak Hour
Downtown/Northbeach	11%	11%	11%	11%
SoMa	2%	2%	2%	2%
Marina/Western Market	12%	12%	12%	12%
Mission/Potrero	10%	10%	10%	10%
Outer Mission/Hills	14%	14%	13%	13%
Bayshore	4%	4%	4%	4%
Richmond	1%	1%	1%	1%
Sunset	24%	24%	25%	25%
Islands	0%	0%	0%	0%
South Bay	16%	16%	11%	11%
East Bay	6%	6%	6%	6%
North Bay	0%	0%	0%	0%
Total	**100%**	**100%**	**96%**	**96%**

Option	Total Am to PM Ratio
Developer's Proposed Option	78.68%
Additional Housing Option	78.05%

Distribution of Retail Trips for Developer's Proposed Option in PM Peak Period

		Outbound													Inbound											
Mode		Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total	Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total
Auto Person Trips	PM Work Trips	0.00	0.14	0.11	1.28	0.06	0.00	0.00	0.14	0.00	0.20	0.00	0.00	**1.93**	1.42	0.00	0.07	0.96	0.10	0.17	0.00	0.08	0.00	0.90	0.00	0.00	**3.70**
	PM Non-Work Trips	0.00	0.00	1.50	1.84	9.73	3.93	1.01	4.14	0.00	3.17	1.93	0.74	**28.00**	0.21	0.15	1.42	1.42	4.71	0.18	1.14	6.78	0.00	3.90	0.93	0.52	**21.36**
Taxi / TNC Person Trips	PM Work Trips	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.04**	0.03	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	**0.07**
	PM Non-Work Trips	0.00	0.00	0.03	0.03	0.18	0.07	0.02	0.08	0.00	0.06	0.04	0.01	**0.52**	0.00	0.00	0.03	0.03	0.09	0.00	0.02	0.12	0.00	0.07	0.02	0.01	**0.39**
Transit Person Trips	PM Work Trips	1.55	0.00	0.00	4.90	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	**6.54**	0.14	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	**0.76**
	PM Non-Work Trips	0.80	0.11	0.09	3.46	1.15	0.00	0.00	0.06	0.00	0.65	0.63	0.00	**6.95**	0.11	0.00	0.53	0.23	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**1.65**
Auto VehicleTrips*	PM Work Trips	0.00	0.14	0.05	1.28	0.03	0.00	0.00	0.14	0.00	0.12	0.00	0.00	**1.77**	1.38	0.00	0.07	0.96	0.08	0.17	0.00	0.08	0.00	0.85	0.00	0.00	**3.59**
	PM Non-Work Trips	0.00	0.00	0.81	0.74	4.55	2.22	0.53	1.61	0.00	1.38	0.87	0.45	**13.17**	0.07	0.07	0.65	0.79	2.54	0.18	0.72	2.89	0.00	2.17	0.27	0.38	**10.73**
Taxi / TNC Vehicle Trips*	PM Work Trips	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.02**	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	**0.04**
		0.00	0.00	0.02	0.02	0.11	0.04	0.01	0.05	0.00	0.03	0.02	0.01	**0.31**	0.00	0.00	0.02	0.02	0.05	0.00	0.01	0.07	0.00	0.04	0.01	0.01	**0.24**
Total Trips		**2.35**	**0.25**	**1.73**	*11.53*	**11.13**	**4.09**	**1.03**	**4.42**	**0.00**	**4.09**	**2.59**	**0.76**	**43.97**	**1.90**	**0.15**	**2.05**	**2.70**	**5.69**	**0.35**	**1.16**	**6.99**	**0.00**	**5.45**	**0.95**	**0.53**	**27.92**
In and Out Total Trips		4.25	0.40	3.77	14.24	16.82	4.45	2.19	11.41	0.00	9.53	3.54	1.29	**71.89**													
Percent		**6%**	**1%**	**5%**	**20%**	**23%**	**6%**	**3%**	**16%**	**0%**	**13%**	**5%**	**2%**														
AVO														**1.874**													1.749007055

Distribution of Residential Trips for Developer's Proposed Option in PM Peak Period

		Outbound													Inbound											
Mode		Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total	Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total
Auto Person Trips	PM Work Trips	4.47	0.00	0.23	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**5.04**	14.06	4.18	2.97	2.14	0.35	2.96	0.00	10.46	0.51	17.90	14.59	0.00	**70.14**
	PM Non-Work Trips	4.70	0.44	19.70	10.88	8.07	3.15	1.06	22.49	0.00	19.32	0.00	0.00	**89.81**	13.49	0.35	13.91	17.32	36.86	7.14	1.26	69.57	0.00	7.96	0.00	0.71	**168.58**
Taxi / TNC Person Trips	PM Work Trips	0.39	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.44**	1.23	0.37	0.26	0.19	0.03	0.26	0.00	0.92	0.04	1.57	1.28	0.00	**6.15**
	PM Non-Work Trips	0.41	0.04	1.73	0.95	0.71	0.28	0.09	1.97	0.00	1.69	0.00	0.00	**7.88**	1.18	0.03	1.22	1.52	3.23	0.63	0.11	6.10	0.00	0.70	0.00	0.06	**14.79**
Transit Person Trips	PM Work Trips	4.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**4.95**	46.11	6.18	5.95	0.00	0.92	4.59	15.86	0.92	0.00	0.00	13.00	0.00	**93.53**
	PM Non-Work Trips	2.11	4.95	1.84	0.00	4.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**13.40**	14.30	3.21	3.14	0.00	10.72	0.00	2.57	3.83	0.00	5.40	2.11	0.00	**45.29**
Auto VehicleTrips*	PM Work Trips	4.47	0.00	0.12	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**4.92**	13.25	3.19	2.86	2.14	0.18	2.96	0.00	10.46	0.51	17.90	14.59	0.00	**68.04**
	PM Non-Work Trips	3.34	0.44	17.76	10.11	7.68	1.71	1.06	12.93	0.00	10.47	0.00	0.00	**65.50**	4.55	0.35	7.11	8.29	19.23	3.21	1.09	32.13	0.00	6.54	0.00	0.36	**82.86**
Taxi / TNC Vehicle Trips*	PM Work Trips	0.23	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.26**	0.74	0.22	0.16	0.11	0.02	0.16	0.00	0.55	0.03	0.94	0.77	0.00	**3.68**
	PM Non-Work Trips	0.25	0.02	1.03	0.57	0.42	0.17	0.06	1.18	0.00	1.01	0.00	0.00	**4.72**	0.71	0.02	0.73	0.91	1.94	0.38	0.07	3.65	0.00	0.42	0.00	0.04	**8.85**
Total Trips		**17.04**	**5.44**	**23.53**	*12.19*	**13.27**	**3.43**	**1.16**	**24.47**	**0.00**	**21.01**	**0.00**	**0.00**	**121.52**	**90.39**	**14.31**	**27.45**	**21.17**	**52.12**	**15.58**	**19.81**	**91.80**	**0.55**	**33.54**	**30.98**	**0.77**	**398.47**
In and Out Total Trips		107.42	19.75	50.97	33.36	65.39	19.01	20.96	116.26	0.55	54.55	30.98	0.77	**519.99**													
Percent		**21%**	**4%**	**10%**	**6%**	**13%**	**4%**	**4%**	**22%**	**0%**	**10%**	**6%**	**0%**														
AVO														**1.519**													

Note: Daycare trip distribution based on summary of PM Peak Period trip distribution

Distribution of Day Care Trips for Developer's Proposed Option in PM Peak Period

		Outbound													Inbound											
Mode		Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total	Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total
Auto Person Trips	Daily Work Trips	0.38	0.01	0.03	0.14	0.01	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.59	1.31	0.35	0.26	0.26	0.04	0.27	0.00	0.89	0.04	1.59	1.24	0.00	6.26
	Daily Non-Work Trips	0.40	0.04	1.80	1.08	1.51	0.60	0.18	2.26	0.00	1.91	0.16	0.06	9.98	1.16	0.04	1.30	1.59	3.52	0.62	0.20	6.47	0.00	1.00	0.08	0.10	16.10
Taxi / TNC Person Trips	Daily Work Trips	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.11	0.03	0.02	0.02	0.00	0.02	0.00	0.08	0.00	0.13	0.11	0.00	0.53
	Daily Non-Work Trips	0.03	0.00	0.15	0.08	0.08	0.03	0.01	0.17	0.00	0.15	0.00	0.00	0.71	0.10	0.00	0.11	0.13	0.28	0.05	0.01	0.53	0.00	0.07	0.00	0.01	1.29
Transit Person Trips	Daily Work Trips	0.55	0.00	0.00	0.42	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.97	3.92	0.52	0.50	0.00	0.08	0.39	1.34	0.08	0.00	0.05	1.10	0.00	7.99
	Daily Non-Work Trips	0.25	0.43	0.16	0.29	0.48	0.00	0.00	0.01	0.00	0.06	0.05	0.00	1.72	1.22	0.27	0.31	0.02	0.98	0.00	0.22	0.32	0.00	0.46	0.18	0.00	3.98
Auto VehicleTrips*	Daily Work Trips	0.38	0.01	0.01	0.14	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.57	1.24	0.27	0.25	0.26	0.02	0.27	0.00	0.89	0.04	1.59	1.24	0.00	6.07
	Daily Non-Work Trips	0.28	0.04	1.57	0.92	1.04	0.33	0.14	1.23	0.00	1.00	0.07	0.04	6.67	0.39	0.04	0.66	0.77	1.84	0.29	0.15	2.97	0.00	0.74	0.02	0.06	7.93
Taxi / TNC Vehicle Trips*	Daily Work Trips	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.02	0.01	0.01	0.00	0.01	0.00	0.05	0.00	0.08	0.06	0.00	0.32
	Daily Non-Work Trips	0.02	0.00	0.09	0.05	0.05	0.02	0.01	0.10	0.00	0.09	0.00	0.00	0.43	0.06	0.00	0.06	0.08	0.17	0.03	0.01	0.32	0.00	0.04	0.00	0.00	0.77
Total Trips		**0.70**	**0.05**	**1.68**	**1.11**	**1.08**	**0.35**	**0.14**	**1.35**	**0.00**	**1.10**	**0.08**	**0.04**	**7.68**	**1.76**	**0.33**	**0.98**	**1.12**	**2.04**	**0.60**	**0.16**	**4.22**	**0.05**	**2.45**	**1.32**	**0.07**	**15.09**
In and Out Total Trips		2.46	0.38	2.66	2.23	3.12	0.95	0.30	5.57	0.05	3.55	1.40	0.11	**22.77**													
Percent		**1%**	**0%**	**1%**	**1%**	**1%**	**0%**	**0%**	**2%**	**0%**	**1%**	**1%**	**0%**														
AVO														**1.559**													

Distribution of Residential Trips for Developer's Proposed Option- Daily

		Outbound													Inbound											
Mode		Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total	Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total
Auto Person Trips	PM Work Trips	54.26	8.94	41.01	26.74	42.91	29.06	25.43	26.31	0.00	76.56	58.61	4.56	**394.39**	47.64	11.41	41.33	13.99	31.95	26.20	23.23	28.43	0.83	94.09	44.88	7.05	**371.03**
	PM Non-Work Trips	61.42	28.90	363.18	94.33	190.60	12.83	122.14	376.79	0.00	157.93	38.18	25.65	**1471.97**	76.17	23.02	355.12	147.11	207.92	14.89	112.15	365.81	0.00	163.02	19.75	###	**1515.21**
Taxi / TNC Person Trips	PM Work Trips	4.76	0.78	3.60	2.35	3.76	2.55	2.23	2.31	0.00	6.72	5.14	0.40	**34.60**	4.18	1.00	3.63	1.23	2.80	2.30	2.04	2.49	0.07	8.25	3.94	0.62	**32.55**
	PM Non-Work Trips	5.39	2.53	31.86	8.27	16.72	1.13	10.71	33.05	0.00	13.85	3.35	2.25	**129.12**	6.68	2.02	31.15	12.90	18.24	1.31	9.84	32.09	0.00	14.30	1.73	2.65	**132.91**
Transit Person Trips	PM Work Trips	178.97	130.56	49.72	22.23	30.88	4.07	13.86	10.10	0.00	43.67	67.18	0.00	**551.24**	160.80	109.34	15.28	21.45	31.56	4.07	14.85	7.10	0.00	44.70	75.41	0.00	**484.55**
	PM Non-Work Trips	85.00	21.18	58.91	16.11	121.25	2.81	6.18	35.52	0.00	20.99	5.04	0.00	**372.99**	58.41	8.22	71.91	106.43	35.13	3.68	12.97	38.13	0.00	18.26	6.22	0.00	**359.36**
Auto VehicleTrips*	PM Work Trips	48.26	7.33	35.18	25.14	42.01	29.06	24.53	25.73	0.00	71.58	54.96	4.56	**368.34**	41.31	9.27	35.06	13.99	31.66	26.20	23.23	27.88	0.83	82.70	41.08	7.05	**340.26**
	PM Non-Work Trips	39.43	23.94	196.38	59.53	125.60	6.86	76.41	191.67	0.00	85.85	28.46	16.64	**850.76**	47.45	14.12	187.86	75.05	147.55	7.75	74.00	193.90	0.00	97.26	19.08	###	**888.55**
Taxi / TNC Vehicle Trips*	PM Work Trips	2.85	0.47	2.15	1.40	2.25	1.53	1.34	1.38	0.00	4.02	3.08	0.24	**20.72**	2.50	0.60	2.17	0.73	1.68	1.38	1.22	1.49	0.04	4.94	2.36	0.37	**19.49**
	PM Non-Work Trips	3.23	1.52	19.08	4.95	10.01	0.67	6.42	19.79	0.00	8.30	2.01	1.35	**77.32**	4.00	1.21	18.65	7.73	10.92	0.78	5.89	19.21	0.00	8.56	1.04	1.59	**79.59**
Total Trips		**93.77**	**33.26**	**252.80**	**91.03**	**179.88**	**38.11**	**108.69**	**238.57**	**0.00**	**169.75**	**88.50**	**22.78**	**1317.14**	**95.26**	**25.20**	**243.75**	**97.50**	**191.81**	**36.11**	**104.35**	**242.49**	**0.88**	**193.47**	**63.55**	**###**	**1327.88**
In and Out Total Trips		189.03	58.45	496.55	188.53	371.69	74.22	213.04	481.06	0.88	363.22	152.05	56.30	**2645.02**													
Percent		**7%**	**2%**	**19%**	**7%**	**14%**	**3%**	**8%**	**18%**	**0%**	**14%**	**6%**	**2%**													
AVO														**1.543**													1.53501736

Distribution of Resdential Trips for Additional Housing Option - Daily

		Outbound													Inbound											
Mode		Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total	Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total
Auto Person Trips	Daily Work Trips	119.98	18.09	86.08	38.75	71.36	35.79	46.50	32.98	0.00	113.73	71.59	8.98	**643.83**	110.43	26.62	91.18	19.55	58.23	32.10	24.11	35.06	0.86	115.32	58.64	###	**585.64**
	Daily Non-Work Trips	117.57	34.38	485.28	126.59	232.39	126.51	151.15	404.80	0.00	202.56	47.13	34.44	**1962.79**	138.57	45.12	503.77	206.55	255.50	99.15	153.56	398.69	0.00	210.36	44.64	###	**2095.48**
Taxi / TNC Person Trips	Daily Work Trips	10.52	1.59	7.55	3.40	6.26	3.14	4.08	2.89	0.00	9.98	6.28	0.79	**56.48**	9.69	2.33	8.00	1.71	5.11	2.82	2.11	3.08	0.08	10.12	5.14	1.19	**51.37**
	Daily Non-Work Trips	10.31	3.02	42.57	11.10	20.39	11.10	13.26	35.51	0.00	17.77	4.13	3.02	**172.17**	12.16	3.96	44.19	18.12	22.41	8.70	13.47	34.97	0.00	18.45	3.92	3.47	**183.81**
Transit Person Trips	Daily Work Trips	230.67	112.23	59.29	44.85	26.03	3.11	13.57	24.58	0.00	72.33	108.28	0.00	**694.94**	204.01	95.85	23.39	16.40	24.68	3.11	11.36	13.10	0.00	73.64	83.94	0.00	**549.50**
	Daily Non-Work Trips	207.17	37.01	141.70	40.70	110.89	2.69	32.58	30.80	0.00	22.75	24.00	0.00	**650.31**	129.43	22.59	169.82	113.52	35.49	21.98	34.34	38.77	0.00	17.33	13.46	0.00	**596.71**
Auto VehicleTrips*	Daily Work Trips	97.37	15.29	67.73	36.30	69.91	35.79	45.56	32.05	0.00	103.37	67.81	8.98	**580.16**	88.24	23.34	74.87	19.18	57.40	32.10	24.11	33.34	0.86	100.27	54.69	###	**521.97**
	Daily Non-Work Trips	80.22	27.70	282.84	82.28	146.58	62.07	102.14	209.02	0.00	115.94	35.16	22.87	**1166.83**	88.30	31.96	293.02	111.93	178.16	61.20	110.33	216.13	0.00	134.22	34.23	###	**1290.90**
Taxi / TNC Vehicle Trips*	Daily Work Trips	6.30	0.95	4.52	2.04	3.75	1.88	2.44	1.73	0.00	5.97	3.76	0.47	**33.82**	5.80	1.40	4.79	1.03	3.06	1.69	1.27	1.84	0.05	6.06	3.08	0.71	**30.76**
	Daily Non-Work Trips	6.18	1.81	25.49	6.65	12.21	6.64	7.94	21.26	0.00	10.64	2.48	1.81	**103.10**	7.28	2.37	26.46	10.85	13.42	5.21	8.07	20.94	0.00	11.05	2.34	2.08	**110.07**
Total Trips		**190.07**	**45.75**	**380.59**	**127.26**	**232.44**	**106.39**	**158.09**	**264.07**	**0.00**	**235.92**	**109.21**	**34.13**	**1883.91**	**189.62**	**59.08**	**399.14**	**142.99**	**252.05**	**100.19**	**143.77**	**272.25**	**0.91**	**251.60**	**94.34**	**###**	**1953.70**
In and Out Total Trips		379.69	104.82	779.73	270.25	484.49	206.58	301.86	536.32	0.91	487.52	203.55	81.89	**3837.61**													
Percent		**10%**	**3%**	**20%**	**7%**	**13%**	**5%**	**8%**	**14%**	**0%**	**13%**	**5%**	**2%**													
AVO														**1.499**												

Distribution of Retail Trips - Daily

		Outbound													Inbound											
Mode		Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total	Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total
Auto Person Trips	Daily Work Trips	0.80	0.50	1.90	2.30	0.90	0.80	1.00	2.90	0.00	2.30	0.50	1.00	**15.00**	1.80	1.10	3.50	2.90	1.40	0.60	1.00	2.70	-	3.80	0.50	0.90	**20.00**
	Daily Non-Work Trips	3.40	2.30	8.40	9.80	31.60	4.20	10.50	38.90	-	16.70	5.00	2.20	**133.00**	2.70	1.80	8.50	6.10	33.10	2.30	11.30	37.20	-	17.10	4.80	1.80	**127.00**
Taxi / TNC Person Trips	Daily Work Trips	0.00	0.00	0.10	0.10	0.00	0.00	0.10	0.20	0.00	0.10	0.00	0.10	**1.00**	0.10	0.10	0.20	0.20	0.10	0.00	0.10	0.10	-	0.20	0.00	0.00	**1.00**
	Daily Non-Work Trips	0.20	0.10	0.40	0.50	1.70	0.20	0.60	2.10	-	0.90	0.30	0.10	**7.00**	0.10	0.10	0.50	0.30	1.80	0.10	0.60	2.00	-	0.90	0.30	0.10	**7.00**
Transit Person Trips	Daily Work Trips	3.00	1.20	1.60	5.50	0.10	0.10	-	0.40	-	0.60	0.10	-	**13.00**	2.30	1.60	3.50	2.60	3.70	0.10	0.20	-	-	1.00	2.70	-	**18.00**
	Daily Non-Work Trips	5.60	0.60	6.90	8.10	9.60	1.00	1.40	5.50	-	2.60	5.70	1.20	**48.00**	7.30	-	11.50	5.10	11.90	1.60	1.30	5.10	-	4.20	5.90	0.30	**54.00**
Auto VehicleTrips*	Daily Work Trips	0.60	0.50	1.40	1.90	0.80	0.80	1.00	1.90	0.00	2.00	0.50	0.70	**12.00**	1.50	0.90	2.60	2.20	1.10	0.50	1.00	1.90	-	3.40	0.50	0.70	**16.00**
	Daily Non-Work Trips	2.60	1.30	5.10	5.30	18.80	2.60	6.70	19.00	-	9.80	2.80	1.40	**75.00**	1.10	1.00	5.50	3.70	18.40	1.20	6.80	18.70	-	9.90	2.40	1.30	**70.00**
Taxi / TNC Vehicle Trips*	Daily Work Trips	0.00	0.00	0.10	0.10	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.00	**0.00**	0.10	0.00	0.10	0.10	0.00	0.00	0.00	0.10	-	0.10	0.00	0.00	**1.00**
	Daily Non-Work Trips	0.10	0.10	0.30	0.30	1.00	0.10	0.30	1.20	-	0.50	0.20	0.10	**4.00**	0.10	0.10	0.30	0.20	1.10	0.10	0.40	1.20	-	0.50	0.20	0.10	**4.00**
Total Trips		**3.30**	**1.90**	**6.90**	**7.60**	**20.60**	**3.50**	**8.00**	**22.20**	**0.00**	**12.40**	**3.50**	**2.20**	**91.00**	**2.80**	**2.00**	**8.50**	**6.20**	**20.60**	**1.80**	**8.20**	**21.90**	**0.00**	**13.90**	**3.10**	**2.10**	**91.00**
In and Out Total Trips		6.10	3.90	15.40	13.80	41.20	5.30	16.20	44.10	0.00	26.30	6.60	4.30	**182.00**													
Percent		**8%**	**5%**	**21%**	**19%**	**57%**	**7%**	**23%**	**61%**	**0%**	**37%**	**9%**	**6%**													
AVO														**1.709**												

Distribution of Resdential Trips for Additional Housing Option in PM Peak Period

		Outbound													Inbound										
Mode		Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total	Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total
Auto Person Trips	Daily Work Trips	6.30	0.00	0.33	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.10	19.82	5.89	4.19	3.02	0.50	4.18	0.00	14.74	0.72	25.23	20.55	0.00	**98.83**
	Daily Non-Work Trips	6.62	0.62	27.76	15.32	11.37	4.44	1.50	31.69	0.00	27.22	0.00	0.00	126.55	19.01	0.49	19.60	24.41	51.94	10.07	1.78	98.03	0.00	11.22	0.00	1.00	**237.55**
Taxi / TNC Person Trips	Daily Work Trips	0.55	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	1.74	0.52	0.37	0.27	0.04	0.37	0.00	1.29	0.06	2.21	1.80	0.00	**8.67**
	Daily Non-Work Trips	0.58	0.05	2.44	1.34	1.00	0.39	0.13	2.78	0.00	2.39	0.00	0.00	11.10	1.67	0.04	1.72	2.14	4.56	0.88	0.16	8.60	0.00	0.98	0.00	0.09	**20.84**
Transit Person Trips	Daily Work Trips	6.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.98	64.98	8.70	8.38	0.00	1.30	6.47	22.35	1.30	0.00	0.00	18.32	0.00	**131.79**
	Daily Non-Work Trips	2.97	6.98	2.59	0.00	6.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.88	20.16	4.52	4.42	0.00	15.11	0.00	3.63	5.39	0.00	7.61	2.97	0.00	**63.81**
Auto VehicleTrips*	Daily Work Trips	6.30	0.00	0.16	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.93	18.67	4.50	4.02	3.02	0.25	4.18	0.00	14.74	0.72	25.23	20.55	0.00	**95.88**
	Daily Non-Work Trips	4.70	0.62	25.03	14.25	10.82	2.41	1.50	18.22	0.00	14.75	0.00	0.00	92.30	6.42	0.49	10.02	11.68	27.10	4.52	1.54	45.28	0.00	9.21	0.00	0.50	**116.76**
Taxi / TNC Vehicle Trips*	Daily Work Trips	0.33	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	1.04	0.31	0.22	0.16	0.03	0.22	0.00	0.77	0.04	1.33	1.08	0.00	**5.19**
	Daily Non-Work Trips	0.35	0.03	1.46	0.80	0.60	0.23	0.08	1.66	0.00	1.43	0.00	0.00	6.65	1.00	0.03	1.03	1.28	2.73	0.53	0.09	5.15	0.00	0.59	0.00	0.05	**12.48**
Total Trips		**11.68**	**0.66**	**26.67**	**15.55**	**11.41**	**2.65**	**1.58**	**19.89**	**0.00**	**16.18**	**0.00**	**0.00**	**106.25**	**27.12**	**5.33**	**15.29**	**16.14**	**30.10**	**9.45**	**1.63**	**65.95**	**0.75**	**36.35**	**21.63**	**0.55**	**230.30**
In and Out Total Trips		38.80	5.98	41.96	31.69	41.51	12.09	3.21	85.83	0.75	52.53	21.63	0.55	**336.56**													
Percent		**12%**	**2%**	**12%**	**9%**	**12%**	**4%**	**1%**	**26%**	**0%**	**16%**	**6%**	**0%**														
AVO														**1.519**													

Summary of Distribution of Trips for Additional Housing Option in PM Peak Period -w/ Daycare

		Outbound													Inbound										
Mode		Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total	Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total
Auto Person Trips	Daily Work Trips	6.83	0.15	0.47	1.89	0.07	0.00	0.00	0.15	0.00	0.21	0.00	0.00	**9.78**	23.02	6.38	4.62	4.31	0.65	4.71	0.00	16.07	0.78	28.32	22.28	0.00	**111.14**
	Daily Non-Work Trips	7.18	0.68	31.72	18.61	22.87	9.08	2.72	38.84	0.00	32.95	2.09	0.80	**167.53**	20.83	0.70	22.79	28.00	61.41	11.11	3.16	113.62	0.00	16.38	1.01	1.65	**280.65**
Taxi / TNC Person Trips	Daily Work Trips	0.60	0.00	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.71**	1.91	0.56	0.40	0.31	0.05	0.40	0.00	1.40	0.07	2.42	1.95	0.00	**9.47**
	Daily Non-Work Trips	0.63	0.06	2.67	1.49	1.28	0.50	0.16	3.10	0.00	2.65	0.04	0.01	**12.59**	1.81	0.05	1.89	2.35	5.03	0.96	0.19	9.46	0.00	1.14	0.02	0.11	**23.01**
Transit Person Trips	Daily Work Trips	9.25	0.00	0.00	5.31	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	**14.66**	70.58	9.43	9.08	0.06	1.41	7.01	24.23	1.41	0.00	0.62	19.86	0.00	**143.69**
	Daily Non-Work Trips	4.09	7.68	2.91	3.75	8.11	0.00	0.00	0.06	0.00	0.71	0.68	0.00	**28.00**	21.96	4.90	5.36	0.25	17.23	0.00	3.93	5.84	0.00	8.25	3.22	0.00	**70.96**
Auto VehicleTrips*	Daily Work Trips	6.83	0.15	0.24	1.89	0.03	0.00	0.00	0.15	0.00	0.13	0.00	0.00	**9.43**	21.74	4.88	4.44	4.31	0.36	4.71	0.00	16.07	0.78	28.27	22.28	0.00	**107.82**
	Daily Non-Work Trips	5.10	0.68	28.01	16.25	16.66	5.03	2.20	21.50	0.00	17.48	0.94	0.49	**114.34**	7.04	0.61	11.57	13.52	32.13	5.10	2.45	52.21	0.00	12.34	0.29	0.96	**138.20**
Taxi / TNC Vehicle Trips*	Daily Work Trips	0.36	0.00	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.43**	1.15	0.34	0.24	0.18	0.03	0.24	0.00	0.84	0.04	1.45	1.17	0.00	**5.67**
	Daily Non-Work Trips	0.38	0.04	1.60	0.89	0.76	0.30	0.10	1.85	0.00	1.59	0.02	0.01	**7.54**	1.08	0.03	1.13	1.41	3.01	0.58	0.11	5.66	0.00	0.69	0.01	0.06	**13.78**
SubTotal		**28.58**	**8.58**	**37.81**	*31.12*	**32.33**	**9.67**	**2.88**	**42.16**	**0.00**	**36.52**	**2.81**	**0.82**	**233.27**	**140.12**	**22.02**	**44.14**	**35.27**	**85.78**	**24.19**	**31.51**	**147.80**	**0.84**	**57.13**	**48.35**	**1.76**	**638.92**
Percent		**12%**	**4%**	**16%**	**13%**	**14%**	**4%**	**1%**	**18%**	**0%**	**16%**	**1%**	**0%**		**22%**	**3%**	**7%**	**6%**	**13%**	**4%**	**5%**	**23%**	**0%**	**9%**	**8%**	**0%**	**100%**
In and Out Total		168.69	30.60	81.95	*66.40*	118.11	33.86	34.39	189.96	0.84	93.66	51.16	2.58	872.19													
Percent		**19%**	**4%**	**9%**	**8%**	**14%**	**4%**	**4%**	**22%**	**0%**	**11%**	**6%**	**0%**	100%													
AVO														**1.548**													
		12.66	**0.87**	**29.87**	**19.08**	**17.46**	**5.33**	**2.30**	**23.51**	**0.00**	**19.20**	**0.96**	**0.50**	**131.73**	**31.00**	**5.85**	**17.38**	**19.42**	**35.53**	**10.62**	**2.56**	**74.79**	**0.82**	**42.74**	**23.75**	**1.02**	**265.48**
		10%	**1%**	**23%**	**14%**	**13%**	**4%**	**2%**	**18%**	**0%**	**15%**	**1%**	**0%**	**100%**	**12%**	**2%**	**7%**	**7%**	**13%**	**4%**	**1%**	**28%**	**0%**	**16%**	**9%**	**0%**	**100%**
		43.66	6.72	47.24	*38.51*	52.99	15.95	4.86	98.30	0.82	61.94	24.71	1.52	397.21													
		11%	**2%**	**12%**	**10%**	**13%**	**4%**	**1%**	**25%**	**0%**	**16%**	**6%**	**0%**	**100%**													

Summary of Trip Distribution for Developer's Proposed Option in PM Peak Period - w/o Daycare

		Outbound													Inbound										
Mode		Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total	Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total
Auto Person Trips	Daily Work Trips	4.47	0.14	0.34	1.61	0.06	0.00	0.00	0.14	0.00	0.20	0.00	0.00	**6.96**	15.48	4.18	3.04	3.10	0.46	3.13	0.00	10.55	0.51	18.80	14.59	0.00	**73.83**
	Daily Non-Work Trips	4.70	0.44	21.20	12.72	17.80	7.09	2.07	26.63	0.00	22.49	1.93	0.74	**117.81**	13.70	0.50	15.33	18.74	41.57	7.32	2.40	76.35	0.00	11.86	0.93	1.23	**189.94**
Taxi / TNC Person Trips	Daily Work Trips	0.39	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.48**	1.26	0.37	0.26	0.21	0.03	0.26	0.00	0.92	0.04	1.59	1.28	0.00	**6.22**
	Daily Non-Work Trips	0.41	0.04	1.76	0.99	0.89	0.35	0.11	2.05	0.00	1.75	0.04	0.01	**8.39**	1.19	0.03	1.25	1.55	3.32	0.63	0.13	6.23	0.00	0.77	0.02	0.07	**15.18**
Transit Person Trips	Daily Work Trips	6.51	0.00	0.00	4.90	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	**11.49**	46.25	6.18	5.95	0.05	0.92	4.59	15.86	0.92	0.00	0.57	13.00	0.00	**94.29**
	Daily Non-Work Trips	2.91	5.06	1.93	3.46	5.64	0.00	0.00	0.06	0.00	0.65	0.63	0.00	**20.35**	14.41	3.21	3.66	0.23	11.51	0.00	2.57	3.83	0.00	5.40	2.11	0.00	**46.93**
Auto VehicleTrips*	Daily Work Trips	4.47	0.14	0.17	1.61	0.03	0.00	0.00	0.14	0.00	0.12	0.00	0.00	**6.69**	14.63	3.19	2.93	3.10	0.26	3.13	0.00	10.55	0.51	18.75	14.59	0.00	**71.63**
	Daily Non-Work Trips	3.34	0.44	18.57	10.86	12.23	3.94	1.60	14.55	0.00	11.84	0.87	0.45	**78.68**	4.63	0.42	7.76	9.08	21.77	3.39	1.81	35.02	0.00	8.71	0.27	0.74	**93.59**
Taxi / TNC Vehicle Trips*	Daily Work Trips	0.23	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.29**	0.75	0.22	0.16	0.12	0.02	0.16	0.00	0.55	0.03	0.95	0.77	0.00	**3.72**
	Daily Non-Work Trips	0.25	0.02	1.05	0.59	0.53	0.21	0.07	1.23	0.00	1.05	0.02	0.01	**5.03**	0.71	0.02	0.75	0.93	1.99	0.38	0.08	3.73	0.00	0.46	0.01	0.04	**9.09**
Total		**8.29**	**0.61**	**19.81**	**13.09**	**12.79**	**4.14**	**1.66**	**15.91**	**0.00**	**13.02**	**0.89**	**0.46**	**90.68**	**20.73**	**3.85**	**11.59**	**13.23**	**24.04**	**7.05**	**1.89**	**49.85**	**0.54**	**28.87**	**15.63**	**0.78**	**178.04**
		9%	**1%**	**22%**	**14%**	**14%**	**5%**	**2%**	**18%**	**0%**	**14%**	**1%**	**1%**		**12%**	**2%**	**7%**	**7%**	**14%**	**4%**	**1%**	**28%**	**0%**	**16%**	**9%**	**0%**	**100%**
In and Out Total		29.01	4.46	31.40	26.32	36.83	11.20	3.55	65.76	0.54	41.89	16.51	1.24	**268.72**													
Percent		**11%**	**2%**	**12%**	**10%**	**14%**	**4%**	**1%**	**24%**	**0%**	**16%**	**6%**	**0%**	100%													
AVO														**1.559**													

Summary of Trip Distribution for Developer's Proposed Option in PM Peak Period - With Daycare

		Outbound													Inbound											
Mode		Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total	Downtown / NorthBeach	SoMa	Marina/ Western Market	Mission/ Potrero	Outer Mission/ Hills	Bayshore	Richmond	Sunset	Islands	South Bay	East Bay	North Bay	Total
Auto Person Trips	Daily Work Trips	4.74	0.15	0.36	1.71	0.07	0.00	0.00	0.15	0.00	0.21	0.00	0.00	7.38	16.41	4.43	3.23	3.29	0.48	3.32	0.00	11.18	0.54	19.93	15.46	0.00	78.26
	Daily Non-Work Trips	4.98	0.47	22.48	13.48	18.87	7.51	2.20	28.23	0.00	23.84	2.04	0.79	124.88	14.52	0.53	16.25	19.87	44.07	7.76	2.54	80.94	0.00	12.57	0.98	1.31	201.33
Taxi / TNC Person Trips	Daily Work Trips	0.42	0.00	0.02	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	1.34	0.39	0.28	0.22	0.03	0.28	0.00	0.97	0.05	1.68	1.36	0.00	6.59
	Daily Non-Work Trips	0.44	0.04	1.86	1.05	0.94	0.37	0.12	2.17	0.00	1.86	0.04	0.01	8.90	1.26	0.04	1.32	1.64	3.52	0.67	0.14	6.60	0.00	0.82	0.02	0.08	16.09
Transit Person Trips	Daily Work Trips	6.90	0.00	0.00	5.19	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	12.18	49.02	6.55	6.30	0.06	0.98	4.87	16.81	0.98	0.00	0.60	13.78	0.00	99.95
	Daily Non-Work Trips	3.09	5.37	2.04	3.67	5.98	0.00	0.00	0.06	0.00	0.69	0.67	0.00	21.57	15.27	3.40	3.88	0.24	12.20	0.00	2.73	4.05	0.00	5.73	2.24	0.00	49.75
Auto VehicleTrips*	Daily Work Trips	4.74	0.15	0.18	1.71	0.03	0.00	0.00	0.15	0.00	0.13	0.00	0.00	7.09	15.51	3.38	3.10	3.29	0.28	3.32	0.00	11.18	0.54	19.88	15.46	0.00	75.93
	Daily Non-Work Trips	3.54	0.47	19.69	11.51	12.97	4.17	1.69	15.42	0.00	12.55	0.92	0.48	83.40	4.91	0.45	8.23	9.62	23.08	3.59	1.92	37.12	0.00	9.23	0.28	0.78	99.21
Taxi / TNC Vehicle Trips*	Daily Work Trips	0.25	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.80	0.23	0.17	0.13	0.02	0.17	0.00	0.58	0.03	1.01	0.81	0.00	3.95
	Daily Non-Work Trips	0.26	0.02	1.11	0.63	0.56	0.22	0.07	1.30	0.00	1.11	0.02	0.01	5.33	0.75	0.02	0.79	0.98	2.11	0.40	0.08	3.95	0.00	0.49	0.01	0.05	9.64
Total		**20.56**	**6.03**	**26.77**	*25.15*	**25.86**	**7.97**	**2.32**	**30.62**	**0.00**	**26.60**	**2.75**	**0.80**	**175.42**	**97.82**	**15.33**	**31.26**	**25.31**	**61.28**	**16.89**	**22.23**	**104.72**	**0.59**	**41.33**	**33.84**	**1.38**	**451.98**
		12%	**3%**	**15%**	**14%**	**15%**	**5%**	**1%**	**17%**	**0%**	**15%**	**2%**	**0%**		**22%**	**3%**	**7%**	**6%**	**14%**	**4%**	**5%**	**23%**	**0%**	**9%**	**7%**	**0%**	
In and Out Total		118.38	21.36	58.03	50.46	87.14	24.87	24.54	135.34	0.59	67.93	36.59	2.18	**627.39**													
Percent		**19%**	**3%**	**9%**	**8%**	**14%**	**4%**	**4%**	**22%**	**0%**	**25%**	**14%**	**1%**														
AVO														**1.559**													

Appendix B – Existing Driveway Counts

Type of peak hour being reported: System Peak

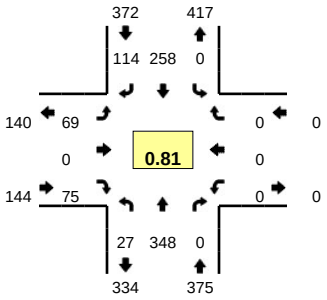
Method for determining peak hour: Total Entering Volume

LOCATION: Phelan Ave -- CCSF Lot North Access

QC JOB #: 14574807

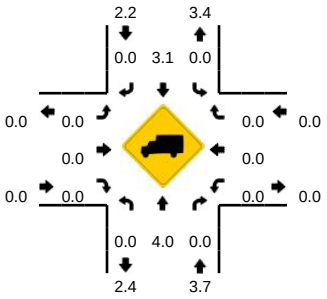
CITY/STATE: San Francisco, CA

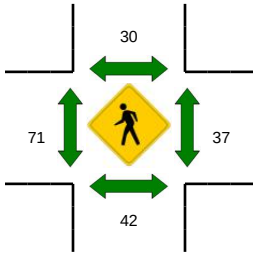
DATE: Thu, Dec 07 2017

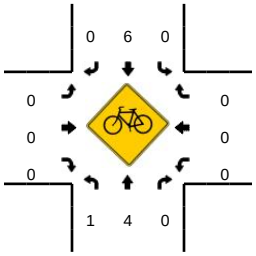


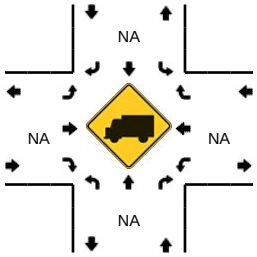
Peak-Hour: 7:35 AM -- 8:35 AM

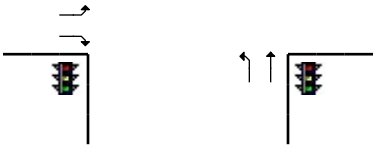
Peak 15-Min: 7:40 AM -- 7:55 AM

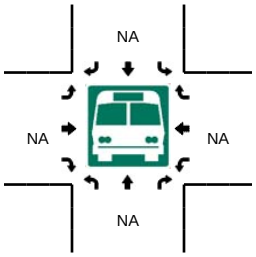












5-Min Count Period Beginning At	Phelan Ave (Northbound)				Phelan Ave (Southbound)				CCSF Lot North Access (Eastbound)				CCSF Lot North Access (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	10	0	0	0	14	0	0	3	0	4	0	0	0	0	0	31	
7:05 AM	2	15	0	0	0	14	1	0	6	0	2	0	0	0	0	0	40	
7:10 AM	0	21	0	0	0	16	1	0	3	0	3	0	0	0	0	0	44	
7:15 AM	1	26	0	0	0	15	1	0	3	0	5	0	0	0	0	0	51	
7:20 AM	0	20	0	0	0	25	0	0	4	0	5	0	0	0	0	0	54	
7:25 AM	0	25	0	0	0	12	2	0	8	0	6	0	0	0	0	0	53	
7:30 AM	2	30	0	0	0	19	1	0	8	0	12	0	0	0	0	0	72	
7:35 AM	3	31	0	1	0	19	4	0	10	0	8	0	0	0	0	0	76	
7:40 AM	3	54	0	0	0	16	3	0	13	0	9	0	0	0	0	0	98	
7:45 AM	3	36	0	0	0	24	7	0	16	0	20	0	0	0	0	0	106	
7:50 AM	1	32	0	0	0	13	9	0	6	0	9	0	0	0	0	0	70	
7:55 AM	2	23	0	0	0	28	12	0	6	0	7	0	0	0	0	0	78	773
8:00 AM	2	30	0	0	0	25	16	0	1	0	1	0	0	0	0	0	75	817
8:05 AM	2	24	0	0	0	29	16	0	4	0	6	0	0	0	0	0	81	858
8:10 AM	4	21	0	0	0	29	11	0	3	0	2	0	0	0	0	0	70	884
8:15 AM	0	21	0	0	0	13	5	0	0	0	6	0	0	0	0	0	45	878
8:20 AM	0	19	0	0	0	29	9	0	3	0	2	0	0	0	0	0	62	886
8:25 AM	3	32	0	0	0	20	11	0	4	0	3	0	0	0	0	0	73	906
8:30 AM	3	25	0	0	0	13	11	0	3	0	2	0	0	0	0	0	57	891
8:35 AM	1	27	0	0	0	19	9	0	4	0	5	0	0	0	0	0	65	880
8:40 AM	1	24	0	0	0	29	19	0	6	0	3	0	0	0	0	0	82	864
8:45 AM	5	25	0	0	0	30	17	0	7	0	1	0	0	0	0	0	85	843
8:50 AM	1	20	0	0	0	23	9	0	8	0	7	0	0	0	0	0	68	841
8:55 AM	1	12	0	0	0	30	19	0	6	0	7	0	0	0	0	0	75	838

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	488	0	0	0	212	76	0	140	0	152	0	0	0	0	0	1096
Heavy Trucks	0	8	0		0	8	0		0	0	0		0	0	0		16
Pedestrians		44				36				80				24			184
Bicycles	0	0	0		0	2	0		0	0	0		0	0	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 12/18/2017 2:27 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

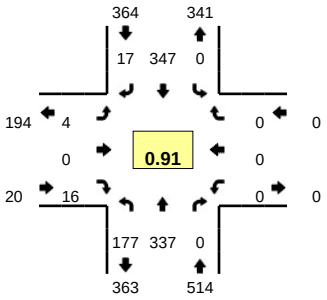
Type of peak hour being reported: System Peak

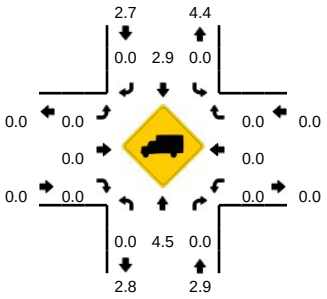
Method for determining peak hour: Total Entering Volume

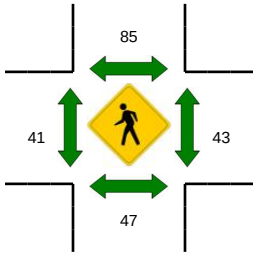
LOCATION: Phelan Ave -- CCSF Lot Central
CITY/STATE: San Francisco, CA

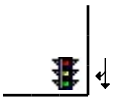
QC JOB #: 14574811
DATE: Thu, Dec 07 2017

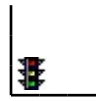
Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

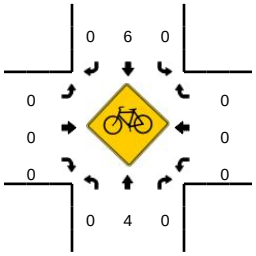


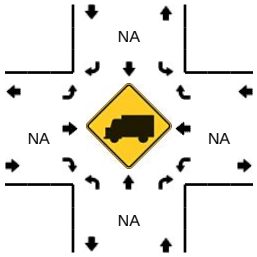


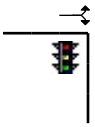


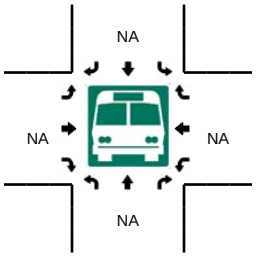












5-Min Count Period Beginning At	Phelan Ave (Northbound)				Phelan Ave (Southbound)				CCSF Lot Central (Eastbound)				CCSF Lot Central (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	11	0	0	0	17	0	0	0	0	1	0	0	0	0	0	33	
7:05 AM	8	17	0	0	0	17	1	0	0	0	2	0	0	0	0	0	45	
7:10 AM	4	21	0	0	0	19	0	0	0	0	0	0	0	0	0	0	44	
7:15 AM	7	26	0	0	0	24	0	0	0	0	0	0	0	0	0	0	57	
7:20 AM	3	16	0	0	0	24	0	0	1	0	1	0	0	0	0	0	45	
7:25 AM	9	32	0	0	0	21	0	0	0	0	2	0	0	0	0	0	64	
7:30 AM	9	30	0	0	0	33	0	0	1	0	3	0	0	0	0	0	76	
7:35 AM	11	34	0	0	0	29	0	0	0	0	2	0	0	0	0	0	76	
7:40 AM	8	55	0	0	0	26	0	0	1	0	4	0	0	0	0	0	94	
7:45 AM	15	26	0	0	0	32	1	0	0	0	0	0	0	0	0	0	74	
7:50 AM	14	33	0	0	0	32	0	0	0	0	1	0	0	0	0	0	80	
7:55 AM	13	22	0	0	0	31	2	0	2	0	0	0	0	0	0	0	70	758
8:00 AM	18	21	0	0	0	33	2	0	0	0	3	0	0	0	0	0	77	802
8:05 AM	23	20	0	0	0	32	4	0	0	0	2	0	0	0	0	0	81	838
8:10 AM	18	23	0	0	0	39	2	0	0	0	0	0	0	0	0	0	82	876
8:15 AM	17	20	0	0	0	27	0	0	0	0	2	0	0	0	0	0	66	885
8:20 AM	12	24	0	0	0	22	1	0	1	0	0	0	0	0	0	0	60	900
8:25 AM	18	27	0	0	0	29	2	0	0	0	0	0	0	0	0	0	76	912
8:30 AM	10	32	0	0	0	15	3	0	0	0	2	0	0	0	0	0	62	898
8:35 AM	13	20	0	0	0	30	2	0	0	0	2	0	0	0	0	0	67	889
8:40 AM	28	19	0	0	0	26	2	0	2	0	3	0	0	0	0	0	80	875
8:45 AM	16	28	0	0	0	35	4	0	1	0	2	0	0	0	0	0	86	887
8:50 AM	21	16	0	0	0	30	2	0	0	0	0	0	0	0	0	0	69	876
8:55 AM	29	14	0	0	0	34	2	0	0	0	4	0	0	0	0	0	83	889

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	148	456	0	0	0	360	4	0	4	0	20	0	0	0	0	0	992
Heavy Trucks	0	16	0		0	8	0		0	0	0		0	0	0		24
Pedestrians		48				56				36				40			180
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 12/18/2017 2:27 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Phelan Ave -- CCSF Lot North Access

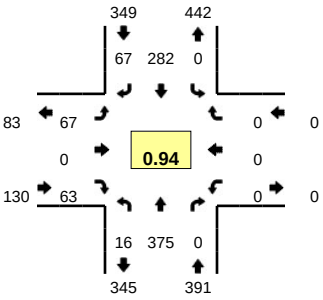
CITY/STATE: San Francisco, CA

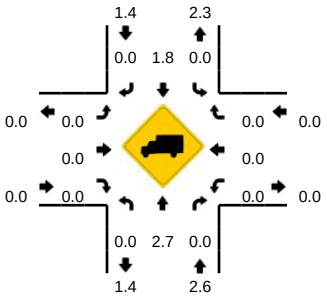
QC JOB #: 14574808

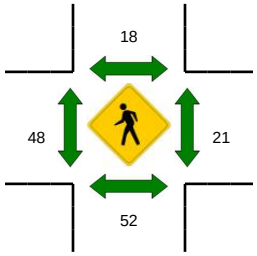
DATE: Thu, Dec 07 2017

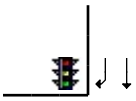
Peak-Hour: 5:00 PM -- 6:00 PM

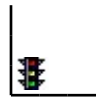
Peak 15-Min: 5:25 PM -- 5:40 PM

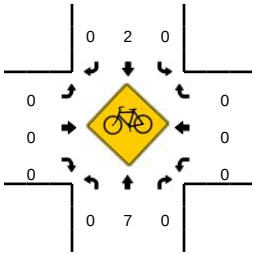


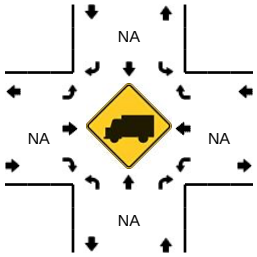


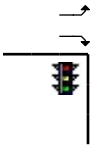


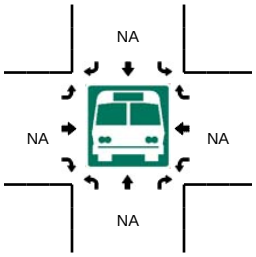












5-Min Count Period Beginning At	Phelan Ave (Northbound)				Phelan Ave (Southbound)				CCSF Lot North Access (Eastbound)				CCSF Lot North Access (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	26	0	0	0	17	0	0	4	0	10	0	0	0	0	0	58	
4:05 PM	0	30	0	0	0	19	2	0	5	0	3	0	0	0	0	0	59	
4:10 PM	2	29	0	0	0	19	4	0	16	0	10	0	0	0	0	0	80	
4:15 PM	0	36	0	0	0	18	5	0	10	0	6	0	0	0	0	0	75	
4:20 PM	1	22	0	0	0	18	2	0	7	0	7	0	0	0	0	0	57	
4:25 PM	2	33	0	0	0	20	2	0	3	0	10	0	0	0	0	0	70	
4:30 PM	0	22	0	0	0	19	1	0	7	0	4	0	0	0	0	0	53	
4:35 PM	1	34	0	0	0	18	2	0	4	0	7	0	0	0	0	0	66	
4:40 PM	1	26	0	0	0	16	1	0	13	0	2	0	0	0	0	0	59	
4:45 PM	1	28	0	0	0	18	3	0	5	0	6	0	0	0	0	0	61	
4:50 PM	3	17	0	0	0	23	0	0	7	0	5	0	0	0	0	0	55	
4:55 PM	2	42	0	0	0	12	0	0	7	0	11	0	0	0	0	0	74	767
5:00 PM	1	28	0	0	0	26	2	0	5	0	5	0	0	0	0	0	67	776
5:05 PM	2	35	0	0	0	17	3	0	5	0	12	0	0	0	0	0	74	791
5:10 PM	1	24	0	0	0	25	4	0	9	0	5	0	0	0	0	0	68	779
5:15 PM	1	34	0	0	0	22	6	0	6	0	4	0	0	0	0	0	73	777
5:20 PM	1	34	0	0	0	25	4	0	6	0	6	0	0	0	0	0	76	796
5:25 PM	1	38	0	0	0	22	3	0	7	0	8	0	0	0	0	0	79	805
5:30 PM	1	35	0	0	0	20	5	0	8	0	5	0	0	0	0	0	74	826
5:35 PM	3	34	0	0	0	33	4	0	1	0	4	0	0	0	0	0	79	839
5:40 PM	0	31	0	0	0	21	4	0	3	0	6	0	0	0	0	0	65	845
5:45 PM	0	19	0	0	0	23	10	0	6	0	3	0	0	0	0	0	61	845
5:50 PM	3	31	0	0	0	22	11	0	5	0	3	0	0	0	0	0	75	865
5:55 PM	2	32	0	0	0	26	11	0	6	0	2	0	0	0	0	0	79	870

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	428	0	0	0	300	48	0	64	0	68	0	0	0	0	0	928
Heavy Trucks	0	8	0		0	0	0		0	0	0		0	0	0		8
Pedestrians		28				16				56				8			108
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 12/18/2017 2:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

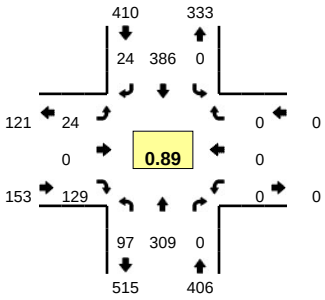
Type of peak hour being reported: System Peak

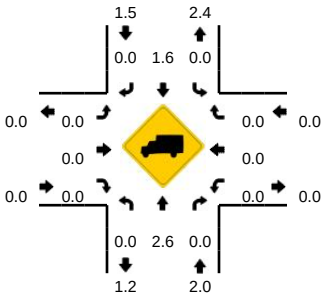
Method for determining peak hour: Total Entering Volume

LOCATION: Phelan Ave -- CCSF Lot Central
CITY/STATE: San Francisco, CA

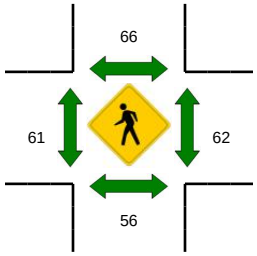
QC JOB #: 14574812
DATE: Thu, Dec 07 2017

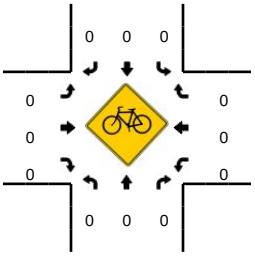
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:25 PM -- 5:40 PM

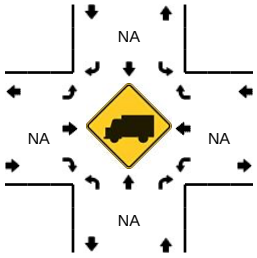


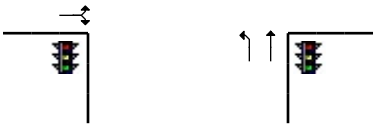


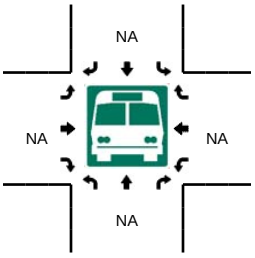
Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES











5-Min Count Period Beginning At	Phelan Ave (Northbound)				Phelan Ave (Southbound)				CCSF Lot Central (Eastbound)				CCSF Lot Central (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	4	22	0	0	0	28	1	0	3	0	12	0	0	0	0	0	70	
4:05 PM	12	24	0	0	0	31	0	0	2	0	20	0	0	0	0	0	89	
4:10 PM	4	28	0	0	0	39	0	0	1	0	18	0	0	0	0	0	90	
4:15 PM	2	26	0	0	0	30	1	0	0	0	13	0	0	0	0	0	72	
4:20 PM	4	22	0	0	0	30	0	0	2	0	10	0	0	0	0	0	68	
4:25 PM	8	20	0	0	0	29	0	0	0	0	10	0	0	0	0	0	67	
4:30 PM	4	29	0	0	0	29	2	0	1	0	7	0	0	0	0	0	72	
4:35 PM	6	27	0	0	0	37	0	0	0	0	13	0	0	0	0	0	83	
4:40 PM	4	26	0	0	0	28	1	0	1	0	9	0	0	0	0	0	69	
4:45 PM	5	16	0	0	0	25	1	0	4	0	5	0	0	0	0	0	56	
4:50 PM	4	23	0	0	0	31	3	0	1	0	10	0	0	0	0	0	72	
4:55 PM	10	33	0	0	0	30	2	0	2	0	13	0	0	0	0	0	90	898
5:00 PM	8	24	0	0	0	33	0	0	2	0	13	0	0	0	0	0	80	908
5:05 PM	5	24	0	0	0	34	2	0	1	0	18	0	0	0	0	0	84	903
5:10 PM	3	24	0	0	0	43	2	0	1	0	16	0	0	0	0	0	89	902
5:15 PM	9	25	0	0	0	36	2	0	2	0	8	0	0	0	0	0	82	912
5:20 PM	11	28	0	0	0	24	2	0	1	0	16	0	0	0	0	0	82	926
5:25 PM	7	31	0	0	0	27	1	0	3	0	18	0	0	0	0	0	87	946
5:30 PM	11	25	0	0	0	29	3	0	3	0	14	0	0	0	0	0	85	959
5:35 PM	6	33	0	0	0	48	1	0	4	0	7	0	0	0	0	0	99	975
5:40 PM	6	23	0	0	0	23	2	0	3	0	6	0	0	0	0	0	63	969
5:45 PM	10	15	0	0	0	30	1	0	2	0	6	0	0	0	0	0	64	977
5:50 PM	7	34	0	0	0	27	6	0	2	0	1	0	0	0	0	0	77	982
5:55 PM	14	23	0	0	0	32	2	0	0	0	6	0	0	0	0	0	77	969

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	96	356	0	0	0	416	20	0	40	0	156	0	0	0	0	0	1084
Heavy Trucks	0	12	0		0	0	0		0	0	0		0	0	0		12
Pedestrians		28				40				72				44			184
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 12/18/2017 2:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Appendix C – Existing Parking Supply and Occupancy Counts

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

2455 Bates Ave, Suite C
Concord, CA 94529
Ph: 925-587-5026

Date Counted: 12/7/2017
Location: Lower Lot

	North Zone				
	Count				
Time	Red - 122	Orange - 156	Yellow - 156	Green - 131	Total
7:00 AM	0	0	0	0	0
8:00 AM	0	0	1	0	1
9:00 AM	0	0	1	5	6
10:00 AM	12	16	18	43	89
11:00 AM	30	37	22	80	169
12:00 PM	34	42	25	84	185
1:00 PM	19	24	15	57	115
2:00 PM	7	14	7	31	59
3:00 PM	3	11	7	29	50
4:00 PM	2	3	4	11	20
5:00 PM	1	2	4	7	14
6:00 PM	0	0	1	4	5
7:00 PM	0	0	1	1	2
8:00 PM	0	0	0	0	0
9:00 PM	0	0	0	0	0
SUPPLY	122	156	156	131	565

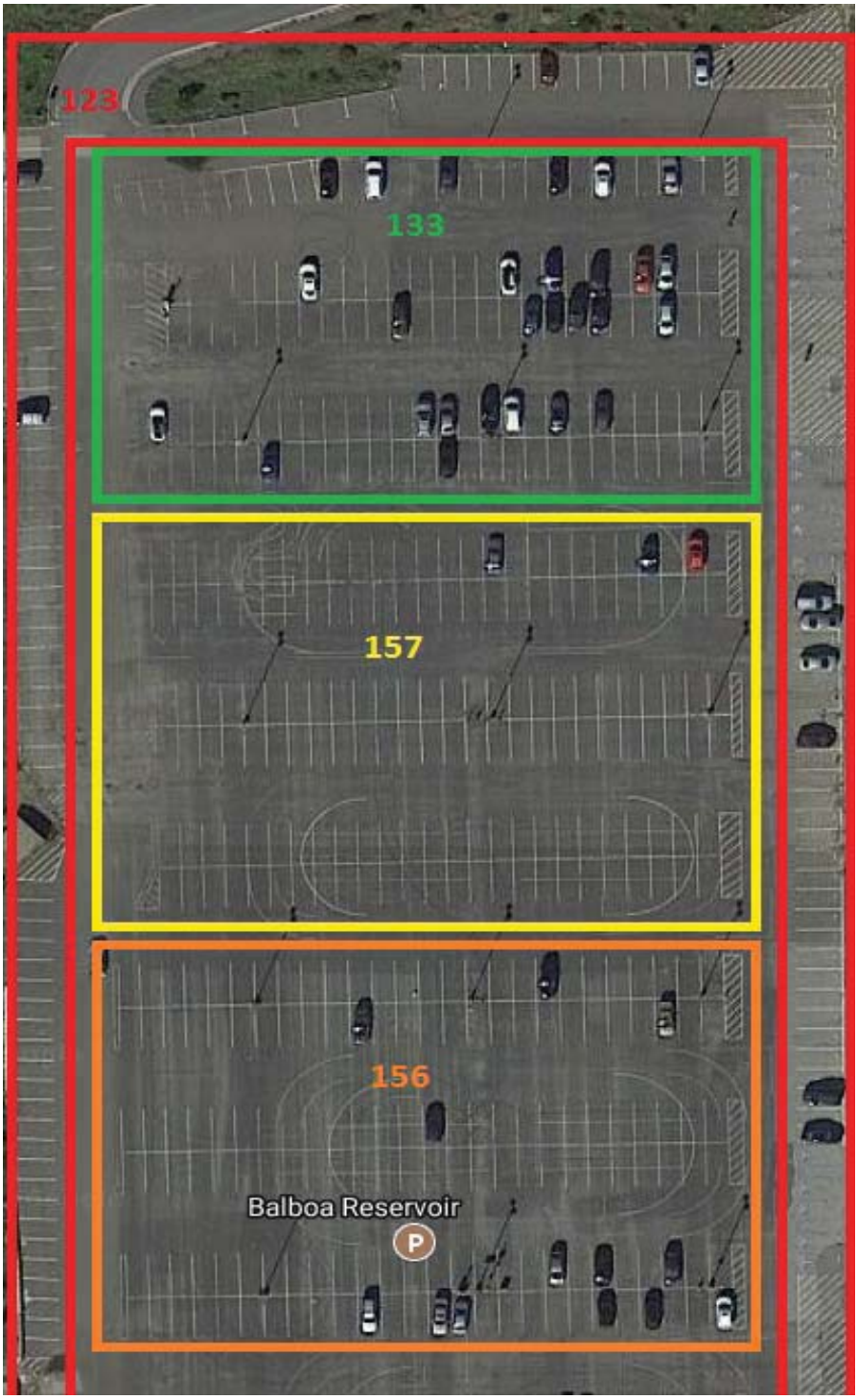
	North Zone				
	Utilization				
Time	Red - 122	Orange - 156	Yellow - 156	Green - 131	Average
7:00 AM	0%	0%	0%	0%	0%
8:00 AM	0%	0%	1%	0%	0%
9:00 AM	0%	0%	1%	4%	1%
10:00 AM	10%	10%	12%	33%	16%
11:00 AM	25%	24%	14%	61%	31%
12:00 PM	28%	27%	16%	64%	34%
1:00 PM	16%	15%	10%	44%	21%
2:00 PM	6%	9%	4%	24%	11%
3:00 PM	2%	7%	4%	22%	9%
4:00 PM	2%	2%	3%	8%	4%
5:00 PM	1%	1%	3%	5%	3%
6:00 PM	0%	0%	1%	3%	1%
7:00 PM	0%	0%	1%	1%	0%
8:00 PM	0%	0%	0%	0%	0%
9:00 PM	0%	0%	0%	0%	0%
AVG. OCCUPANCY	6%	6%	5%	18%	9%

	South Zone			
	Count			
Time	Red - 89	Orange - 197	Green - 156	Total
7:00 AM	0	0	0	0
8:00 AM	2	0	0	2
9:00 AM	5	0	0	5
10:00 AM	15	4	25	44
11:00 AM	28	12	26	66
12:00 PM	27	12	29	68
1:00 PM	25	9	18	52
2:00 PM	26	5	11	42
3:00 PM	24	4	9	37
4:00 PM	9	8	3	20
5:00 PM	7	3	2	12
6:00 PM	2	2	0	4
7:00 PM	3	1	0	4
8:00 PM	1	0	1	2
9:00 PM	1	0	0	1
SUPPLY	89	197	156	442

	South Zone			
	Utilization			
Time	Red - 89	Orange - 197	Green - 156	Average
7:00 AM	0%	0%	0%	0%
8:00 AM	2%	0%	0%	1%
9:00 AM	6%	0%	0%	2%
10:00 AM	17%	2%	16%	12%
11:00 AM	31%	6%	17%	18%
12:00 PM	30%	6%	19%	18%
1:00 PM	28%	5%	12%	15%
2:00 PM	29%	3%	7%	13%
3:00 PM	27%	2%	6%	12%
4:00 PM	10%	4%	2%	5%
5:00 PM	8%	2%	1%	4%
6:00 PM	2%	1%	0%	1%
7:00 PM	3%	1%	0%	1%
8:00 PM	1%	0%	1%	1%
9:00 PM	1%	0%	0%	0%
AVG. OCCUPANCY	13%	2%	5%	7%

	Lower Lot	
Time	Occupied Space	Utilization
7:00 AM	0	0%
8:00 AM	3	0%
9:00 AM	11	1%
10:00 AM	133	13%
11:00 AM	235	23%
12:00 PM	253	25%
1:00 PM	167	17%
2:00 PM	101	10%
3:00 PM	87	9%
4:00 PM	40	4%
5:00 PM	26	3%
6:00 PM	9	1%
7:00 PM	6	1%
8:00 PM	2	0%
9:00 PM	1	0%
SUPPLY / AVG. OCCUPANCY	1007	7%

North Zone



* Aerial photo used for definition of sub areas for data collection. Aerial photos were not used for parking counts.

Zone	Overhead	On Site
Red	123	122
Orange	156	156
Yellow	157	156
Green	133	131

Notes:
"overhead" and "onsite" refers to the method used to count parking supply/inventory

South Zone

Zone	Overhead	On Site
Red	85	89
Orange	177	197
Green	156	156

Notes:
"overhead" and "onsite" refers to the method used to count parking supply/inventory

* Aerial photo used for definition of sub areas for data collection. Aerial photos were not used for parking counts.

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

2455 Bates Ave, Suite C
Concord, CA 94529
Ph: 925-587-5026

Date Counted: 12/7/2017
Location: Upper Lot

	North Zone				
	Count				
Time	Red - 176	Orange - 135	Yellow - 263	Green - 198	Total
7:00 AM	6	15	3	4	28
8:00 AM	33	47	20	41	141
9:00 AM	94	116	112	133	455
10:00 AM	175	135	263	198	771
11:00 AM	172	130	256	195	753
12:00 PM	174	135	258	192	759
1:00 PM	168	129	243	186	726
2:00 PM	138	93	180	156	567
3:00 PM	117	72	163	131	483
4:00 PM	91	64	64	87	306
5:00 PM	71	63	44	60	238
6:00 PM	96	88	49	74	307
7:00 PM	112	113	68	108	401
8:00 PM	91	87	55	103	336
9:00 PM	44	32	22	50	148
SUPPLY	176	135	263	198	772

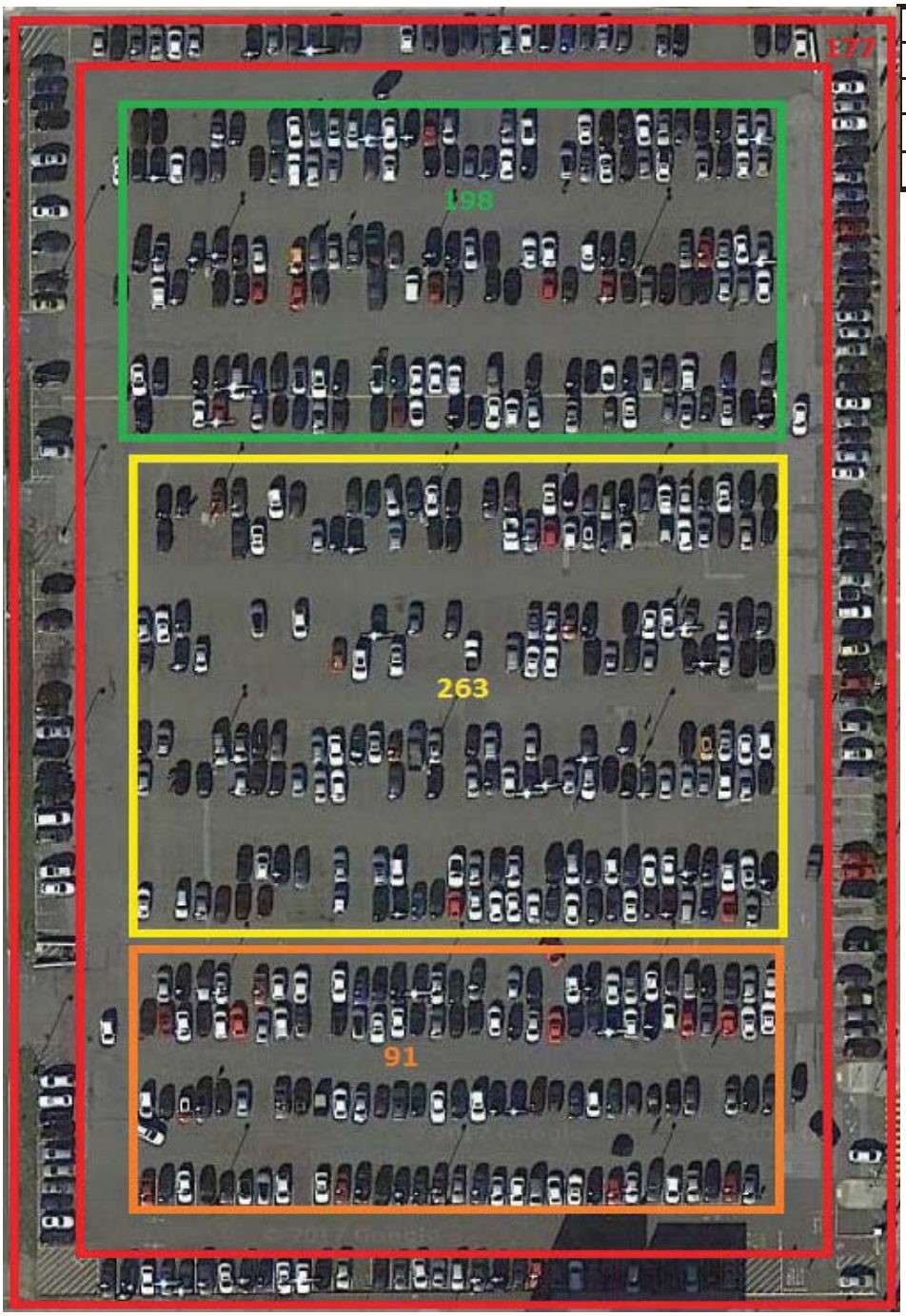
	North Zone				
	Utilization				
Time	Red - 176	Orange - 135	Yellow - 263	Green - 198	Average
7:00 AM	3%	11%	1%	2%	4%
8:00 AM	19%	35%	8%	21%	20%
9:00 AM	53%	86%	43%	67%	62%
10:00 AM	99%	100%	100%	100%	100%
11:00 AM	98%	96%	97%	98%	97%
12:00 PM	99%	100%	98%	97%	98%
1:00 PM	95%	96%	92%	94%	94%
2:00 PM	78%	69%	68%	79%	74%
3:00 PM	66%	53%	62%	66%	62%
4:00 PM	52%	47%	24%	44%	42%
5:00 PM	40%	47%	17%	30%	34%
6:00 PM	55%	65%	19%	37%	44%
7:00 PM	64%	84%	26%	55%	57%
8:00 PM	52%	64%	21%	52%	47%
9:00 PM	25%	24%	8%	25%	21%
AVG. OCCUPANCY	60%	65%	46%	58%	57%

	South Zone			
	Count			
Time	Red - 69	Orange - 242	Green - 84	Total
7:00 AM	3	5	3	11
8:00 AM	8	22	10	40
9:00 AM	26	90	43	159
10:00 AM	32	208	67	307
11:00 AM	39	208	71	318
12:00 PM	47	202	75	324
1:00 PM	53	202	77	332
2:00 PM	27	156	63	246
3:00 PM	46	105	59	210
4:00 PM	41	71	58	170
5:00 PM	30	45	48	123
6:00 PM	17	62	43	122
7:00 PM	15	67	54	136
8:00 PM	12	52	45	109
9:00 PM	8	18	10	36
SUPPLY	69	242	84	395

	South Zone			
	Utilization			
Time	Red - 69	Orange - 242	Green - 84	Average
7:00 AM	4%	2%	4%	3%
8:00 AM	12%	9%	12%	11%
9:00 AM	38%	37%	51%	42%
10:00 AM	46%	86%	80%	71%
11:00 AM	57%	86%	85%	76%
12:00 PM	68%	83%	89%	80%
1:00 PM	77%	83%	92%	84%
2:00 PM	39%	64%	75%	60%
3:00 PM	67%	43%	70%	60%
4:00 PM	59%	29%	69%	53%
5:00 PM	43%	19%	57%	40%
6:00 PM	25%	26%	51%	34%
7:00 PM	22%	28%	64%	38%
8:00 PM	17%	21%	54%	31%
9:00 PM	12%	7%	12%	10%
AVG. OCCUPANCY	39%	42%	58%	46%

	Upper Lot	
Time	Count - 1167	Utilization
7:00 AM	39	3%
8:00 AM	181	16%
9:00 AM	614	53%
10:00 AM	1078	92%
11:00 AM	1071	92%
12:00 PM	1083	93%
1:00 PM	1058	91%
2:00 PM	813	70%
3:00 PM	693	59%
4:00 PM	476	41%
5:00 PM	361	31%
6:00 PM	429	37%
7:00 PM	537	46%
8:00 PM	445	38%
9:00 PM	184	16%
SUPPLY/AVG. OCCUPANCY	1167	52%

North Zone

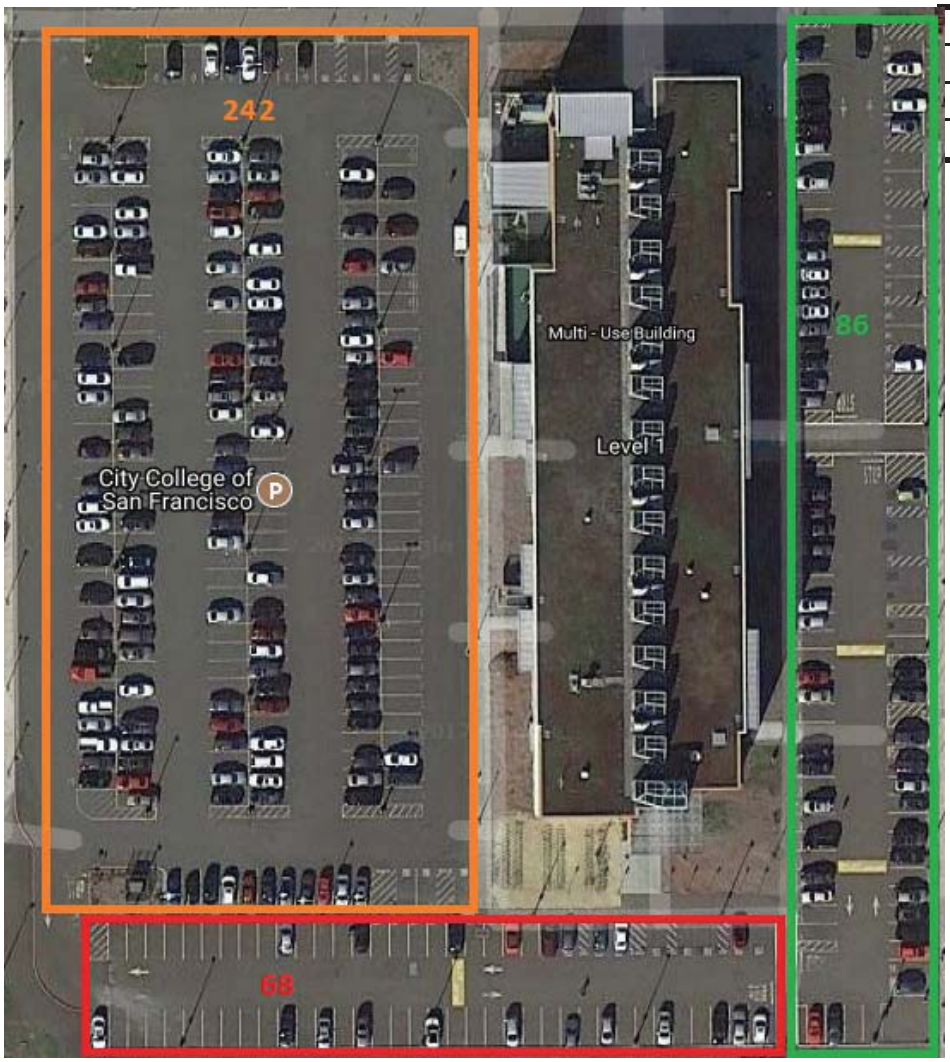


Zone	Overhead	On Site
Red	177	176
Orange	91	135
Yellow	263	236
Green	198	198

Notes:
"overhead" and "onsite" refers to the method used to count parking supply/inventory

* Aerial photo used for definition of sub areas for data collection. Aerial photos were not used for parking counts.

South Zone



Zone	Overhead	On Site
Red	68	69
Orange	242	242
Green	86	84

Notes:
"overhead" and "onsite" refers to the method used to count parking supply/inventory

* Aerial photo used for definition of sub areas for data collection. Aerial photos were not used for parking counts.

Wednesday, January 31, 2018

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

2455 Bates Ave, Suite C
Concord, CA 94529
Ph: 925-587-5026

Date Counted: 1/31/2018
Location: Lower Lot

	North Zone				
	Count				
Time	Red - 122	Orange - 156	Yellow - 156	Green - 131	Total
7:00 AM	0	0	1	0	1
8:00 AM	2	0	1	0	3
9:00 AM	7	7	2	4	20
10:00 AM	57	26	64	124	271
11:00 AM	73	88	106	125	392
12:00 PM	45	97	106	105	353
1:00 PM	30	55	57	73	215
2:00 PM	18	31	33	49	131
3:00 PM	14	25	21	31	91
4:00 PM	7	13	11	18	49
5:00 PM	7	2	8	12	29
6:00 PM	0	0	2	2	4
7:00 PM	2	0	3	2	7
8:00 PM	1	0	2	2	5
9:00 PM	0	0	2	1	3
SUPPLY	122	156	156	131	565

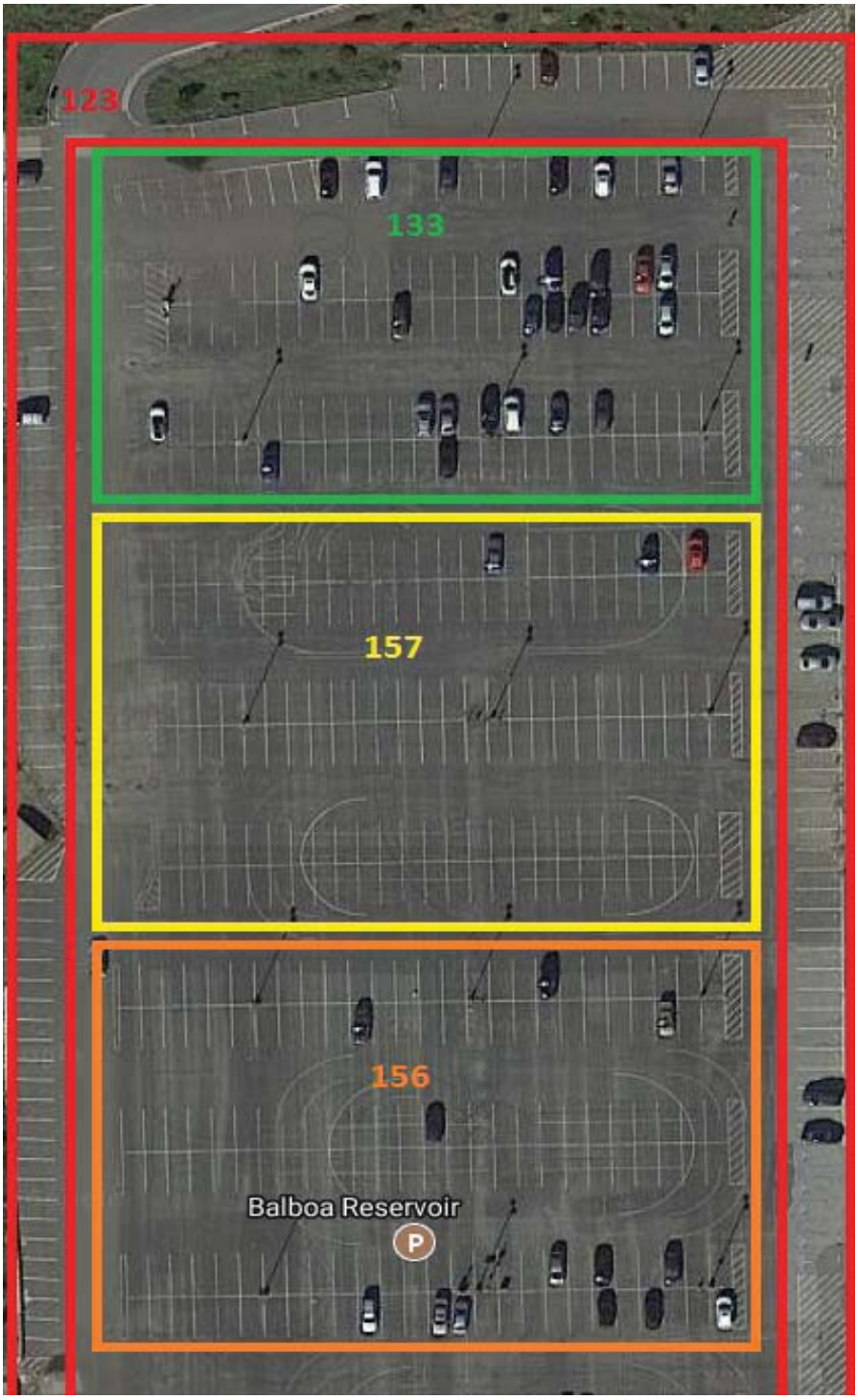
	North Zone				
	Utilization				
Time	Red - 122	Orange - 156	Yellow - 156	Green - 131	Average
7:00 AM	0%	0%	1%	0%	0%
8:00 AM	2%	0%	1%	0%	1%
9:00 AM	6%	4%	1%	3%	4%
10:00 AM	47%	17%	41%	95%	50%
11:00 AM	60%	56%	68%	95%	70%
12:00 PM	37%	62%	68%	80%	62%
1:00 PM	25%	35%	37%	56%	38%
2:00 PM	15%	20%	21%	37%	23%
3:00 PM	11%	16%	13%	24%	16%
4:00 PM	6%	8%	7%	14%	9%
5:00 PM	6%	1%	5%	9%	5%
6:00 PM	0%	0%	1%	2%	1%
7:00 PM	2%	0%	2%	2%	1%
8:00 PM	1%	0%	1%	2%	1%
9:00 PM	0%	0%	1%	1%	1%
AVG. OCCUPANCY	14%	15%	18%	28%	19%

	South Zone			
	Count			
Time	Red - 89	Orange - 197	Green - 156	Total
7:00 AM	0	0	0	0
8:00 AM	1	0	0	1
9:00 AM	35	19	65	119
10:00 AM	39	30	67	136
11:00 AM	42	36	63	141
12:00 PM	38	35	57	130
1:00 PM	25	27	30	82
2:00 PM	21	16	18	55
3:00 PM	17	14	13	44
4:00 PM	9	12	6	27
5:00 PM	8	9	9	26
6:00 PM	2	5	6	13
7:00 PM	2	1	2	5
8:00 PM	1	0	2	3
9:00 PM	0	0	1	1
SUPPLY	89	197	156	442

	South Zone			
	Utilization			
Time	Red - 89	Orange - 197	Green - 156	Average
7:00 AM	0%	0%	0%	0%
8:00 AM	1%	0%	0%	0%
9:00 AM	39%	10%	42%	30%
10:00 AM	44%	15%	43%	34%
11:00 AM	47%	18%	40%	35%
12:00 PM	43%	18%	37%	32%
1:00 PM	28%	14%	19%	20%
2:00 PM	24%	8%	12%	14%
3:00 PM	19%	7%	8%	12%
4:00 PM	10%	6%	4%	7%
5:00 PM	9%	5%	6%	6%
6:00 PM	2%	3%	4%	3%
7:00 PM	2%	1%	1%	1%
8:00 PM	1%	0%	1%	1%
9:00 PM	0%	0%	1%	0%
AVG. OCCUPANCY	18%	7%	14%	13%

	Lower Lot	
Time	Count - 1007	Utilization
7:00 AM	1	0%
8:00 AM	4	0%
9:00 AM	139	14%
10:00 AM	407	40%
11:00 AM	533	53%
12:00 PM	483	48%
1:00 PM	297	29%
2:00 PM	186	18%
3:00 PM	135	13%
4:00 PM	76	8%
5:00 PM	55	5%
6:00 PM	17	2%
7:00 PM	12	1%
8:00 PM	8	1%
9:00 PM	4	0%
SUPPLY/AVG. OCCUPANCY	1007	16%

North Zone



Zone	Overhead	On Site
Red	123	122
Orange	156	156
Yellow	157	156
Green	133	131

Notes:
"overhead" and "onsite" refers to the method used to count parking supply/inventory

* Aerial photo used for definition of sub areas for data collection. Aerial photos were not used for parking counts.

South Zone

Zone	Overhead	On Site
Red	85	89
Orange	177	197
Green	156	156

Notes:
"overhead" and "onsite" refers to the method used to count parking supply/inventory

* Aerial photo used for definition of sub areas for data collection. Aerial photos were not used for parking counts.

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

2455 Bates Ave, Suite C
Concord, CA 94529
Ph: 925-587-5026

Date Counted: 1/31/2018
Location: Upper Lot

	North Zone				
	Count				
Time	Red - 176	Orange - 135	Yellow - 263	Green - 198	Total
7:00 AM	17	32	7	5	61
8:00 AM	47	95	46	59	247
9:00 AM	170	135	257	198	760
10:00 AM	176	134	263	197	770
11:00 AM	167	129	251	186	733
12:00 PM	167	129	252	198	746
1:00 PM	154	112	220	198	684
2:00 PM	133	121	170	198	622
3:00 PM	119	112	176	118	525
4:00 PM	101	84	99	87	371
5:00 PM	97	102	88	65	352
6:00 PM	102	124	130	113	469
7:00 PM	127	133	147	174	581
8:00 PM	108	99	140	152	499
9:00 PM	48	37	46	63	194
SUPPLY	176	135	263	198	772

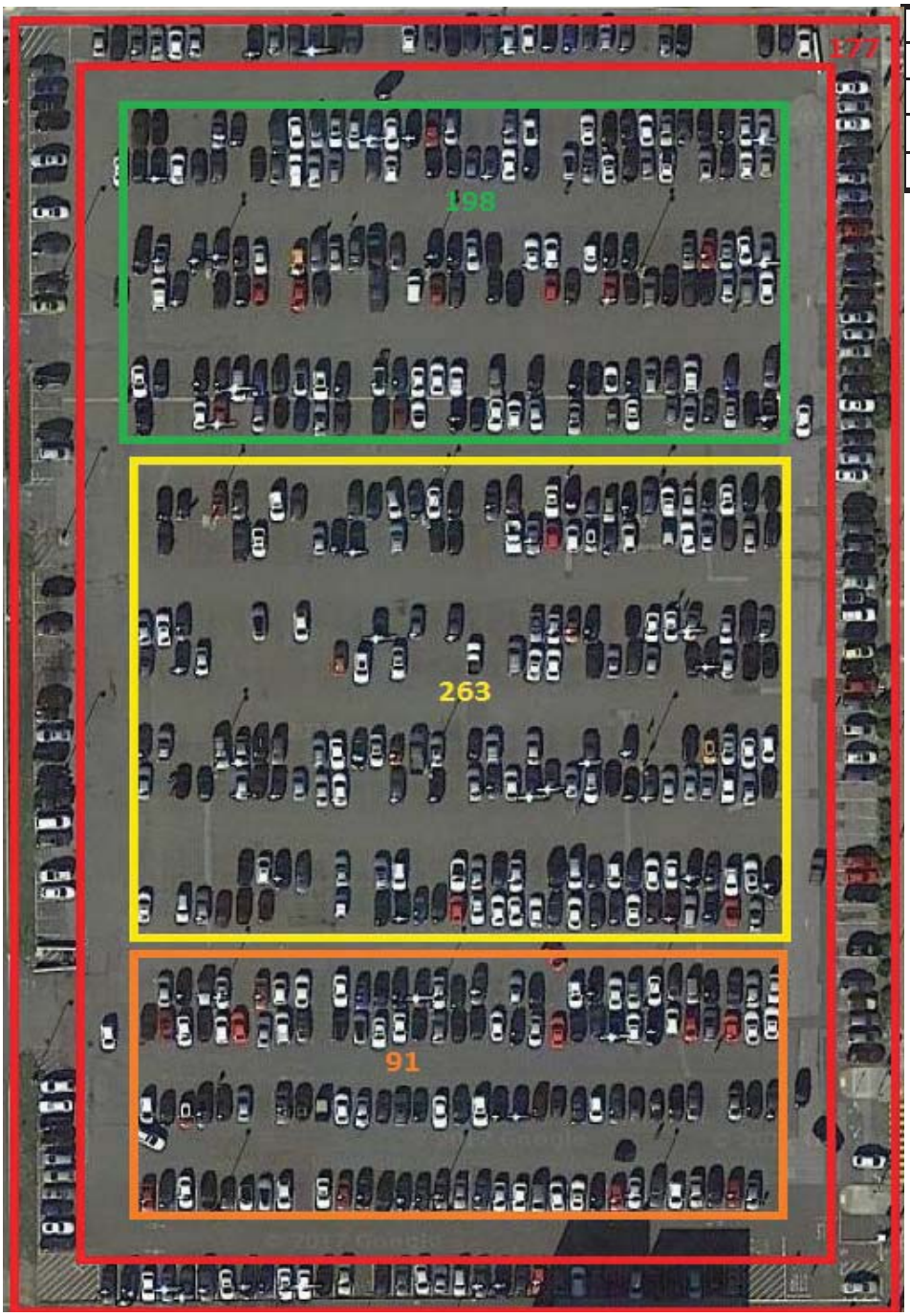
	North Zone				
	Utilization				
Time	Red - 176	Orange - 135	Yellow - 263	Green - 198	Average
7:00 AM	10%	24%	3%	3%	10%
8:00 AM	27%	70%	17%	30%	36%
9:00 AM	97%	100%	98%	100%	99%
10:00 AM	100%	99%	100%	99%	100%
11:00 AM	95%	96%	95%	94%	95%
12:00 PM	95%	96%	96%	100%	97%
1:00 PM	88%	83%	84%	100%	89%
2:00 PM	76%	90%	65%	100%	82%
3:00 PM	68%	83%	67%	60%	69%
4:00 PM	57%	62%	38%	44%	50%
5:00 PM	55%	76%	33%	33%	49%
6:00 PM	58%	92%	49%	57%	64%
7:00 PM	72%	99%	56%	88%	79%
8:00 PM	61%	73%	53%	77%	66%
9:00 PM	27%	27%	17%	32%	26%
AVG. OCCUPANCY	66%	78%	58%	68%	67%

	South Zone			
	Count			
Time	Red - 69	Orange - 242	Green - 84	Total
7:00 AM	2	13	3	18
8:00 AM	7	28	16	51
9:00 AM	14	137	47	198
10:00 AM	32	216	76	324
11:00 AM	44	210	76	330
12:00 PM	51	177	72	300
1:00 PM	46	162	71	279
2:00 PM	48	139	67	254
3:00 PM	44	95	62	201
4:00 PM	38	93	53	184
5:00 PM	29	57	44	130
6:00 PM	34	68	50	152
7:00 PM	31	63	70	164
8:00 PM	15	45	53	113
9:00 PM	6	25	26	57
SUPPLY	69	242	84	395

	South Zone			
	Utilization			
Time	Red - 69	Orange - 242	Green - 84	Average
7:00 AM	3%	5%	4%	4%
8:00 AM	10%	12%	19%	14%
9:00 AM	20%	57%	56%	44%
10:00 AM	46%	89%	90%	75%
11:00 AM	64%	87%	90%	80%
12:00 PM	74%	73%	86%	78%
1:00 PM	67%	67%	85%	73%
2:00 PM	70%	57%	80%	69%
3:00 PM	64%	39%	74%	59%
4:00 PM	55%	38%	63%	52%
5:00 PM	42%	24%	52%	39%
6:00 PM	49%	28%	60%	46%
7:00 PM	45%	26%	83%	51%
8:00 PM	22%	19%	63%	34%
9:00 PM	9%	10%	31%	17%
AVG. OCCUPANCY	43%	42%	62%	49%

	Upper Lot	
Time	Count - 1167	Utilization
7:00 AM	79	7%
8:00 AM	298	26%
9:00 AM	958	82%
10:00 AM	1094	94%
11:00 AM	1063	91%
12:00 PM	1046	90%
1:00 PM	963	83%
2:00 PM	876	75%
3:00 PM	726	62%
4:00 PM	555	48%
5:00 PM	482	41%
6:00 PM	621	53%
7:00 PM	745	64%
8:00 PM	612	52%
9:00 PM	251	22%
SUPPLY/AVG OCCUPANCY	1167	59%

North Zone

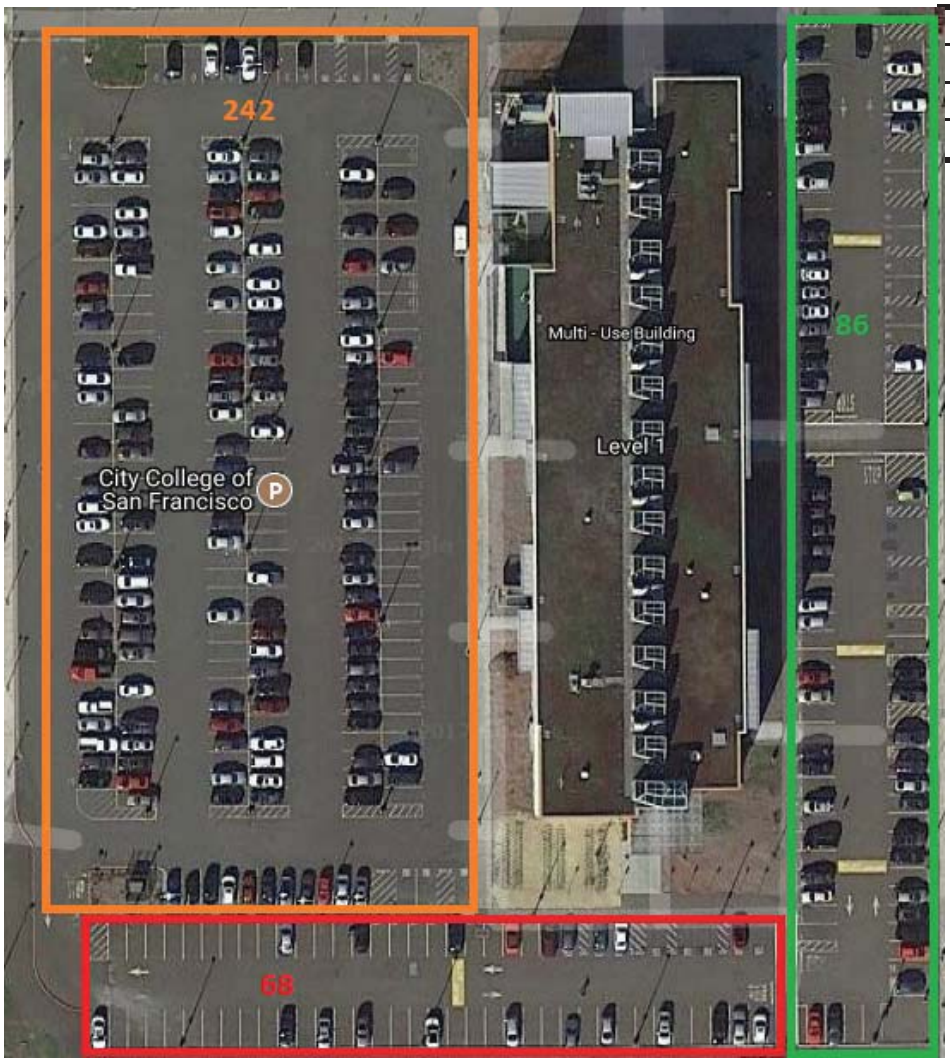


Zone	Overhead	On Site
Red	177	176
Orange	91	135
Yellow	263	236
Green	198	198

Notes:
"overhead" and "onsite" refers to the method used to count parking supply/inventory

* Aerial photo used for definition of sub areas for data collection. Aerial photos were not used for parking counts.

South Zone



Zone	Overhead	On Site
Red	68	69
Orange	242	242
Green	86	84

Notes:
"overhead" and "onsite" refers to the method used to count parking supply/inventory

* Aerial photo used for definition of sub areas for data collection. Aerial photos were not used for parking counts.

Wednesday, April 18, 2018

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

2455 Bates Ave, Suite C
Concord, CA 94529
Ph: 925-587-5026

Date Counted: 4/18/2018
Location: Lower Lot

	North Zone				
	Count				
Time	Red - 122	Orange - 156	Yellow - 156	Green - 131	Total
7:00 AM	1	1	0	0	2
8:00 AM	2	1	0	0	3
9:00 AM	2	3	1	0	6
10:00 AM	19	29	5	39	92
11:00 AM	30	47	21	80	178
12:00 PM	25	30	18	53	126
1:00 PM	19	21	60	45	145
2:00 PM	11	17	8	20	56
3:00 PM	8	13	5	18	44
4:00 PM	1	7	6	8	22
5:00 PM	1	5	2	1	9
6:00 PM	1	4	2	1	8
7:00 PM	1	2	1	2	6
8:00 PM	1	1	1	0	3
9:00 PM	1	1	1	0	3
SUPPLY	122	156	156	131	565

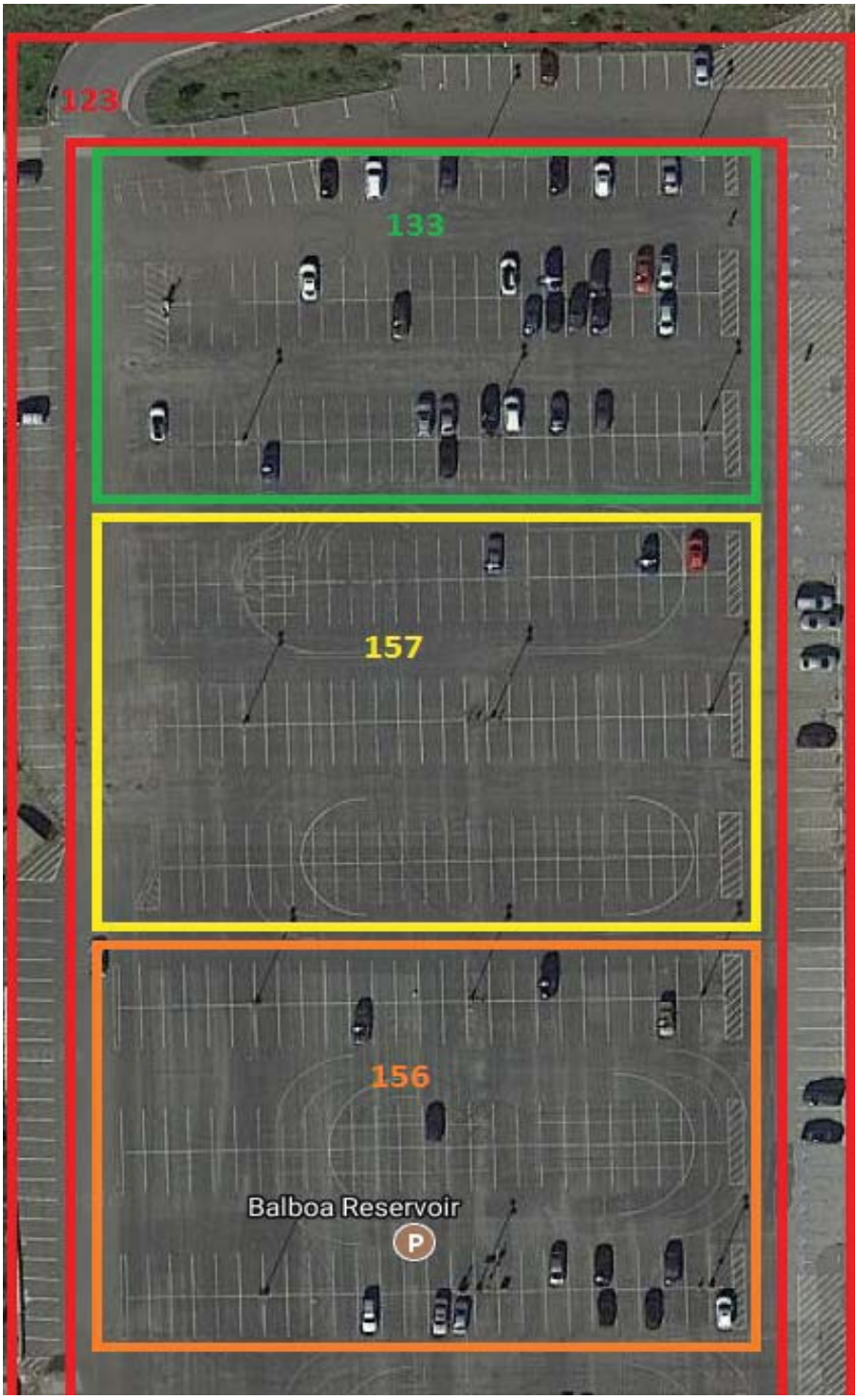
	North Zone				
	Utilization				
Time	Red - 122	Orange - 156	Yellow - 156	Green - 131	Average
7:00 AM	1%	1%	0%	0%	0%
8:00 AM	2%	1%	0%	0%	1%
9:00 AM	2%	2%	1%	0%	1%
10:00 AM	16%	19%	3%	30%	17%
11:00 AM	25%	30%	13%	61%	32%
12:00 PM	20%	19%	12%	40%	23%
1:00 PM	16%	13%	38%	34%	25%
2:00 PM	9%	11%	5%	15%	10%
3:00 PM	7%	8%	3%	14%	8%
4:00 PM	1%	4%	4%	6%	4%
5:00 PM	1%	3%	1%	1%	2%
6:00 PM	1%	3%	1%	1%	1%
7:00 PM	1%	1%	1%	2%	1%
8:00 PM	1%	1%	1%	0%	1%
9:00 PM	1%	1%	1%	0%	1%
AVG. OCCUPANCY	7%	8%	6%	14%	8%

	South Zone			
	Count			
Time	Red - 89	Orange - 197	Green - 156	Total
7:00 AM	1	0	0	1
8:00 AM	1	0	0	1
9:00 AM	3	0	0	3
10:00 AM	21	6	7	34
11:00 AM	26	18	16	60
12:00 PM	30	10	15	55
1:00 PM	22	8	12	42
2:00 PM	16	7	6	29
3:00 PM	12	6	5	23
4:00 PM	12	4	1	17
5:00 PM	7	3	3	13
6:00 PM	5	3	1	9
7:00 PM	2	2	0	4
8:00 PM	1	1	0	2
9:00 PM	1	1	0	2
SUPPLY	69	197	156	422

	South Zone			
	Utilization			
Time	Red - 89	Orange - 197	Green - 156	Average
7:00 AM	1%	0%	0%	0%
8:00 AM	1%	0%	0%	0%
9:00 AM	3%	0%	0%	1%
10:00 AM	24%	3%	4%	10%
11:00 AM	29%	9%	10%	16%
12:00 PM	34%	5%	10%	16%
1:00 PM	25%	4%	8%	12%
2:00 PM	18%	4%	4%	8%
3:00 PM	13%	3%	3%	7%
4:00 PM	13%	2%	1%	5%
5:00 PM	8%	2%	2%	4%
6:00 PM	6%	2%	1%	3%
7:00 PM	2%	1%	0%	1%
8:00 PM	1%	1%	0%	1%
9:00 PM	1%	1%	0%	1%
AVG. OCCUPANCY	12%	2%	3%	6%

	Lower Lot	
Time	Count - 1007	Utilization
7:00 AM	3	0%
8:00 AM	4	0%
9:00 AM	9	1%
10:00 AM	126	13%
11:00 AM	238	24%
12:00 PM	181	18%
1:00 PM	187	19%
2:00 PM	85	8%
3:00 PM	67	7%
4:00 PM	39	4%
5:00 PM	22	2%
6:00 PM	17	2%
7:00 PM	10	1%
8:00 PM	5	0%
9:00 PM	5	0%
SUPPLY/AVG. OCCUPANCY	1007	7%

North Zone



Zone	Overhead	On Site
Red	123	122
Orange	156	156
Yellow	157	156
Green	133	131

Notes:
"overhead" and "onsite" refers to the method used to count parking supply/inventory

South Zone

Zone	Overhead	On Site
Red	85	89
Orange	177	197
Green	156	156

Notes:
"overhead" and "onsite" refers to the method used to count parking supply/inventory

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

2455 Bates Ave, Suite C
Concord, CA 94529
Ph: 925-587-5026

Date Counted: 4/18/2018
Location: Upper Lot

	North Zone				
	Count				
Time	Red - 176	Orange - 135	Yellow - 263	Green - 198	Total
7:00 AM	8	17	2	3	30
8:00 AM	50	74	29	42	195
9:00 AM	163	74	223	42	502
10:00 AM	175	74	223	42	514
11:00 AM	170	132	247	190	739
12:00 PM	164	128	214	198	704
1:00 PM	167	134	196	159	656
2:00 PM	109	115	163	145	532
3:00 PM	121	97	138	92	448
4:00 PM	108	91	88	74	361
5:00 PM	88	95	72	62	317
6:00 PM	88	100	74	97	359
7:00 PM	116	115	86	129	446
8:00 PM	107	104	77	133	421
9:00 PM	41	28	12	32	113
SUPPLY	176	139	263	198	776

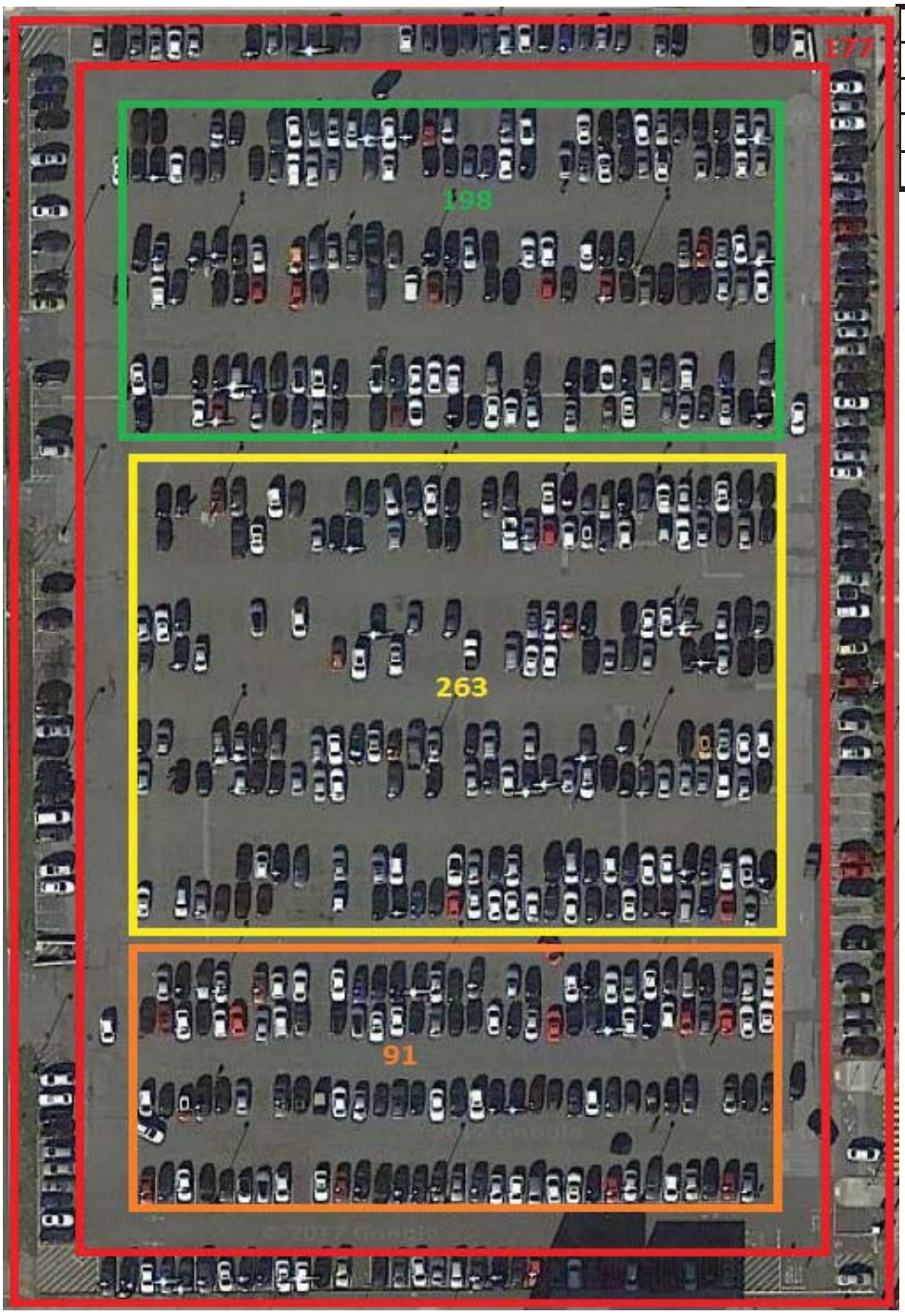
	North Zone				
	Utilization				
Time	Red - 176	Orange - 135	Yellow - 263	Green - 198	Average
7:00 AM	5%	13%	1%	2%	5%
8:00 AM	28%	55%	11%	21%	29%
9:00 AM	93%	55%	85%	21%	63%
10:00 AM	99%	55%	85%	21%	65%
11:00 AM	97%	98%	94%	96%	96%
12:00 PM	93%	95%	81%	100%	92%
1:00 PM	95%	99%	75%	80%	87%
2:00 PM	62%	85%	62%	73%	71%
3:00 PM	69%	72%	52%	46%	60%
4:00 PM	61%	67%	33%	37%	50%
5:00 PM	50%	70%	27%	31%	45%
6:00 PM	50%	74%	28%	49%	50%
7:00 PM	66%	85%	33%	65%	62%
8:00 PM	61%	77%	29%	67%	59%
9:00 PM	23%	21%	5%	16%	16%
AVG. OCCUPANCY	63%	68%	47%	48%	57%

	South Zone			
	Count			
Time	Red - 69	Orange - 242	Green - 84	Total
7:00 AM	6	14	6	26
8:00 AM	15	35	20	70
9:00 AM	25	128	51	204
10:00 AM	41	217	75	333
11:00 AM	55	210	74	339
12:00 PM	61	171	73	305
1:00 PM	58	158	67	283
2:00 PM	61	131	68	260
3:00 PM	61	99	25	185
4:00 PM	46	81	48	175
5:00 PM	32	62	38	132
6:00 PM	30	59	41	130
7:00 PM	15	60	42	117
8:00 PM	10	47	32	89
9:00 PM	7	15	6	28
SUPPLY	69	242	84	395

	South Zone			
	Utilization			
Time	Red - 69	Orange - 242	Green - 84	Average
7:00 AM	9%	6%	7%	7%
8:00 AM	22%	14%	24%	20%
9:00 AM	36%	53%	61%	50%
10:00 AM	59%	90%	89%	79%
11:00 AM	80%	87%	88%	85%
12:00 PM	88%	71%	87%	82%
1:00 PM	84%	65%	80%	76%
2:00 PM	88%	54%	81%	74%
3:00 PM	88%	41%	30%	53%
4:00 PM	67%	33%	57%	52%
5:00 PM	46%	26%	45%	39%
6:00 PM	43%	24%	49%	39%
7:00 PM	22%	25%	50%	32%
8:00 PM	14%	19%	38%	24%
9:00 PM	10%	6%	7%	8%
AVG. OCCUPANCY	51%	41%	53%	48%

	Upper Lot	
Time	Count - 1167	Utilization
7:00 AM	56	5%
8:00 AM	265	23%
9:00 AM	706	60%
10:00 AM	847	73%
11:00 AM	1078	92%
12:00 PM	1009	86%
1:00 PM	939	80%
2:00 PM	792	68%
3:00 PM	633	54%
4:00 PM	536	46%
5:00 PM	449	38%
6:00 PM	489	42%
7:00 PM	563	48%
8:00 PM	510	44%
9:00 PM	141	12%
SUPPLY/AVG. OCCUPANCY	1167	51%

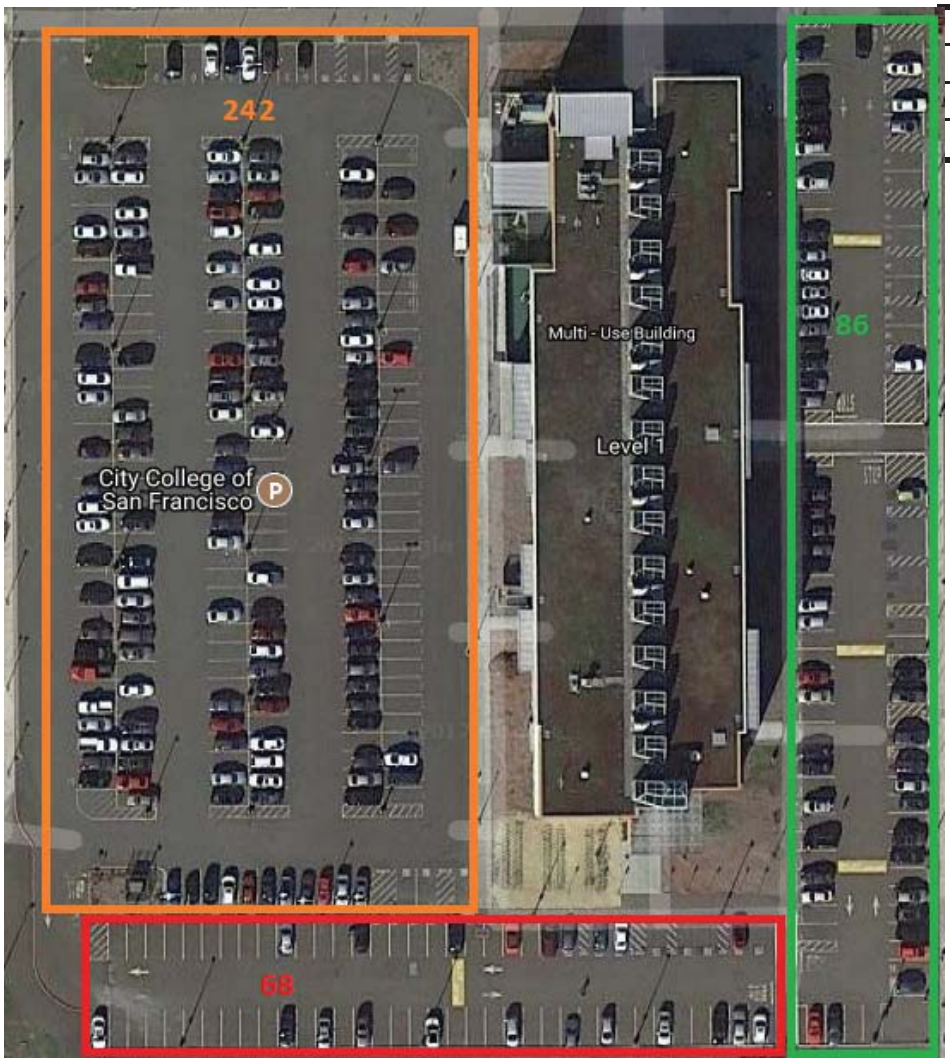
North Zone



Zone	Overhead	On Site
Red	177	176
Orange	91	135
Yellow	263	236
Green	198	198

Notes:
"overhead" and "onsite" refers to the method used to count parking supply/inventory

South Zone



Zone	Overhead	On Site
Red	68	69
Orange	242	242
Green	86	84

Notes:
"overhead" and "onsite" refers to the method used to count parking supply/inventory