

Attachment 24

Memorandum Regarding 100% Responsible Intersection Mitigation



## Interoffice Memorandum

**Date:** June 20, 2016  
**To:** Acting City Manager  
**From:** Acting Assistant Director of Public Works  
**Subject:** City Place 100% Responsible Intersection Mitigation

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This memo is to document the payment or construction of intersection mitigation for the City Place development where the development is 100% responsible for the implementation.

The City Place development is responsible for the construction or funding of various intersection improvements that will completely or partially mitigate projected impacts from project generated traffic. The improvements identified are relatively minor such as new traffic signals, modifications to existing traffic signals, additional turn or thru lanes at an intersection. Table 1 is attached to this document indicating intersection mitigation which the developer is responsible for construction.

After discussion with the County of Santa Clara, there are some identified mitigation that they would prefer to construct as part of a larger project. Therefore, the developer will pay the identified amount to the City as indicated in Table 1 for specific intersections and the City will execute a funding agreement with the County to ensure completion. The intersections that the County desires to construct are Intersections 48, 55, and 82.

Within the City of San Jose's jurisdiction, they have identified that San Jose would like to have the monetary equivalent of the cost for constructing a new signal at Intersection 109 provided to them instead of the developer constructing the improvement.

Additionally, in order to provide flexibility to all jurisdictions and to the developer, if permits cannot be issued in a timely manner along with plan approval, the developer may provide the monetary equivalent costs for design and construction as identified in Table 1 to the applicable jurisdiction.

Intersection improvements at intersections 64, 65 and 66 are all fully funded mitigation that will be constructed as part of the Yahoo! Development or by the City in the case of intersection 66.

The trigger point for construction of the identified intersection mitigation at various phases of development was identified in the Fehr & Peers' "City Place Santa Clara – Intersection Mitigation and Site Access Timing" memo dated February 10, 2016.

**cc:** Ruth Shikada, Assistant City Manager

Table 1

No.	Intersection	Mitigation	% Responsible	Total Cost	City Place Responsibility	Basis of Cost
<b>100% RESPONSIBLE INTERSECTIONS</b>						
8	Great America Pkwy/Tasman Dr	Partial Mitigation: Add a southbound right-turn lane and add a third westbound left-turn lane.	100.0	\$ 1,415,400	\$ 1,415,400	The cost estimate was prepared by BKF Engineers and accepted by the City. The cost estimate assumes that 10' turn lanes will be implemented and the Tasman Drive westbound left turn lane will be added to an existing Tasman Drive configuration of two auto lanes and one bike lane.
13	Calle Del Sol/Tasman Dr	Add a westbound right-turn lane. Reconfigure southbound approach to include two left-turn lanes and one right- turn lane with overlap phase.	100.0	\$ 1,075,000	\$ 1,075,000	The cost estimate was prepared by BKF Engineers and accepted by the City. The cost estimate is based on the assumption that the new westbound right turn lane will be added to an existing Tasman Drive configuration of two auto lanes and one bike lane. The estimate also assumes the Calle del Sol southbound right turn lane will require additional right-of-way that may impact the on-site parking stalls. The estimate is therefore predicated on the use of narrow lanes to minimize impacts. If parking stalls are affected, the City will permit a variance to the parking requirements. Bike lanes additions along Calle del Sol are not included.
14	Lick Mill Blvd/Tasman Dr	Partial Mitigation: Reconfigure northbound and southbound approach to two left-turn lanes, one through lane, and one right-turn lane. Change split phasing to protected phasing northbound/southbound. Add a second westbound left-turn lane.	100.0	\$ 1,978,700	\$ 1,978,700	The cost estimate was prepared by BKF Engineers and accepted by the City. The cost estimate assumes that 10' turn lanes and 11' through lanes will be implemented and no bike lanes will be added.
22	Agnew Rd-De La Cruz Blvd/Montague Expwy	Partial Mitigation: Add a second northbound left-turn lane.	100.0	\$ 424,300	\$ 424,300	The cost estimate was prepared by BKF Engineers and accepted by the City. The cost estimate assumes that 10' turn lanes and 11' through lanes will be implemented and no bike lanes will be added.
23	Lick Mill Blvd/Montague Expwy	Partial Mitigation: Add a third southbound left-turn lane.	100.0	\$ 312,800	\$ 312,800	The cost estimate was prepared by BKF Engineers and accepted by the City. The cost estimate assumes that: 1) 10' turn lanes and 11' through lanes will be implemented, 2) no bike lanes will be added, and 3) on-street parking at northwest corner will be eliminated.
48	Lawrence Expressway/US 101 SB Ramps	Convert eastbound left turn lane to a shared left/right turn lane.	100.0	\$ 13,500	\$ 13,500	The cost estimate was prepared by BKF Engineers and accepted by the City. The cost estimate assumes that the work is limited to striping.
54	Lawrence Expwy/Benton St	Partial Mitigation: Add a second southbound left-turn lane and a second eastbound left-turn lane.	100.0	\$ 948,600	\$ 948,600	The cost estimate was prepared by BKF Engineers and accepted by the City. The cost estimate assumes that 10' turn lanes and 11' through lanes will be implemented and that the Benton Street southbound through lane can be offset through the intersection.

No.	Intersection	Mitigation	% Responsible	Total Cost	City Place Responsibility	Basis of Cost
55	Lawrence Expwy/Homestead Rd	Add a third eastbound through lane and a third westbound through lane (Yahoo! Santa Clara Campus TIA, August 2009; City of Sunnyvale Citywide Deficiency Plan, September 2005; and City of Santa Clara Traffic Mitigation Program, June 2011).	100.0	\$ 2,841,800	\$ 2,342,740	<p>The cost estimate was prepared by BKF Engineers and accepted by the City. The cost estimate assumes that 10' turn lanes and 11' through lanes will be implemented.</p> <p>While the Project has 100% responsibility for this mitigation, the project's responsibility for the cost is reduced by previous contributions made by Yahoo (\$96,060) and the County of Santa Clara (\$400,000). Right of way for this mitigation has been previously dedicated by Kaiser negating the need for the Project to acquire any right of way for mitigation.</p> <p>The Project will make a monetary contribution equal to its cost responsibility in lieu of constructing the mitigation.</p>
57	Great America Pkwy/SR 237 WB Ramps	Add third westbound left-turn lane and associated receiving lane under underpass. Add a second westbound right-turn lane.	100.0	\$ 2,351,652	\$ 2,351,652	<p>The Total Cost includes both local road work and freeway ramp work. The cost estimate was prepared by BKF Engineers and accepted by the City. The cost of the local road work is estimated at \$963,508 and the freeway ramp work at \$1,388,144. Since the freeway ramp work will be performed concurrently with the intersection mitigation, the estimated cost of the freeway ramp work is deducted from the Freeway Fair Share voluntary contribution amount.</p>
58	Great America Pkwy/SR 237 EB Ramps	Add third southbound through lane (from Int. 57) and a second eastbound right-turn lane.	100.0	\$ 1,704,644	\$ 1,704,644	<p>The Total Cost includes both local road work and freeway ramp work. The cost estimate was prepared by BKF Engineers and accepted by the City. The cost of the local road work is estimated at \$787,008 and the freeway ramp work as \$917,636. Since the freeway ramp work will be performed concurrently with the intersection mitigation, the estimated cost of the freeway ramp work is deducted from the Freeway Fair Share voluntary contribution amount.</p>
59	Great America Pkwy/Yerba Buena Way	Partial Mitigation: Add a second westbound right-turn lane with an overlap phase and a second southbound left-turn lane.	100.0	\$ 1,180,800	\$ 1,180,800	<p>The cost estimate was prepared by BKF Engineers and accepted by the City. The estimated cost assumes that 11' lanes will be implemented and the median along Great America Parkway can be reduced in width from 6' to 4'.</p>
60	Great America Pkwy/Old Mountain View Alviso	Partial Mitigation: Add a second eastbound left-turn lane.	100.0	\$ 430,600	\$ 430,600	<p>The cost estimate was prepared by BKF Engineers and accepted by the City. The estimated cost assumes that: 1) 10' lanes will be implemented, 2) right of way acquisition may be required only along westbound Old Mountain View Alviso Road, and 3) no bridge widening will be required.</p>
64	Great America Pkwy/Old Glory Lane	Partial Mitigation: Add a second northbound left-turn lane. Install an overlap phase for eastbound right-turning vehicles (Yahoo! Santa Clara Campus TIA, August 2009).	100.0	\$ -	\$ -	<p>The City has determined that Yahoo will construct the mitigation. No Project contribution is required.</p>

No.	Intersection	Mitigation	% Responsible	Total Cost	City Place Responsibility	Basis of Cost
65	Great America Pkwy / Patrick Henry Dr	Partial Mitigation: Add a second northbound left-turn lane and an eastbound free-right-turn lane. The eastbound right-turn lane includes the addition of a fourth southbound lane on Great America Parkway between Patrick Henry Drive and Mission College Boulevard (Yahoo! Santa Clara Campus TIA, August 2009).	100.0	\$ -	\$ -	The City has determined that Yahoo will construct the mitigation. No Project contribution is required.
66	Great America Pkwy / Mission College Blvd	Partial Mitigation: Add a southbound and a westbound right-turn pocket (Yahoo! Santa Clara Campus TIA, August 2009).	100.0	\$ 1,147,400	\$ -	The cost estimate was prepared by BKF Engineers and accepted by the City. The cost estimate assumes no ROW acquisition is required. This mitigation will be implemented by the City and funded from a prior contribution of \$3,000,000 from Yahoo. No Project contribution is required.
71	Bowers Ave/Central Expwy	Partial Mitigation: Add third southbound left-turn lane and third eastbound left-turn lane.	100.0	\$ 1,994,400	\$ 1,994,400	<p>This intersection appears under both 100% Responsible Intersections and Fair Share Intersections. This cost allocation assumes that the longer term intersection mitigation will not occur until approximately 10 years after commencement of construction of the first Phase of the project. Based on that assumption, the Project is responsible for a fair share contribution to the partial mitigation defined here to improve traffic conditions in the near term. Project will also be responsible for a Fair Share contribution to the longer term intersection mitigation. If the longer term intersection mitigation is planned for construction within 10 years after commencement of construction of the Phase of the project for which this intersection improvement is required, Project is responsible for only the Fair Share contribution for the longer term mitigation.</p> <p>The cost estimate was prepared by BKF Engineers and accepted by the City. The cost estimate assumes that 10' turn lanes and 11' through lanes will be implemented. Since ROW along both the Central Expressway and Bowers Avenue has been previously dedicated, the Project will not be required to acquire ROW for this mitigation.</p>
73	Bowers Ave / Monroe St	Add a northbound and a southbound left-turn lane. Change the northbound and southbound from split to protected left-turn phasing	100.0	\$ 255,550	\$ 255,550	The cost estimate was prepared by BKF Engineers and accepted by the City. The cost estimate assumes that: 1) 10' turn lanes and 11' through lanes will be implemented, 2) street parking along Bowers Ave will be eliminated, and 3) the bus stop along northbound Bowers Avenue can be relocated with no right of way impacts.
76	San Tomas Expwy/Walsh Ave	Partial Mitigation: Add a second eastbound left-turn lane.	100.0	\$ 581,800	\$ 581,800	The cost estimate was prepared by BKF Engineers and accepted by the City. The estimated cost assumes that 10' turn lanes and 11' through lanes will be implemented.

No.	Intersection	Mitigation	% Responsible	Total Cost	City Place Responsibility	Basis of Cost
79	San Tomas Expwy/Benton St	Partial Mitigation: Add a second eastbound left-turn lane.	100.0	\$ 144,700	\$ 144,700	The cost estimate was prepared by BKF Engineers and accepted by the City. The estimated cost assumes that 10' turn lanes and 11' through lanes will be implemented and Santa Clara County will relocate the affected utility poles as part of the San Tomas widening.
82	San Tomas Expwy/Pruneridge Ave	Partial Mitigation: Add a second northbound left-turn lane.	100.0	\$ 271,900	\$ 271,900	The cost estimate was prepared by BKF Engineers and accepted by the City after concurrence with the cost by the County. The estimate assumes that the second northbound left turn lane will be implemented by the County as part of the San Tomas widening
84	Gold Street / Gold Street connector	Convert northbound through lane to a shared left-turn/through lane, add second northbound left-turn lane and a second eastbound right-turn lane (move pedestrian crossing to north leg of intersection).	100.0	\$ 735,100	\$ 735,100	In order to avoid modifications to existing electrical transmission line towers, the City waived the mitigation requirement to add a second northbound left turn lane. The City also agreed to include a surveillance camera at the intersection as requested by the City of San Jose.  The cost estimate was prepared by BKF Engineers and accepted by the City. The estimated cost includes \$685,100 for the intersection mitigation and an additional \$50,000 for the surveillance camera requested by the City of San Jose. The estimated cost assumes that 11' lanes will be implemented and the work associated with the addition of the surveillance camera does not require a new signal controller or installation of equipment to the control station.
90	Lafayette St/Calle De Luna	Partial Mitigation: Reconstruct the westbound approach to include two left-turn lanes and one right-turn lane.	100.0	\$ 70,700	\$ 70,700	The cost estimate was prepared by BKF Engineers and accepted by the City. The estimated cost assumes that 11' lanes will be implemented and no bike lanes will be added.
94	Lafayette St / Agnew Rd	Add a second eastbound left-turn lane and a second southbound left-turn lane. ROW would be required.	100.0	\$ 954,200	\$ 954,200	The cost estimate was prepared by BKF Engineers and accepted by the City. The estimated cost assumes that 10' turn lanes and 11' through lanes will be implemented and that the median along Lafayette St can be reduced in width from 6' to 4'.
96	Lafayette St/Montague Expwy WB Ramps	Add second westbound right-turn lane with an overlap phase and a second southbound left-turn lane.	100.0	\$ 1,241,700	\$ 1,241,700	The cost estimate was prepared by BKF Engineers and accepted by the City. The estimated cost assumes that: 1) 10' turn lanes and 11' through lanes will be implemented, 2) the median along Montague Expressway will be reduced in width from 8' to 4' and, 3) no bike lanes will be required along Lafayette St.
109	Liberty St / Lewis St	Signalize.	100.0	\$ 300,000	\$ 300,000	The City of San Jose requested that the intersection not be signalized per the mitigation. The City of Santa Clara will provide the City of San Jose with the monetary equivalent of the cost of installing a signal.
114	Calle Del Sol/Calle De Luna	Signalize.	100.0	\$ 392,900	\$ 392,900	The cost estimate was prepared by BKF Engineers and accepted by the City.

No.	Intersection	Mitigation	% Responsible	Total Cost	City Place Responsibility	Basis of Cost
120	De La Cruz Blvd/Laurelwood Rd	Reconfigure the northbound and southbound approaches to include one left-turn lane, one through, and one shared through/right turn lane and change the phasing from split to protected in the northbound and southbound directions. Signal modifications to increase cycle length.	100.0	\$ 375,900	\$ 375,900	The cost estimate was prepared by BKF Engineers and accepted by the City. The estimated cost assumes that: 1) turn lanes and 11' through lanes will be implemented, 2) street parking will be eliminated, and 3) no bike lanes will be added.
123	Great America Pkwy / Gold Street connector	Add a second northbound right-turn lane (from Int. 57 dual westbound right-turn lanes).	100.0	\$ -	\$ -	The cost of this work is included in the cost estimate for intersection #57.
		Subtotal			\$ 21,497,586	



## MEMORANDUM

Date: February 10, 2016

To: Dennis Ng and Debby Fernandez, City of Santa Clara  
Rich Walter, Erin Efner and Kirsten Chapman, ICF International

From: Jane Bierstedt, Daniel Rubins, Sarah Jampole, and Ashley Brooks, Fehr & Peers

Subject: **City Place Santa Clara – Intersection Mitigation and Site Access Timing Analysis**

*SJ14-1528.01*

This memorandum presents the results of the analysis conducted to determine the timing of the physical intersection mitigation measures and the site access roadway infrastructure for City Place Santa Clara. City Place Santa Clara is a mixed-use development on 239 acres and comprising 5 parcels in northern Santa Clara. **Figure 1** shows the Project location and the Parcel boundaries. It will contain office, retail, restaurant, hotel, entertainment, and residential units. Development by parcel and phase has been created for planning purposes and is presented in **Tables 1** and **2**, respectively<sup>1</sup>. However, the pace of the development will be dependent on the real estate market at the time of construction. Therefore this analysis was based on the number of AM and/or PM peak hour vehicle trips that would cause each intersection mitigation measure or site access roadway infrastructure to be triggered. The vehicle trips can be converted to land use types and sizes using the trip generation method (vehicle trip generation rates, internalization reductions, and transit use reductions) from the *City Place Santa Clara Project Draft Environmental Impact Report*.

### INTERSECTION MITIGATION MEASURES

There are 53 intersections with significant Project impacts. Of these 25 intersections have a physical improvement that is the responsibility of the Project to fully fund and would constitute either a full or partial physical mitigation measure, as presented in **Table 3**. This table presents the mitigation measures in chronological order based on the number of Project vehicle trips that

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<sup>1</sup> For the alternative known as Scheme A.





would trigger each one (from the lowest number of trips to the highest). The process used to determine the number of Project vehicle trips that would trigger each mitigation measure and the results are discussed in the following sections.

Of the remaining impacted intersections there are 24 where the Project has a fair-share responsibility to contribute to planned expressway interchanges and similar street improvements at Santa Clara County and San José intersections. Many of these improvements are needed in the early stages of the City Place project to provide additional vehicle capacity.

## ANALYSIS METHODS

The analysis was conducted with the following steps for each of the 25 intersections:

1. The corresponding (AM and/or PM peak hour) Background with Project Conditions level of service calculation for each of the 25 impacted intersections was reviewed to identify the amount of Project traffic anticipated to be added to the critical movements.
2. Levels of service were then recalculated to identify the number of Project vehicle trips that would trigger the impact at each intersection based on the significance criteria, (i.e., (1) intersection operations degrade from an acceptable level to an unacceptable level, (2) unacceptable operations are exacerbated by increasing critical delay by more than 4 seconds and increasing the V/C ratio by 0.01 or more, or (3) unacceptable operations are exacerbated by increasing the V/C ratio by 0.01 or more when the change in critical delay is negative).
3. The corresponding amount of traffic generated at the Project site was then estimated based on the generalized trip distribution patterns from the select zone analysis for the Project under Background with Project Conditions.
4. The number of Project trips was then associated with a Project phase based on trip generation estimates from **Table 5**, and the phasing trip estimates in **Table 6**.

## ANALYSIS RESULTS

The number of AM or PM peak hour vehicle trips generated by City Place Santa Clara that would trigger each intersection mitigation measure is presented in **Table 3**. The corresponding development phase for each traffic mitigation is also shown in **Table 3** using the Scheme A phasing and trip generation.



## SITE ACCESS ROADWAY INFRASTRUCTURE

City Place Santa Clara will be built over several years. The types and sizes of the land uses and their locations within the site will likely vary from the land use program evaluated in the EIR (Scheme B) and the phasing currently envisioned by the development team (Scheme A). The new roadway infrastructure providing site access will need to be constructed in tandem with the development so that adequate vehicular site access is provided.<sup>2</sup>

The site access infrastructure that was evaluated is a blend of the base and variant schemes and includes:

- Two signalized access points on Great America Parkway. One new intersection would be located between the San Tomas Aquino Creek bridge and Old Mountain View-Alviso Road, and the other one would be located south of the creek. The southern access would also serve the existing Santa Clara Convention Center, with a new bridge crossing the creek to provide access to City Place.
- Five access points (intersections) on Tasman Drive
  - Unsignalized right-in-right-out driveway west of Centennial Drive
  - Signalized intersection at Centennial Drive
  - Unsignalized right-in-right-out driveway east of Centennial Drive
  - Eastbound slip off-ramp from Tasman Drive to Stars and Stripes Drive
  - Signalized intersection with left out access east of Centennial Drive
- Two signalized access points on Lafayette Street
  - Great America Way
  - Northern 'Jug Handle'
- Lick Mill Boulevard extension from Tasman Drive to Calle Del Luna

## ANALYSIS PROCESS

Fehr & Peers used the Traffix operations model developed for the intersections near the site for this analysis with Background Conditions<sup>3</sup> volumes for the surrounding roadways. The analysis was conducted with the following steps:

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<sup>2</sup> Other off-site transportation infrastructure, such as paving the west bank of the Guadalupe River recreation trail, is part of the project rather than identifying the improvement as a project impact. Therefore the timing of those improvements will be determined through discussions between the City of Santa Clara and the Project Developer and are not addressed in this analysis.

<sup>3</sup> Background volumes are slightly higher than Existing volumes and will account for other approved development. Existing volumes were considered by City staff and the project team but not selected.



1. The number of AM and/or PM peak-hour Project trips that can be accommodated by each access point (driveway) listed above while maintaining peak-hour operations at no worse than LOS D was determined with intersection level of service calculations and queuing for the turning movements into and out of the Project site based on the 95<sup>th</sup> percentile queues. The vehicle storage capacity of each turning movement was determined using the latest site plan.
2. The results were then correlated to the amount of traffic generated by each Parcel using the relative magnitudes and distribution of vehicle trips used in the transportation analysis of the City Place Santa Clara Project Draft EIR.

## ANALYSIS RESULTS

The available capacities at each access point/driveway intersection during the AM and PM peak hours are presented in **Table 7**. The results show that additional driveway vehicle capacity is needed to serve the Project traffic demand and maintain LOS D operations. The driveways at Tasman Drive Slip Ramp / Stars and Stripes Drive (#1064), Future Driveway (Avenue C) / Tasman Drive (#1081), and Lafayette Street / Northern 'Jug Handle' (#87b) have the greatest available capacities.

The relative distribution of peak hour Project traffic using each driveway from each parcel is presented in **Table 8**. This shows that Project traffic to/from Parcels 1 and 2 would use the access points on Lafayette Street (#85, #87, and #1000), with some traffic accessing from Great America Parkway (#61). Parcel 3 is accessed using Great America Parkway (#61), Lafayette Street (#87), Lick Mill Extension (#14), and Tasman Drive. For Parcel 4 most of the Project traffic access/egress is from Great America Parkway, followed by Tasman Drive, Lafayette Street, and Lick Mill extensions. Parcel 5 is mostly accessed via Tasman Drive. With all of the access points, the driveway capacity can serve Project traffic at LOS D inclusive of Phase 4 during the AM peak hour, and inclusive of Phase 2 during the PM peak hour.

### By Development Phase

**Table 9** identifies the development phase that would trigger the need for each access point. The phasing presented in **Table 9** begins with the driveway access points needed during the construction of Phase 1 with the proposed closure of Centennial Boulevard and Tasman Drive and construction of the alternative access routes, progressing in sequence from Phase 1 to 8.



### **By Parcel**

Another analysis was conducted to identify the amount of development that could occur on each parcel until additional site access points are needed. The analysis assumes that two access points would be provided for each parcel with the initial amounts of development to provide site access. The results are presented as if each parcel is developed independently in **Table 10**. While there is a desire to maintain maximum flexibility regarding the amount and timing of development on each parcel, there are too many combinations and permutations to conduct an analysis assuming development on several parcels would obtain simultaneously and present the results in a cogent manner.

## **QUALITATIVE ANALYSIS RESULTS**

The project team requested a qualitative assessment of an alternate signalized access on Great America Parkway at Old Mountain View-Alviso Road (#60) through the Irvine Company development north of the project, and the southern 'jug handle' with the Lick Mill Boulevard extension (#88). This was conducted by reviewing the driveway access locations and increasing Project traffic to identify the driveway capacity for each intersection as done for the analysis described above. Moving the Great America Parkway south of Old Mountain View-Alviso Road access north to align with Old Mountain View-Alviso Road would provide additional vehicle capacity (900 vehicles during the AM peak hour and 500 vehicles during the PM peak hour). The addition of the Lafayette Street "Southern Jug Handle" would also increase vehicle capacity (710 AM peak hour vehicles and 220 PM peak hour vehicles). The southern jug handle has less capacity because of the location of the on-site streets. The addition/replacement of these driveways would serve inclusive of Phase 5 during the AM peak hour and inclusive of Phase 3 during the PM peak hour.

## **ATTACHMENTS**

### **Figures**

Figure 1: City Place Santa Clara Master Community Plan – Parcel Numbers and Development Phasing

### **Tables**

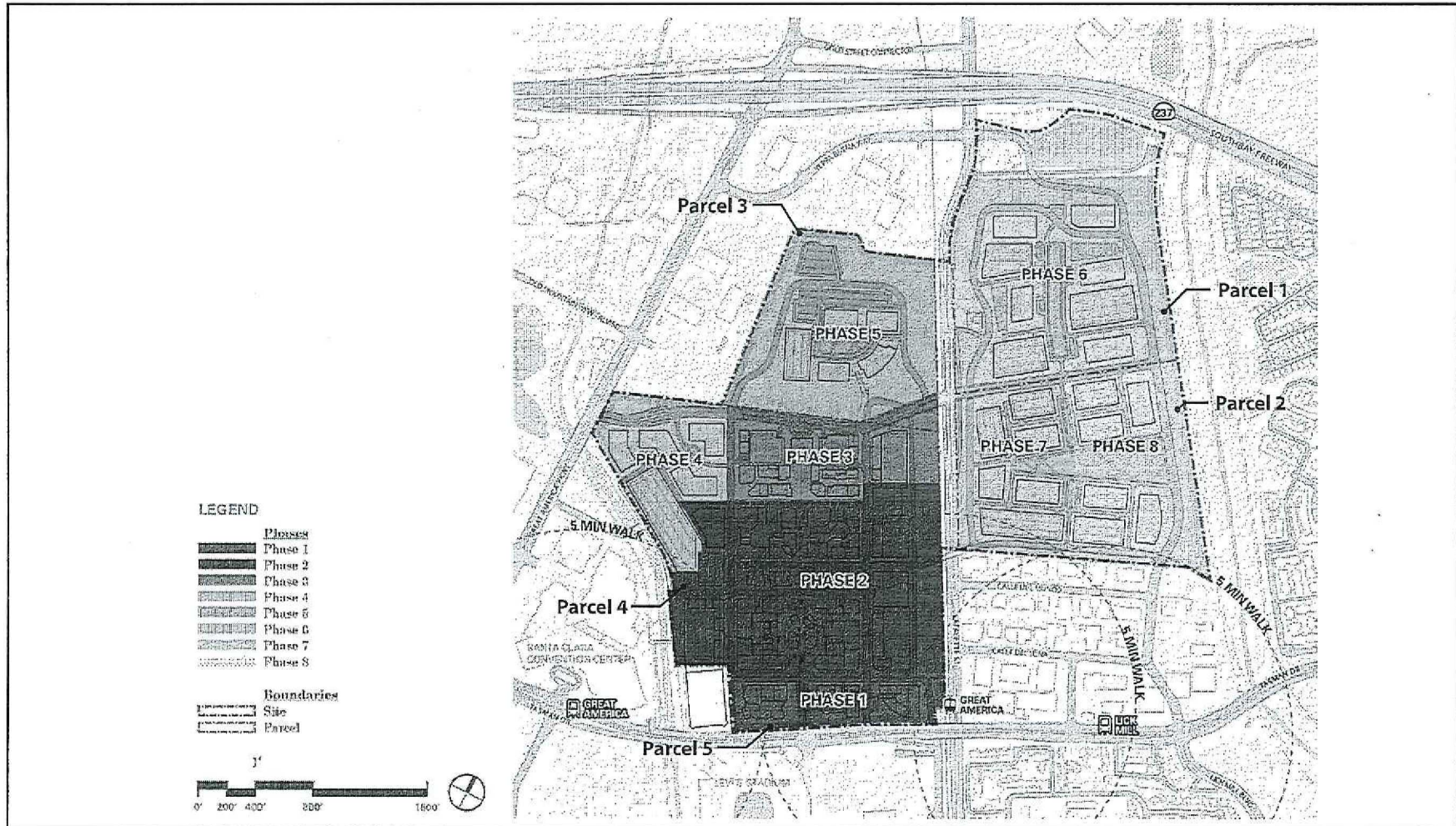
Table 1: City Place Santa Clara Development by Parcel (Scheme A)  
Table 2: City Place Santa Clara Development by Phase (Scheme A)  
Table 3: Intersection Mitigation Sensitivity Analysis Results: Full Funding Responsibility  
Table 4: Intersection Mitigation Sensitivity Analysis Results: Fair-Share Responsibility



Table 5:	Trip Generation Estimates
Table 6:	Trip Generation by Phase
Table 7:	Available Driveway Access Capacity Analysis Results (By Trips)
Table 8:	Project Driveway Distribution
Table 9:	Driveway Capacity Analysis Results (By Phase)
Table 10:	Driveway Construction Timing based on Project Trips Generated by Each Parcel

**Attachments**

- Attachment A: Access Streets Storage Capacity of Key Entry and Exit Movements
- Attachment B: Level of Service and Queuing Calculations



Source: City Place Santa Clara Master Community Plan (Figure 9-1: Scheme A - Development Phasing Plan), The Related Companies, September 2015

Figure 1  
City Place Santa Clara Master Community Plan - Parcel Numbers and Development Phasing



**TABLE 1: CITY PLACE SANTA CLARA DEVELOPMENT BY PARCEL (SCHEME A)**

Unit Base	Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5	
Building Size				1,386.4 KSF Office	258 KSF Office	
				298 KSF Hotel	280 KSF Hotel	
				1,000 KSF Retail	62 KSF Retail	
		1,200 KSF Office	2,160 KSF Office	720 KSF Office	195 KSF Restaurants	25 KSF Restaurants
					35 KSF Grocery Store	200 Apartment Units
					1,160 Apartment Units	
					190 KSF Entertainment	
Employees and Population				5,130 Office Employees		
				360 Hotel Employees	960 Office Employees	
				2,300 Retail Employees	340 Hotel Employees	
		4,440 Office Employees	8,000 Office Employees	2,670 Office Employees	420 Restaurant Employees	140 Retail Employees
					2,780 Residents	60 Restaurant Employees
					30 Residential Employees	480 Residents
					420 Entertainment Employees	10 Residential Employees

Notes:

1. Gross square footage shown in thousand square feet (KSF).
2. 700 hotel rooms = 578,000 s.f. of hotel space.
3. For the City Place project, the assumed densities for the proposed land uses are as follows (note that the results have been rounded to the nearest 10 employees or residents):
  - Office = 270 s.f. per employee (3.7 employees per 1,000 square feet)
  - Hotel = 840 s.f. per employee (1.2 employees per 1,000 square feet; 1.03 employees per room)
  - Retail = 450 s.f. per employee (2.2 employees per 1,000 square feet)
  - Restaurant = 450 s.f. per employee (2.2 employees per 1,000 square feet)
  - Apartments = 2.4 residents per dwelling unit
  - Residential = 1 employee per 32 dwelling units
  - Entertainment = 450 s.f. per employee (2.2 employees per 1,000 square feet)

Source: Related March 13, 2015; Fehr & Peers, 2016.

**TABLE 2: CITY PLACE SANTA CLARA DEVELOPMENT BY PHASE (SCHEME A)**

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
	240 KSF Office						
	298 KSF Hotel						
258 KSF Office	823.3 KSF Retail	80 KSF Office					
280 KSF Hotel	165.2 KSF	147.2 KSF Retail	1,066.4 KSF				
62 KSF Retail	Restaurants	24.8 KSF	Office	720 KSF	1,200 KSF	1,080 KSF	1,080 KSF
25 KSF	35 KSF Grocery	Restaurants	29.5 KSF	Office	Office	Office	Office
Restaurants	Store	500 Apartment	Retail				
200 Apartment	660 Apartment	Units					
Units	Units						
	190 KSF						
	Entertainment						

Notes:

1. Gross square footage shown in thousand square feet (KSF).
2. 700 hotel rooms = 578,000 s.f. of hotel space.

Source: Related March 13, 2015; Fehr & Peers, 2016.



**TABLE 3: INTERSECTION MITIGATION SENSITIVITY ANALYSIS RESULTS: FULL FUNDING RESPONSIBILITY**

ID	Intersection	Jurisdiction/ CMP <sup>1</sup>	Mitigation Measure <sup>3</sup>	Impact Peak Hour	Project Trips	Project Phase
22	Agnew Road-De La Cruz Boulevard/ Montague Expressway	Santa Clara County (CMP)	Partial Mitigation: Add a second northbound left-turn lane.	AM	450	Phase 1
64	Great America Parkway/ Old Glory Lane	Santa Clara	Partial Mitigation: Add a second northbound left-turn lane. Install an overlap phase for eastbound right turning vehicles (Yahoo! Santa Clara Campus TIA, August 2009).	PM	520	Phase 1
65	Great America Parkway/ Patrick Henry Drive	Santa Clara	Partial Mitigation: Add a second northbound left-turn lane and an eastbound free-right-turn lane. The eastbound right-turn lane includes the addition of a fourth southbound lane on Great America Parkway between Patrick Henry Drive and Mission College Boulevard (Yahoo! Santa Clara Campus TIA, August 2009).	PM	520	Phase 1
54	Lawrence Expressway/ Benton Street	Santa Clara County	Partial Mitigation: Add a second southbound left-turn lane and a second eastbound left-turn lane.	AM	2,240	Phase 2
55	Lawrence Expressway/ Homestead Road	Santa Clara County (CMP)	Add a third eastbound through lane and a third westbound through lane (Yahoo! Santa Clara Campus TIA, August 2009; City of Sunnyvale Citywide Deficiency Plan, September 2005; and City of Santa Clara Traffic Mitigation Program, June 2011).	AM	2,240	Phase 2
76	San Tomas Expressway/ Walsh Avenue	Santa Clara County	Partial Mitigation: Add a second eastbound left-turn lane.	AM	2,240	Phase 2
82	San Tomas Expressway/ Pruneridge Avenue	Santa Clara County	Partial Mitigation: Add a second northbound left-turn lane.	AM	2,240	Phase 2
8	Great America Parkway/ Tasman Drive*	Santa Clara (CMP)	Partial Mitigation: Add a southbound right-turn lane and add a third westbound left-turn lane.	PM	2,610	Phase 2
48	Lawrence Expressway/ US 101 SB Ramps	Santa Clara County	Convert eastbound left-turn lane to a shared left-/right-turn lane.	PM	2,610	Phase 2

**TABLE 3: INTERSECTION MITIGATION SENSITIVITY ANALYSIS RESULTS: FULL FUNDING RESPONSIBILITY**

ID	Intersection	Jurisdiction/ CMP <sup>1</sup>	Mitigation Measure <sup>3</sup>	Impact Peak Hour	Project Trips	Project Phase
59	Great America Parkway/ Yerba Buena (Great America) Way	Santa Clara	Partial Mitigation: Add a second westbound right-turn lane with an overlap phase and a second southbound left-turn lane.	PM	3,650	Phase 2
60	Great America Parkway/ Old Mountain View-Alviso Road	Santa Clara	Partial Mitigation: Add a second eastbound left-turn lane.	PM	3,650	Phase 2
71	Bowers Avenue/ Central Expressway	Santa Clara County (CMP)	Partial Mitigation: Add third southbound left-turn lane and third eastbound left-turn lane.**	PM	3,650	Phase 2
57	Great America Parkway/ SR 237 WB Ramps	San José (CMP) <sup>2</sup>	Add third westbound left-turn lane and associated receiving lane under underpass. Add a second westbound right-turn lane. Include safe and convenient bicycle and pedestrian facilities along Great America Parkway. Intersections #58 and #123 would also need to be modified to accommodate these intersection improvements. <sup>4</sup>	AM	2,690	Phase 3
79	San Tomas Expressway/ Benton Street*	Santa Clara County	Add a second eastbound left-turn lane.	AM	3,140	Phase 3
120	De La Cruz Boulevard/ Laurelwood Road	Santa Clara	Reconfigure the northbound and southbound approaches to include one left-turn lane, one through, and one shared through/right-turn lane; change the phasing from split to protected in the northbound and southbound directions; and increase cycle length.	AM	3,140	Phase 3
14	Lick Mill Boulevard/ Tasman Drive	Santa Clara	Partial Mitigation: Reconfigure northbound and southbound approach to two left-turn lanes, one through lane, and one right-turn lane. Change the northbound/southbound signal phasing from split to protective. Add a second westbound left-turn lane.	PM	4,690	Phase 3
23	Lick Mill Boulevard/ Montague Expressway	Santa Clara County	Add a third southbound left-turn lane.	PM	5,730	Phase 4

**TABLE 3: INTERSECTION MITIGATION SENSITIVITY ANALYSIS RESULTS: FULL FUNDING RESPONSIBILITY**

ID	Intersection	Jurisdiction/ CMP <sup>1</sup>	Mitigation Measure <sup>3</sup>	Impact Peak Hour	Project Trips	Project Phase
96	Lafayette Street/ Montague Expressway WB Ramps	Santa Clara	Add second westbound right-turn lane with an overlap phase and a second southbound left-turn lane.	AM	6,730	Phase 7
84	Gold Street/ Gold Street Connector	San José <sup>2</sup>	Convert northbound through lane to a shared left-turn/through lane, add a second northbound left-turn lane and second eastbound right-turn lane. (move pedestrian crossing to north leg of intersection).	AM	7,180	Phase 7
114	Calle Del Sol/ Calle Del Luna	Santa Clara	Signalize.	PM	8,340	Phase 7
90	Lafayette Street/ Calle De Luna	Santa Clara	Reconstruct the westbound approach to include two left-turn lanes and one right-turn lane.	AM	8,970	Phase 8
13	Calle Del Sol/ Tasman Drive*	Santa Clara	Add a westbound right-turn lane. Reconfigure southbound approaches to include two left-turn lanes and one right-turn lane with overlap phase.	PM	9,380	Phase 8
66	Great America Parkway/ Mission College Boulevard*	Santa Clara (CMP)	Partial Mitigation: Add a southbound and a westbound right-turn pocket (Yahoo! Santa Clara Campus TIA, August 2009).	PM	10,420	Phase 8
94	Lafayette Street/ Agnew Road	Santa Clara	Add a second eastbound left-turn lane and a second southbound left-turn lane.	PM	10,420	Phase 8
109	Liberty Street/ Taylor Street	San José <sup>2</sup>	Signalize. Off-setting Mitigation: Construct traffic control devices to divert traffic from entering the Alviso neighborhood.**	PM	10,420	Phase 8

Notes:

1. CMP = Congestion Management Program intersection (VTA).
2. An LOS D threshold is used for study intersections within San José, including CMP designated intersections. Santa Clara County intersections in San José use an LOS E threshold.
3. Partial Mitigation: The proposed mitigation measure mitigates the impact at one but not the other peak hour or reduces the delay but not enough to mitigate the impact.
4. Intersection #58 (Great America Parkway/SR 237 EB Ramps) and #123 (Great America Parkway/ Gold Street Connector) are not impacted intersections, but would need to be modified to accommodate the improvements at Intersection #57 (Great America Parkway/SR 237 WB Ramps).
  - Intersection #58: Add third southbound through lane and a second eastbound right-turn lane.

- Intersection #123: Add a second northbound right-turn lane.
- \* Intersection improvement identified at this intersection under existing or background no-project conditions. See Appendix 3.3-D of the *City Place Santa Clara Project Draft Environmental Impact Report* (October 2015).
- \*\* City-preferred mitigation option.

Source: Fehr & Peers, 2016.

**TABLE 4: INTERSECTION MITIGATION SENSITIVITY ANALYSIS RESULTS: FAIR-SHARE RESPONSIBILITY**

ID	Intersection	Jurisdiction/ CMP <sup>1</sup>	Mitigation Measure <sup>3</sup>	Project Responsibility <sup>4</sup>	Peak Hour	Project Trips	Project Phase
17	Rio Robles/ Tasman Drive	San José <sup>2</sup>	Partial Mitigation: Widen the southbound approach to include one left-turn lane and one shared through/right-turn lane. Change the northbound/southbound signal phasing from split to protected. Install crosswalk treatments that enhance visibility and traffic surveillance cameras at the intersection.	Pay North San José fee or fair-share contribution of partial mitigation	PM	520	Phase 1
24	North 1st Street/ Montague Expressway	Santa Clara County (CMP) <sup>2</sup>	No feasible mitigation (no right-of-way is available).  Off-setting Mitigation: Future interchange, which includes grade separation of the light rail, is planned.**	% of Total Traffic	PM	520	Phase 1
26	Montague Expressway/ Plumeria Drive- River Oaks Parkway	Santa Clara County <sup>2</sup>	Partial Mitigation: Install an eastbound right-turn overlap phase and limit northbound U-turns.	% of Total Traffic	PM	520	Phase 1
27	Trimble Road/ Montague Expressway	Santa Clara County (CMP) <sup>2</sup>	A "fly-over" is identified at this intersection as a Tier 1B priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009).	% of Total Traffic	PM	520	Phase 1
50	Lawrence Expressway/ Arques Avenue	Santa Clara County (CMP)	An interchange is identified at this intersection as a Tier 1B priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009; City of Sunnyvale Citywide Deficiency Plan, September 2005).	% of Total Traffic	PM	1,040	Phase 2
121	De La Cruz Boulevard/ Central Expressway	Santa Clara County (CMP)	HOV lane conversion to mixed-flow lanes on Central Expressway identified as a Tier 1A priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009). Add second southbound right-turn lane.	% of Total Traffic	PM	1,040	Phase 2

**TABLE 4: INTERSECTION MITIGATION SENSITIVITY ANALYSIS RESULTS: FAIR-SHARE RESPONSIBILITY**

ID	Intersection	Jurisdiction/ CMP <sup>1</sup>	Mitigation Measure <sup>3</sup>	Project Responsibility <sup>4</sup>	Peak Hour	Project Trips	Project Phase
52	Lawrence Expressway/ Reed Avenue-Monroe Street*	Santa Clara County (CMP)	An interchange is identified at this intersection as a Tier 1B priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009; City of Sunnyvale Citywide Deficiency Plan, September 2005).	% of Total Traffic	AM	1,350	Phase 2
56	Lawrence Expressway/ Pruneridge Avenue	Santa Clara County	An interchange is identified at this intersection as a Tier 3 priority (Comprehensive County Expressway Planning Study Policy Advisory Board 2015 Update, March 23, 2015).	% of Total Traffic	PM	1,560	Phase 2
98	Lafayette Street/ Central Expressway	Santa Clara County (CMP)	<ul style="list-style-type: none"> <li>HOV lane conversion to mixed-flow lanes on Central Expressway identified as a Tier 1A priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009),**</li> <li>Grade separation between Central Expressway and Lafayette Street.</li> </ul>	% of Total Traffic	PM	1,560	Phase 2
83	San Tomas Expressway/ Saratoga Avenue	Santa Clara County (CMP)	Widen San Tomas to four lanes in each direction including exclusive right-turn lanes and maintain HOV lanes identified as a Tier 1A priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009).	% of Total Traffic	AM	1,790	Phase 2
21	Mission College Boulevard/ Montague Expressway	Santa Clara County (CMP)	<ul style="list-style-type: none"> <li>Partial Mitigation: Add a third southbound left-turn lane (VTP 2040 #X14).**</li> <li>An interchange is identified at this intersection as a Tier 2 priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009).</li> </ul>	% of Total Traffic	AM	2,240	Phase 2

**TABLE 4: INTERSECTION MITIGATION SENSITIVITY ANALYSIS RESULTS: FAIR-SHARE RESPONSIBILITY**

ID	Intersection	Jurisdiction/ CMP <sup>1</sup>	Mitigation Measure <sup>3</sup>	Project Responsibility <sup>4</sup>	Peak Hour	Project Trips	Project Phase
75	San Tomas Expressway/ Scott Boulevard	Santa Clara County (CMP)	<ul style="list-style-type: none"> <li>Partial Mitigation: A second westbound right-turn lane is identified as a Tier 1C priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009; City of Santa Clara Traffic Mitigation Program, June 2011).**</li> <li>An interchange is identified at this intersection as a Tier 2 priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009).</li> </ul>	% of Total Traffic	AM	2,240	Phase 2
77	San Tomas Expressway/ Monroe Street	Santa Clara County (CMP)	<p>Partial Mitigation: A second northbound left-turn lane is identified at this intersection as a Tier 3 priority (Comprehensive County Expressway Planning Study Policy Advisory Board 2015 Update, March 23, 2015).</p>	% of Total Traffic	AM	2,240	Phase 2
78	San Tomas Expressway/ El Camino Real*	Santa Clara County (CMP)	An interchange is identified at this intersection as a Tier 2 priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009).	% of Total Traffic	AM	2,240	Phase 2
125	San Tomas Expressway/ Stevens Creek Boulevard	Santa Clara County (CMP)	<ul style="list-style-type: none"> <li>Widen San Tomas to four lanes in each direction including exclusive northbound and southbound right-turn lanes and maintain HOV lanes identified as a Tier 1A priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009).**</li> <li>An interchange is identified at this intersection as a Tier 2 priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009).</li> </ul>	% of Total Traffic	AM	2,240	Phase 2
71	Bowers Avenue/ Central Expressway	Santa Clara County (CMP)	An interchange is identified at this intersection as a Tier 2 priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009).	% of Total Traffic <sup>5</sup>	PM	3,650	Phase 2

**TABLE 4: INTERSECTION MITIGATION SENSITIVITY ANALYSIS RESULTS: FAIR-SHARE RESPONSIBILITY**

ID	Intersection	Jurisdiction/ CMP <sup>1</sup>	Mitigation Measure <sup>3</sup>	Project Responsibility <sup>4</sup>	Peak Hour	Project Trips	Project Phase
25	Zanker Road/ Montague Expressway*	Santa Clara County (CMP) <sup>2</sup>	<ul style="list-style-type: none"> <li>Widen Zanker Road to three lanes in each direction and add second northbound and southbound left-turn lanes with no separate right-turn lanes (North San José Deficiency Plan, January 2006).**</li> <li>Off-setting Mitigation: HOV-type signal improvements that could support future Bus Rapid Transit facilities.**</li> </ul>	% of Total Traffic	PM	5,210	Phase 4
34	North 1st Street/ Brokaw Road	San José (CMP) <sup>2</sup>	The Zanker Road connection from Zanker Road to Skyport Drive with a partial US 101 interchange is proposed to alleviate congestion at this intersection (North San José Deficiency Plan, January 2006).	Pay North San José fee or fair-share contribution of mitigation	PM	5,210	Phase 4
53	Lawrence Expressway/ Cabrillo Avenue	Santa Clara County	An interchange is identified at this intersection as a Tier 3 priority (Comprehensive County Expressway Planning Study Policy Advisory Board 2015 Update, March 23, 2015).	% of Total Traffic	PM	5,210	Phase 4
124	Scott Boulevard/ Central Expressway	Santa Clara County (CMP)	HOV lane conversion to mixed-flow lanes on Central Expressway identified as a Tier 1A priority (Comprehensive County Expressway Planning Study 2008 Update, March 2009).	% of Total Traffic	PM	5,210	Phase 4
30	North 1st Street/ Trimble Road	San José (CMP) <sup>2</sup>	Add a second eastbound left-turn lane and add an exclusive westbound right-turn lane (North San José Deficiency Plan, January 2006).	Pay North San José fee or fair-share contribution of mitigation	AM	5,380	Phase 6
18	North 1st Street/ Tasman Drive	San José <sup>2</sup>	<ul style="list-style-type: none"> <li>No feasible mitigation (no right-of-way is available).</li> <li>Off-setting Mitigation: A new bus/shuttle stop (including right-of-way) is a proposed improvement at this location. Enhance pedestrian and bicycle access to and from the light rail station.**</li> </ul>	Pay North San José fee or fair-share contribution of off-setting mitigation	AM	6,280	Phase 6



**TABLE 4: INTERSECTION MITIGATION SENSITIVITY ANALYSIS RESULTS: FAIR-SHARE RESPONSIBILITY**

ID	Intersection	Jurisdiction/ CMP <sup>1</sup>	Mitigation Measure <sup>3</sup>	Project Responsibility <sup>4</sup>	Peak Hour	Project Trips	Project Phase
29	De La Cruz Boulevard/ Trimble Road	San José (CMP) <sup>2</sup>	Add a third southbound left-turn lane.	Pay North San José fee or fair-share contribution of off- setting mitigation	PM	10,420	Phase 8
73	Bowers Avenue/ Monroe Street	Santa Clara	Add a northbound and a southbound left-turn lane. Change the northbound and southbound from split to protected left-turn phasing.	% of Total Traffic	PM	10,420	Phase 8

Notes:

1. CMP = Congestion Management Program intersection (VTA).
  2. An LOS D threshold is used for study intersections within San José, including CMP designated intersections. Santa Clara County intersections in San José use an LOS E threshold.
  3. Off-setting Mitigation: In the North San José Deficiency Plan area, off-setting local street network, transit, bicycle, and pedestrian improvements were identified to accommodate future travel growth, but not directly mitigate the intersection with the identified impact. Partial Mitigation: The proposed mitigation measure mitigates the impact at one but not the other peak hour or reduces the delay but not enough to mitigate the impact.
  4. "% of Total Traffic" = Project Developer shall pay a fair-share contribution to the proposed mitigation measure, which is typically a larger transportation improvement, such as an expressway interchange, that has been identified in an adopted plan. "Pay North San José fee or fair-share contribution of alternative or off-setting mitigation" = The Project Developer can pay the North San José fee or a fair-share contribution for the mitigation measure or off-setting mitigation measure based on the amount of Project's percent contribution of the traffic volume growth at the intersection.
  5. Intersection #71 (Bowers Avenue/Central Expressway) is shown in Tables 3 and 4. In Table 3, the partial mitigation is identified as a fully funded project funded mitigation. While in Table 4 a longer term interchange improvement is identified as a project fair share contribution.
- \* Intersection improvement identified at this intersection under existing or background no-project conditions. See Appendix 3.3-D of the *City Place Santa Clara Project Draft Environmental Impact Report* (October 2015).
- \*\* City-preferred mitigation option.

Source: Fehr & Peers, 2016.

**TABLE 5: TRIP GENERATION ESTIMATES**

Trip Generation Estimates	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
<b>Parcel 1</b>							
Parcel 1	13,100	1,230	150	1,380	260	1,070	1,330
<b>Parcel 2</b>							
Parcel 2	23,600	2,210	270	2,480	480	1,920	2,400
Public Transit Reduction (5%)	-1,180	-110	-10	-120	-20	-100	-120
Parcel 2 Subtotal	22,420	2,100	260	2,360	460	1,820	2,280
<b>Parcel 3</b>							
Parcel 3	7,880	740	90	830	160	640	800
<b>Parcel 4</b>							
Parcel 4 (Phases 2 and 3)	53,630	1,460	1,090	2,570	1,900	1,850	3,760
Public Transit Reduction (5%)	-2840	-80	-50	-130	-100	-100	-200
Parcel 4 (Phases 2 and 3) Subtotal	50,790	1,380	1,060	2,440	1,810	1,750	3,560
Parcel 4 (Phase 4)	14,720	1,140	160	1,300	360	1,090	1,450
Parcel 4 Subtotal	65,510	2,520	1,220	3,740	2,170	2,840	5,010
<b>Parcel 5</b>							
Parcel 5	14,870	400	290	690	530	520	1,050
Public Transit Reduction (5%)	-740	-20	-10	-30	-20	-30	-50
Parcel 5 Subtotal	14,130	380	280	660	510	490	1,000
<b>Total without Public Transit Reduction</b>							
East (Parcels 1 and 2) Subtotal	36,700	3,440	420	3,860	740	2,990	3,730
West (Parcels 3, 4, and 5) Subtotal	91,100	3,740	1,650	5,390	2,960	4,100	7,060
Subtotal	127,800	7,180	2,070	9,250	3,700	7,090	10,790
Public Transit Reduction (5%) for Parcels 2, 4 (Phases 2 and 3), and Parcel 5	-4,760	-210	-70	-280	-140	-230	-370
<b>Total with Public Transit Reduction</b>							
East (Parcels 1 and 2) Subtotal	35,520	3,330	410	3,740	720	2,890	3,610
West (Parcels 3, 4, and 5) Subtotal	87,520	3,640	1,590	5,230	2,840	3,970	6,810
<b>Total</b>	<b>123,040</b>	<b>6,970</b>	<b>2,000</b>	<b>8,970</b>	<b>3,560</b>	<b>6,860</b>	<b>10,420</b>

Note:

1. City Place Santa Clara Development Scheme A.

Source: Fehr & Peers, 2016.

**TABLE 6: TRIP GENERATION BY PHASE**

Phase	Trip Generation	AM Peak Hour		PM Peak Hour		
		Cumulative Project Trips	Cumulative Percent of Project Trips	Trip Generation	Cumulative Project Trips	Cumulative Percent of Project Trips
1	660	660	7%	1,000	1,000	10%
2	1,860	2,520	28%	2,710	3,710	36%
3	580	3,100	35%	850	4,560	44%
4	1,300	4,400	49%	1,450	6,010	58%
5	830	5,230	58%	800	6,810	65%
6	1,380	6,610	74%	1,330	8,140	78%
7	1,180	7,790	87%	1,140	9,280	89%
8	1,180	8,970	100%	1,140	10,420	100%
<b>Total</b>	<b>8,970</b>	<b>8,970</b>	<b>100%</b>	<b>10,420</b>	<b>10,420</b>	<b>100%</b>

Note:

1. Cumulative percent of Project based on the sum of the AM and PM peak hours for City Place Santa Clara Development Scheme A.

Source: Fehr & Peers, 2016.

**TABLE 7: AVAILABLE DRIVEWAY CAPACITY ANALYSIS RESULTS (BY TRIPS)**

Int. #	Driveway Intersection	Number of Access Lanes (2-way)	AM Peak Hour	PM Peak Hour
<b>Great America Parkway</b>				
61	Great America Parkway / Future Driveway (south of Old Mountain View-Alviso Road)	4-lanes	110	300
62	Great America Parkway / Future Driveway (north of Bunker Hill Lane)	4-lanes	450	240
<b>Tasman Drive</b>				
10	Future Driveway (west of Centennial Boulevard) / Tasman Drive	2-lanes	320	130
11	Centennial Boulevard / Tasman Drive	4-lanes	30	70
12	Future Driveway (east of Centennial Boulevard) / Tasman Drive	2-lanes	520	220
1064	Tasman Drive Slip Ramp / Stars and Stripes Drive	1-lane	1,000	1,000
1081	Future Driveway (Avenue C) / Tasman Drive	2-lanes	590	1,100
14	Lick Mill Boulevard / Tasman Drive <sup>1</sup>	4-lanes	130	380
<b>Lafayette Street</b>				
85	Lafayette Street / Great America Way	4-lanes	290	490
87b	Lafayette Street / Northern 'Jug Handle'	4-lanes	1,090	460
<b>Total Available Driveway Capacity (at LOS D)</b>			<b>4,530</b>	<b>4,390</b>
<b>Total Trip Generation (Demand)</b>			<b>8,970</b>	<b>10,420</b>

Note:

1. This peak hour project trip capacity includes the mitigation described in Table 3. Without the mitigation the project would serve 50 AM peak hour vehicles and 230 PM peak hour vehicles.

Source: Fehr & Peers, 2016.

**TABLE 8: PROJECT TRAFFIC TRIP DISTRIBUTION BY PARCEL AND BY DRIVEWAY**

Int. #	Driveway Intersection	Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5
<b>Great America Parkway</b>						
61	Great America Parkway / Future Driveway (south of Old Mountain View-Alviso Road)	10%	8%	42%	29%	10%
62	Great America Parkway / Future Driveway (north of Bunker Hill Lane)	0%	0%	0%	27%	8%
<b>Tasman Drive</b>						
10	Future Driveway (west of Centennial Boulevard) / Tasman Drive	0%	0%	4%	6%	6%
11	Centennial Boulevard / Tasman Drive	0%	2%	2%	5%	44%
12	Future Driveway (east of Centennial Boulevard) / Tasman Drive	0%	0%	2%	1%	4%
1064	Tasman Drive Slip Ramp / Stars and Stripes Drive	0%	0%	2%	4%	0%
1081	Future Driveway (Avenue C) / Tasman Drive	0%	4%	2%	10%	24%
14	Lick Mill Boulevard / Tasman Drive	35%	38%	8%	2%	0%
<b>Lafayette Street</b>						
85	Lafayette Street / Great America Way	30%	32%	0%	0%	0%
87b	Lafayette Street / Northern 'Jug Handle'	25%	16%	38%	16%	4%

Source: Fehr & Peers, 2016.

**TABLE 9: DRIVEWAY CAPACITY ANALYSIS RESULTS (BY PHASE)**

Int. #	Driveway Intersection	Project Phase
<b>Great America Parkway</b>		
61	Great America Parkway / Future Driveway (south of Old Mountain View-Alviso Road)	1 <sup>1</sup>
62	Great America Parkway / Future Driveway (north of Bunker Hill Lane)	2
<b>Tasman Drive</b>		
10	Future Driveway (west of Centennial Boulevard) / Tasman Drive	1 <sup>1</sup>
11	Centennial Boulevard / Tasman Drive	1 <sup>1</sup>
12	Future Driveway (east of Centennial Boulevard) / Tasman Drive	2
1064	Tasman Drive Slip Ramp / Stars and Stripes Drive	1 <sup>1</sup>
1081	Future Driveway (Avenue C) / Tasman Drive	2
14	Lick Mill Boulevard / Tasman Drive	2
<b>Lafayette Street</b>		
85	Lafayette Street / Great America Way	3 <sup>2</sup>
87b	Lafayette Street / Northern 'Jug Handle'	2 <sup>3</sup>

Notes:

1. Phase 1 driveway access needed during construction.
2. Part of Parcel 5 site access construction, but needed to provide capacity to serve project under Phase 4.
3. The southern 'jug handle' could be built in-lieu of the northern 'jug handle' in Phase 2.

Source: Fehr & Peers, 2016.

**TABLE 10: DRIVEWAY CONSTRUCTION TIMING BASED ON PROJECT TRIPS  
GENERATED BY EACH PARCEL**

Int. #	Driveway Intersection	Parcel 1 <sup>1</sup>	Parcel 2 <sup>1</sup>	Parcel 3 <sup>1</sup>	Parcel 4 <sup>1</sup>	Parcel 5 <sup>1</sup>
<b>Great America Parkway</b>						
61	Great America Parkway / Future Driveway (south of Old Mountain View-Alviso Road)	1,350	-	SA	SA	-
62	Great America Parkway / Future Driveway (north of Bunker Hill Lane)	-	-	-	500	-
<b>Tasman Drive</b>						
10	Future Driveway (west of Centennial Boulevard) / Tasman Drive	-	-	-	350	SA
11	Centennial Boulevard / Tasman Drive	-	-	-	SA	SA
12	Future Driveway (east of Centennial Boulevard) / Tasman Drive	-	-	700	700	200
1064	Tasman Drive Slip Ramp / Stars and Stripes Drive	-	-	-	1,000	600
1081	Future Driveway (Avenue C) / Tasman Drive	-	1,300	-	2,400	400
14	Lick Mill Boulevard / Tasman Drive	950	950	-	3,500	-
<b>Lafayette Street</b>						
85	Lafayette Street / Great America Way	SA	SA	-	-	-
87b	Lafayette Street / Northern 'Jug Handle'	SA	SA	SA	2,000	-

Source: Fehr & Peers, 2016.

Notes:

SA = Driveways needed for site access regardless of trip generation

1. Design peak hour vehicle trips by parcel with peak hour: Parcel 1 = 1,400 total vehicles during the PM peak hour; Parcel 2 = 2,300 total vehicles during the AM or PM peak hours; 800 total vehicles during the AM or PM peak hour; Parcel 4 = 5,000 total vehicles during the PM peak hour (Only 4,000 PM peak hour trips can be served and maintain LOS D); and Parcel 5 1,000 total vehicles during the PM peak hour.

Note on Table 10: The results should be interpreted as follows:

Parcel 1: Intersections 85 and 87b needed for site access. Once the development generates 950 PM peak hour trips, Intersection 1081 and connecting roadways is needed. Intersection 61 and connecting roadways are needed when trip generation reaches 1,350 PM peak hour trips.