



# HEXAGON TRANSPORTATION CONSULTANTS, INC.

## Memorandum

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**Date:** June 22, 2022  
**To:** Christy Cheung, City of San Jose  
**From:** Robert Del Rio, T.E.  
**Subject:** Transportation Analysis Consistency Review for the Hotel Clariana Phase II Residential Development Adjustments

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This memo presents a supplemental evaluation of consistency with the completed Local Transportation Analysis (LTA) for the proposed Hotel Clariana Phase II residential development project description adjustments. An LTA report dated March 1, 2021 was completed for the following project description:

- seven-story building with 36 condominium units
- 29 parking spaces for the Phase II residential use

The new project description proposes an increase of the proposed units to 41 condominium units. A total of 73 parking spaces would be provided on-site, of which 37 spaces would be reserved for the residential use. Based on the revised site plan dated March 2022, there are no changes to the proposed site access points and vehicular on-site circulation. The supplemental evaluation consists of a revised trip generation and queuing analysis for the new project description. In addition, a review of the revised site plan and proposed on-site parking supply also was completed.

### Revised Trip Generation and Trip Assignment

Baseline (or gross) vehicle-trips were estimated by using average vehicle-trip rates from the *ITE Trip Generation Manual, 11th Edition* for the Multifamily Housing (Mid-Rise) land use (Land Use 221). Although the project site is within ½-mile of rail transit (Santa Clara LRT Station), trip generation rates for the “Not Close to Rail Transit” land use subcategory were selected since multimodal trip reductions are already accounted for as part of the location-based adjustment, as described below. The baseline trip estimates were reduced to account for the predicted vehicle mode share of the project based on its location and surrounding transportation system and land uses.

### Trip Reductions

#### Location-Based Adjustment

The location-based adjustment reflects the project’s vehicle mode share based on the place type in which the project is located per the San Jose Travel Demand Model. The project’s place type was obtained from the *San Jose VMT Evaluation Tool*. Based on the VMT Tool, the project site is located within a central city urban area. Therefore, the baseline project trips were adjusted to reflect a central city urban mode share. Central city urban areas are characterized as areas with high density, excellent accessibility, high public transit access, low single-family homes, and older housing stock. Residential uses within central city urban areas have a vehicle mode share of 71 percent. Thus, a 29 percent reduction was applied to the baseline trips estimated to be generated by the proposed condominiums.



### **VMT Reduction**

A VMT reduction was applied to the trip generation estimates based on the VMT per capita estimate obtained from the San Jose VMT Evaluation Tool. Based on the San Jose VMT Evaluation Tool, the project is anticipated to generate 7.72 VMT per-capita in an area that currently generates approximately 7.77 VMT per-capita. It is assumed that every percent reduction from the existing per-capita VMT is equivalent to one percent reduction in peak-hour vehicle trips. Thus, the project trip estimates were reduced by 0.6 percent to reflect the reduction in peak hour trips.

### **Project Trip Estimates**

Based on the trip generation rates and reductions, it is estimated that the proposed Phase II residential project would generate 131 daily trips, with 11 trips (2 inbound and 9 outbound) occurring during the AM peak hour and 11 trips (7 inbound and 4 outbound) occurring during the PM peak hour.

Combined, the Phase I hotel expansion and Phase II residential project would generate 886 daily trips, with 44 trips (22 inbound and 22 outbound) occurring during the AM peak hour and 59 trips (33 inbound and 26 outbound) occurring during the PM peak hour. The project trip generation estimates are presented in Table 1.

### **Comparison to Trip Generation of Previous Project Description**

The trip generation comparison indicates that the proposed change in project description will result in an increase of 2 outbound trips during the AM peak-hour and no changes to the PM peak-hour trips. The number of daily project trips decreased from 138 trips to 131 trips due to reduced trip generation rates contained in the 11<sup>th</sup> Edition *ITE Trip Generation Manual*.

### **Project Trip Assignment**

The trip assignment for the proposed Phase II residential development is shown on Figure 1. Figure 2 shows the project trip assignment for the combined Phase I hotel expansion and Phase II residential development.

### **Vehicular Queueing Analysis**

The results of the queue analysis are summarized in Table 2. The new project description will not result in an increase to the maximum queue of the eastbound left-turn movement at Third Street/San Fernando Street.

### **Third Street/San Fernando Street**

The queuing analysis shows that the eastbound left-turn movement at the Third Street and San Fernando Street intersection already exceeds the existing storage capacity during the PM peak hour under existing conditions and would continue to do so under background conditions. However, the addition of project traffic is not projected to lengthen the queue during the PM peak hour. Providing additional queue storage capacity at the Third Street/San Fernando Street eastbound left-turn pocket would require shortening of the upstream left-turn pocket at Second Street/San Fernando Street westbound left-turn that lies back-to-back with the subject left-turn pocket or street widening along with narrowing of sidewalks and/or removal of bike lanes. The removal and/or alteration of roadway designs that are intended to encourage the use of multi-modal travel to accommodate vehicular demand is not consistent with General Plan goals.

## Site Access Design

The revised site plan dated March 2022 (Figure 3) indicates no changes to the design of the project driveways along Third Street and Fourth Street. The Fourth Street driveway would provide access to a ground-floor parking lot serving the Phase II residential use. The Third Street driveway would provide access to a below-ground parking level located beneath the Phase I hotel and Phase II residential sites. Vehicular access between the ground level and basement level would not be provided on-site.

As discussed in the March 2021 LTA, drivers exiting from the Fourth Street driveway may have difficulty seeing southbound traffic if a tall truck obstructs the view of Fourth Street from the driveway. The recommendation from the LTA is provided below.

**Recommendation:** There is an existing freight loading zone extending approximately 30 feet north of the existing Fourth Street driveway. Exiting drivers may have difficulty seeing southbound traffic if a tall truck obstructs the view of Fourth Street from the driveway. Proposed signage and striping changes along the Fourth Street project frontage would replace the freight loading zone with a single metered parking space, approximately 20 feet north of the driveway. The proposed improvement would help maintain an acceptable sight distance at the project driveway.

## Project Driveway Operations

The gross project trip assignment at the proposed project driveways is shown in Figure 3.

Based on the estimated project trips, it is projected that a maximum of 22 and 33 inbound trips (during the AM peak-hour and PM peak-hours, respectively) would enter the parking garages. Based on the site plan, approximately 51% of residential parking spaces would be located within the basement parking level and accessible from Third Street, while the remaining 49% would be located within the ground-floor parking level and accessible from Fourth Street. Additionally, all hotel parking would be located within the basement parking level accessible from Third Street. The estimated inbound trips at each of the site's driveways for the residential (Phase II) and hotel components (Phase 1) are shown on Table 1. During the AM peak-hour, the Third Street driveway is projected to serve 21 inbound trips and the Fourth Street driveway is projected to serve 1 inbound trip. During the PM peak-hour, the Third Street driveway is projected to serve 30 inbound trips and the Fourth Street driveway is projected to serve 3 inbound trips.

As discussed in the March 2021 LTA, a vehicle that enters the Fourth Street driveway and waits for the gate to open would likely block a portion or all of the sidewalk width. The recommendation from the LTA is provided below.

**Recommendation:** It is recommended that the Fourth Street entry gate be located further within the parking level to provide queuing space of at least one car-length (25 feet) between the gate and sidewalk.

## On-site Circulation

The revised site plan dated March 2022 indicates no changes to on-site circulation within the project's parking facilities.

The project would provide 90-degree parking stalls within the parking garages. All drive aisles will need to meet the City's minimum width of 26 feet for two-way drive aisles. The site plan indicates that a majority of proposed drive aisle widths would not meet City standards including the following:

- Some of the two-way drive aisles serving 90-degree parking spaces are shown to be as narrow as 22 feet wide.

- The drive aisle that connects the Third Street driveway to the basement parking level is shown to be 20 feet wide.
- The access point between the Phase I basement and Phase II basement is shown to be 18 feet and 9 inches wide.

The drive aisle within the Phase I basement (shown on Figure 4) features a sharp turn at the base of the ramp. It is recommended that mirrors be provided along the outer radius of the sharp turn to provide incoming drivers a view of the parking stalls located adjacent to the sharp turn. Additionally, the access point between the Phase I basement and Phase II basement would connect at the described sharp turn. Due to the limited sight distance, it is recommended that stop signs be installed at the intersection of the two drive aisles.

There are dead-end drive aisles located on both parking levels. Dead-end aisles are undesirable because drivers may enter the aisle, and upon discovering that there is no available parking, will be required to back out or conduct three-point turns. Reversing out of these dead-end aisles could be challenging if all parking spaces adjacent to the dead-end are occupied. However, dead-ends should not be problematic since all hotel parking will be assigned to guests, as described below. It is recommended that residential parking also be pre-assigned to prevent residents from entering when the garage is full. The recommendations from the LTA are provided below.

**Recommendation:** It is recommended that mirrors be provided along the outer radius of the sharp turn within the basement parking level to provide incoming drivers a view of the parking stalls located adjacent to the sharp turn.

**Recommendation:** Due to the limited sight distance, it is recommended that stop signs be installed at the intersection where the Phase I and Phase II basements are connected.

**Recommendation:** It is recommended that residential parking also be pre-assigned to prevent residents from entering when the garage is full.

### Truck Site Access

Based on the City of San Jose off-street loading standards within the Downtown Area (20.70.435), residential uses consisting of fewer than 50 units are not required to provide an off-street loading space.

A trash collection room for the residential units will be located adjacent to the parking garage entrance on Fourth Street. Garbage trucks will not enter the parking garage. Trash bins will be wheeled out to Fourth Street for trash collection.

Fire trucks will have access to the proposed site via the Third Street and Fourth Street frontages.

### Revised On-Site Parking Supply

According to the City of San Jose Downtown Zoning Regulations (Table 20-140), residential developments are required to provide one off-street vehicle parking space for each residential unit.

The previous project description proposed 29 on-site parking spaces for the residential use. The proposed 29 parking spaces represented a 19.4% percent reduction from the required 36 off-street parking spaces per City code for the originally proposed project. The project conformed to Code 20.90.220.A.1 Subsections A and B and would have been granted up to a 20 percent reduction in off-street parking spaces.

The revised project description and site plan dated March 2022 includes an increase in provided parking from 29 spaces to 37 spaces. The proposed 37 parking spaces represents a 9.8 percent reduction from the required 41 parking spaces per City code for the revised project description.

The project conforms to Code 20.90.220.A.1 Subsections A and B and will be granted up to a 20 percent reduction in off-street parking spaces. Therefore, the proposed number of residential parking spaces will meet the reduced parking requirements.

### **Bicycle Parking**

The City Municipal Code (Table 20-190) requires one bicycle parking space per four residential units. Of the required residential bicycle parking, City standards require that at most 40 percent be short-term bicycle spaces and at least 60 percent be secured long-term bicycle spaces. Based on these requirements, the 41-unit development is required to provide a total of 11 bicycle parking spaces consisting of 4 short-term parking spaces and 7 long-term parking spaces.

The project proposes to provide a total of 12 bicycle parking spaces for residential uses, which will exceed the City's minimum requirement. The site plan indicates that a bicycle storage room will be located at the ground-floor level, within the interior of the building along the south side of the drive aisle. From the storage room, access to Fourth Street is provided via internal walkways.

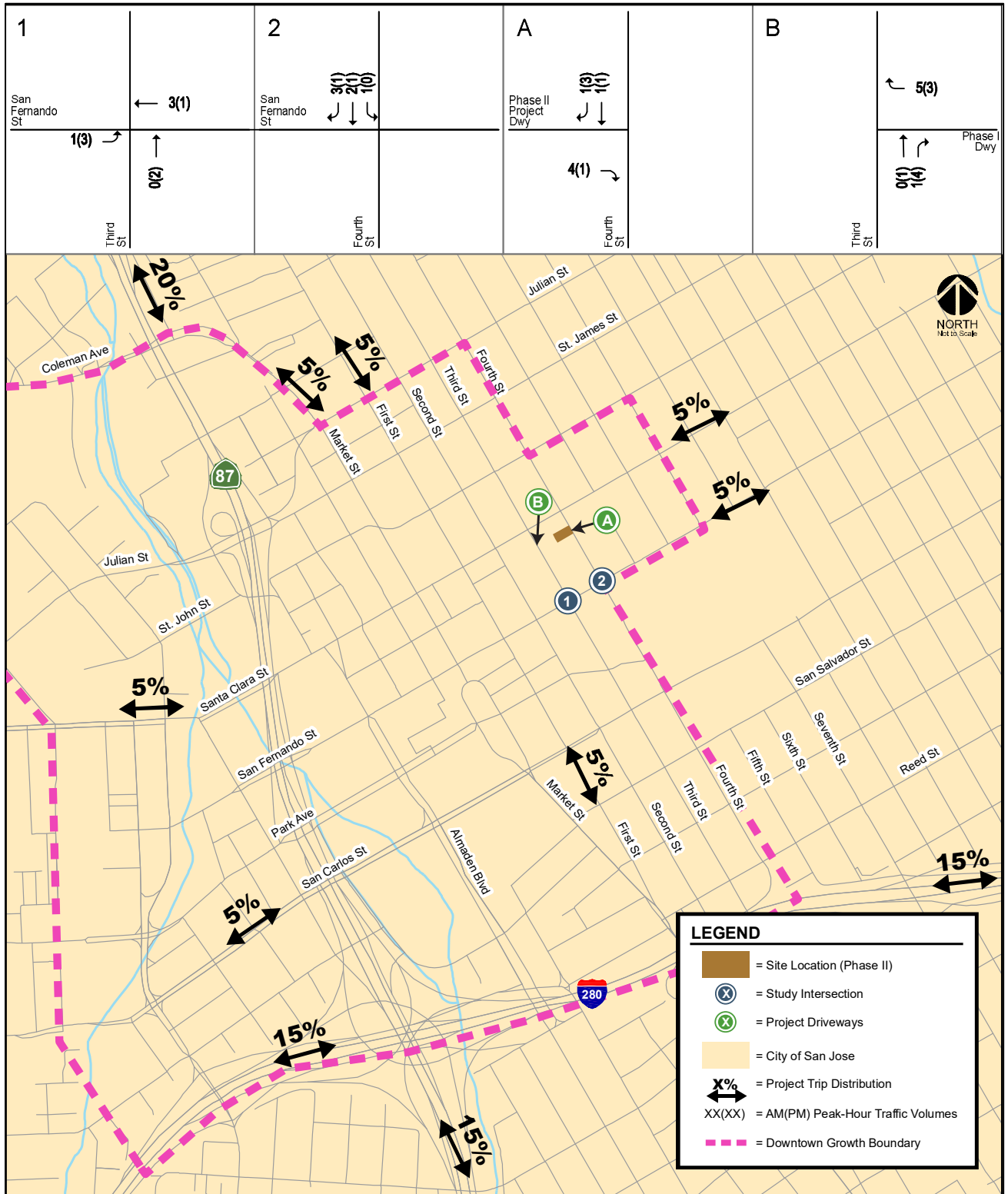
**Table 1  
Trip Generation Estimates**

Land Use	ITE Land Use Code	Location	% of Vehicle Mode Share	VMT <sup>3</sup>		% Reduction	Size	Daily		AM Peak Hour						PM Peak Hour					
				Existing	Project			Rate	Trip	Pk-Hr Rate	Split		Trip			Pk-Hr Rate	Split		Trip		
											In	Out	In	Out	Total		In	Out	Total		
<b>Proposed Phase II Land Uses</b>																					
Multifamily Housing (Mid-Rise) <sup>1</sup>	221						41 Dwelling Units	4,540	186	0.370	23%	77%	3	12	15	0.390	61%	39%	10	6	16
- Location Based Reduction <sup>2</sup>		Central City Urban	71%			29%			-54				-1	-3	-4				-3	-2	-5
- VMT Reduction <sup>3</sup>				7.77	7.72	0.6%			-1				0	0	0				0	0	0
<b>Phase II Project Trips</b>									131				2	9	11				7	4	11
<b>Approved Phase I Trips</b>																					
Hotel and Restaurant <sup>4</sup>									755				20	13	33				26	22	48
<b>Total Trips at Site Driveways (Phases I and II)</b>									886				22	22	44				33	26	59
Trips at 3rd Street Driveway									823				21	18	39				30	25	54
Trips at 4th Street Driveway									63				1	4	5				3	1	5
Notes:																					
<sup>1</sup> Source: ITE Trip Generation Manual, 11th Edition 2021, average trip generation rates. All land uses are located within a General Urban/Suburban setting.																					
<sup>2</sup> The project site is located within a central city urban area based on the City of San Jose VMT Evaluation Tool (February 29, 2019). The location-based vehicle mode shares are obtained from Table 6 of the City of San Jose Transportation Analysis Handbook (November 2018). The trip reductions are based on the percent of mode share for all of the other modes of travel besides vehicle.																					
<sup>3</sup> VMT per capita for residential use. Existing and project VMTs were estimated using the City of San Jose VMT Evaluation Tool.																					
It is assumed that every percent reduction in VMT per-capita is equivalent to one percent reduction in peak-hour vehicle trips.																					
<sup>4</sup> Source: Hotel Clariana Addition Local Transportation Analysis, April 10, 2019.																					

**Table 2  
Queueing Analysis**

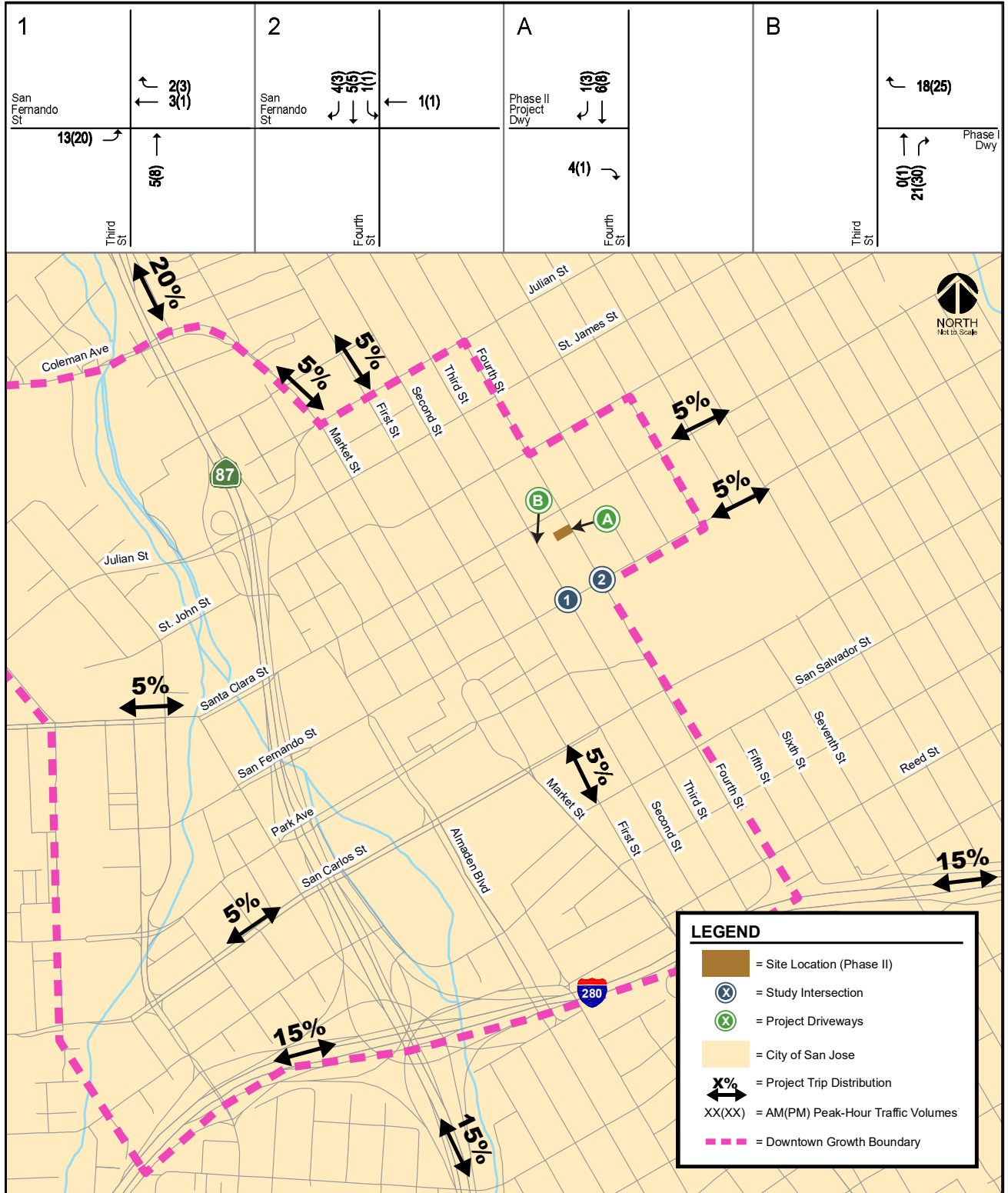
Measurement	Third/ San Fernando	
	EBL AM	EBL PM
<b>Existing Conditions</b>		
Cycle/Delay <sup>1</sup> (sec)	80	100
Lanes	1	1
Volume (vph)	29	74
Volume (vphpl )	29	74
Avg. Queue (veh/ln.)	1	2
Avg. Queue <sup>2</sup> (ft./ln)	16	51
95th % . Queue (veh/ln.)	2	5
95th % . Queue (ft./ln)	50	125
Storage (ft./ ln.)	100	100
Adequate (Y/N)	YES	<input type="text" value="NO"/>
<b>Background Conditions</b>		
Cycle/Delay <sup>1</sup> (sec)	80	100
Lanes	1	1
Volume (vph)	33	78
Volume (vphpl )	33	78
Avg. Queue (veh/ln.)	1	2
Avg. Queue <sup>2</sup> (ft./ln)	18	54
95th % . Queue (veh/ln.)	2	5
95th % . Queue (ft./ln)	50	125
Storage (ft./ ln.)	100	100
Adequate (Y/N)	YES	<input type="text" value="NO"/>
<b>Background Plus Project Conditions (Phase II)</b>		
Cycle/Delay <sup>1</sup> (sec)	80	100
Lanes	1	1
Volume (vph)	34	81
Volume (vphpl )	34	81
Avg. Queue (veh/ln.)	1	2
Avg. Queue <sup>2</sup> (ft./ln)	19	56
95th % . Queue (veh/ln.)	2	5
95th % . Queue (ft./ln)	50	125
Storage (ft./ ln.)	100	100
Adequate (Y/N)	YES	<input type="text" value="NO"/>
<b>Background Plus Project Conditions (Phase I and Phase II)</b>		
Cycle/Delay <sup>1</sup> (sec)	80	100
Lanes	1	1
Volume (vph)	46	98
Volume (vphpl )	46	98
Avg. Queue (veh/ln.)	1	3
Avg. Queue <sup>2</sup> (ft./ln)	26	68
95th % . Queue (veh/ln.)	2	5
95th % . Queue (ft./ln)	50	125
Storage (ft./ ln.)	100	100
Adequate (Y/N)	YES	<input type="text" value="NO"/>
<sup>1</sup> Vehicle queue calculations based on cycle length for signalized intersections. <sup>2</sup> Assumes 25 feet per vehicle in the queue. NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound, R = Right, T = Through, L = Left.		

**Figure 1  
Project Trip Assignment (Phase II Condominiums)**

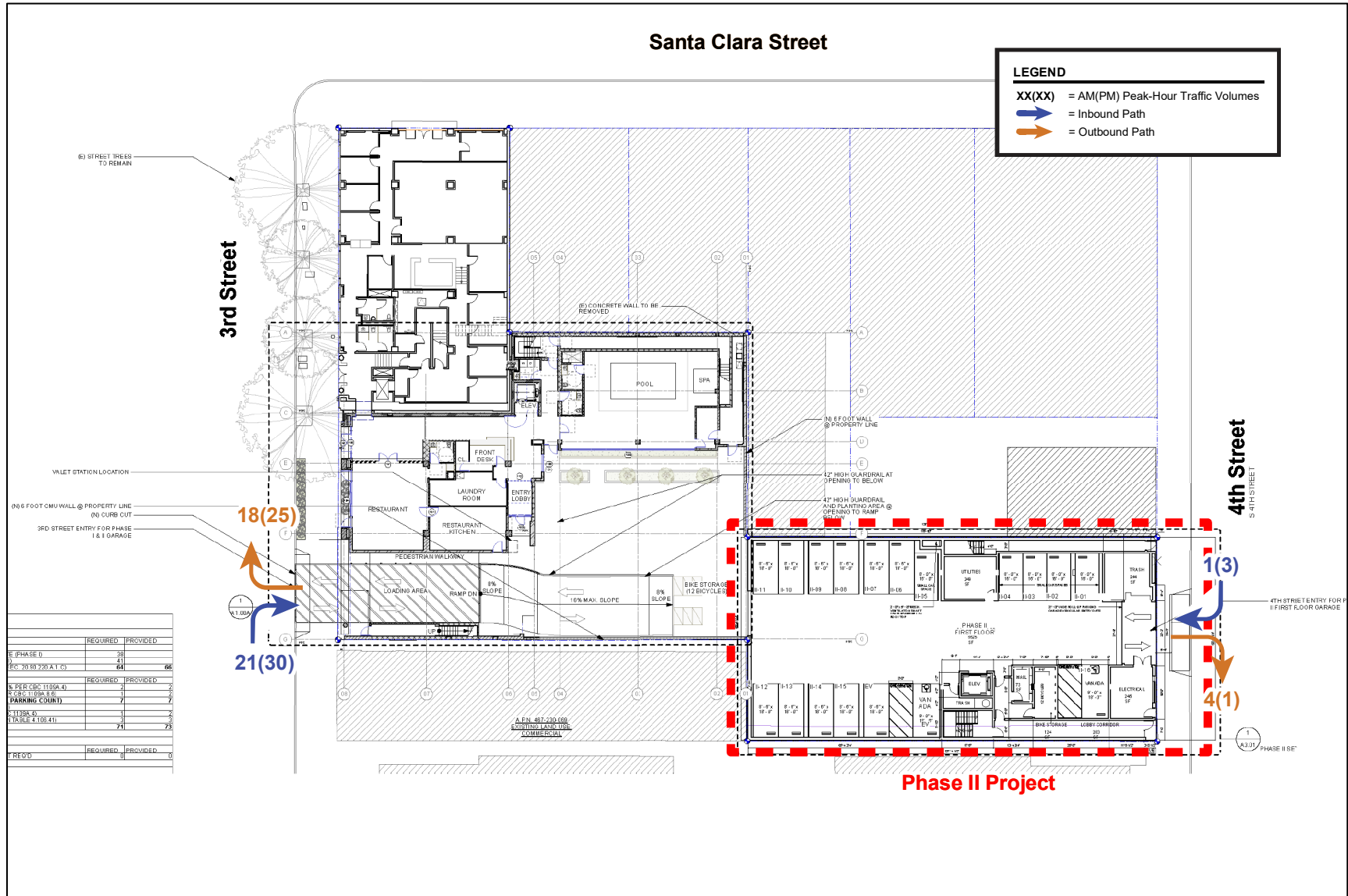




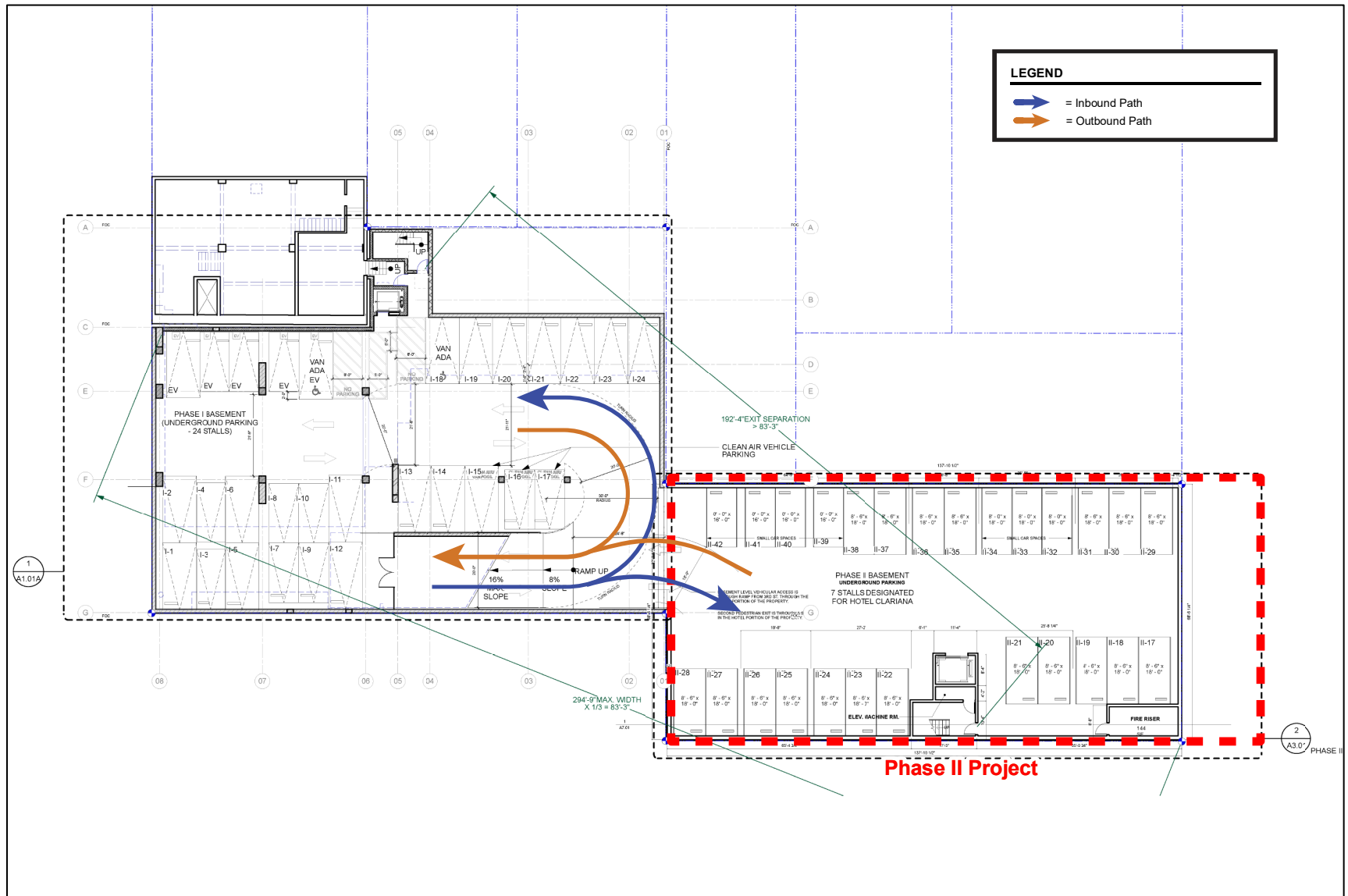
**Figure 2**  
**Project Trip Assignment (Phase I Hotel and Phase II Condominiums)**



**Figure 3**  
**Ground Floor Site Plan and Trips at Driveways**



**Figure 4**  
**Basement Site Plan**



**Clariana Phase II Residential Development  
Supplemental Traffic Evaluation  
Technical Appendices**

June 22, 2022

**Appendix A**  
**VMT Evaluation**  
**Tool Summary**

# CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

## PROJECT:

Name: Clariana Phase II Residential Development	Tool Version: 2/29/2019	Date: 6/13/2022
Location: 27 S 4th St, San Jose, CA		
Parcel: 46723033      Parcel Type: Central City Urban		
Proposed Parking Spaces	Vehicles: 37	Bicycles: 10

## LAND USE:

Residential:	Percent of All Residential Units		
Single Family      0 DU	Extremely Low Income ( ≤ 30% MFI)	0 % Affordable	
Multi Family      41 DU	Very Low Income ( > 30% MFI, ≤ 50% MFI)	0 % Affordable	
Subtotal      41 DU	Low Income ( > 50% MFI, ≤ 80% MFI)	0 % Affordable	
Office:      0 KSF			
Retail:      0 KSF			
Industrial:      0 KSF			

## VMT REDUCTION STRATEGIES

### Tier 1 - Project Characteristics

Increase Residential Density	
Existing Density (DU/Residential Acres in half-mile buffer) . . . . .	28
With Project Density (DU/Residential Acres in half-mile buffer) . . . . .	29
Increase Development Diversity	
Existing Activity Mix Index . . . . .	0.91
With Project Activity Mix Index . . . . .	0.91
Integrate Affordable and Below Market Rate	
Extremely Low Income BMR units . . . . .	0 %
Very Low Income BMR units . . . . .	0 %
Low Income BMR units . . . . .	0 %
Increase Employment Density	
Existing Density (Jobs/Commercial Acres in half-mile buffer) . . . . .	79
With Project Density (Jobs/Commercial Acres in half-mile buffer) . . . . .	79

### Tier 2 - Multimodal Infrastructure

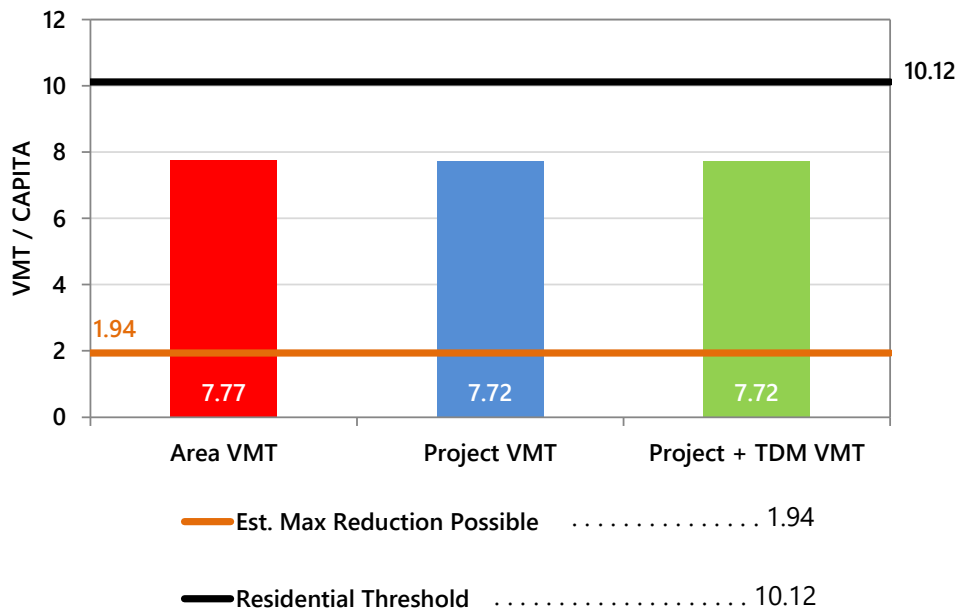
### Tier 3 - Parking

### Tier 4 - TDM Programs

# CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

## RESIDENTIAL ONLY

The tool estimates that the project would generate per capita VMT below the City's threshold.



**Appendix B**  
**Volumes Summary**



Intersection Number: 1  
 Trafix Node Number: 3773  
 Intersection Name: 3rd Street and San Fernando Street  
 Peak Hour: AM  
 Count Date: 1/31/18

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Counts	0	0	0	64	226	0	287	985	104	0	152	28	1846
<b>Existing Conditions</b> (with 1% compound growth if older than 2 yrs)	<b>0</b>	<b>0</b>	<b>0</b>	<b>66</b>	<b>233</b>	<b>0</b>	<b>296</b>	<b>1015</b>	<b>108</b>	<b>0</b>	<b>157</b>	<b>29</b>	<b>1904</b>
ATI	0	0	0	1	5	0	17	115	11	0	14	4	167
<b>Background Conditions</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>67</b>	<b>238</b>	<b>0</b>	<b>313</b>	<b>1130</b>	<b>119</b>	<b>0</b>	<b>171</b>	<b>33</b>	<b>2071</b>
Proposed Phase II Project Trips	0	0	0	0	3	0	0	0	0	0	0	1	4
<b>Background Plus Project Conditions (Phase II)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>67</b>	<b>241</b>	<b>0</b>	<b>313</b>	<b>1130</b>	<b>119</b>	<b>0</b>	<b>171</b>	<b>34</b>	<b>2075</b>
Phase I (Reassigned) and Phase II Project Trips	0	0	0	2	3	0	0	5	0	0	0	13	23
<b>Background Plus Project Conditions (Phase I and II)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>69</b>	<b>241</b>	<b>0</b>	<b>313</b>	<b>1135</b>	<b>119</b>	<b>0</b>	<b>171</b>	<b>46</b>	<b>2094</b>

Intersection Number: 2  
 Trafix Node Number: 3539  
 Intersection Name: 4th Street and San Fernando Street  
 Peak Hour: AM  
 Count Date: 6/5/18

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Counts	78	390	35	0	205	80	0	0	0	145	254	0	1187
<b>Existing Conditions</b> (with 1% compound growth if older than 2 yrs)	<b>81</b>	<b>402</b>	<b>37</b>	<b>0</b>	<b>212</b>	<b>83</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>150</b>	<b>262</b>	<b>0</b>	<b>1227</b>
ATI	1	18	2	0	4	2	0	0	0	2	8	0	37
<b>Background Conditions</b>	<b>82</b>	<b>420</b>	<b>39</b>	<b>0</b>	<b>216</b>	<b>85</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>152</b>	<b>270</b>	<b>0</b>	<b>1264</b>
Proposed Phase II Project Trips	3	2	1	0	0	0	0	0	0	0	0	0	6
<b>Background Plus Project Conditions (Phase II)</b>	<b>85</b>	<b>422</b>	<b>40</b>	<b>0</b>	<b>216</b>	<b>85</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>152</b>	<b>270</b>	<b>0</b>	<b>1270</b>
Phase I (Reassigned) and Phase II Project Trips	4	5	1	0	1	0	0	0	0	0	0	0	11
<b>Background Plus Project Conditions (Phase I and II)</b>	<b>86</b>	<b>425</b>	<b>40</b>	<b>0</b>	<b>217</b>	<b>85</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>152</b>	<b>270</b>	<b>0</b>	<b>1275</b>

Intersection Number: 1  
 Traffix Node Number: 3773  
 Intersection Name: 3rd Street and San Fernando Street  
 Peak Hour: PM  
 Count Date: 1/31/18

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Counts	0	0	0	73	234	0	236	486	86	0	272	71	1458
<b>Existing Conditions</b> (with 1% compound growth if older than 2 yrs)	<b>0</b>	<b>0</b>	<b>0</b>	<b>76</b>	<b>242</b>	<b>0</b>	<b>244</b>	<b>501</b>	<b>89</b>	<b>0</b>	<b>281</b>	<b>74</b>	<b>1507</b>
ATI	0	0	0	8	40	0	24	44	7	0	28	4	155
<b>Background Conditions</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>84</b>	<b>282</b>	<b>0</b>	<b>268</b>	<b>545</b>	<b>96</b>	<b>0</b>	<b>309</b>	<b>78</b>	<b>1662</b>
Proposed Phase II Project Trips	0	0	0	0	1	0	0	2	0	0	0	3	6
<b>Background Plus Project Conditions (Phase II)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>84</b>	<b>283</b>	<b>0</b>	<b>268</b>	<b>547</b>	<b>96</b>	<b>0</b>	<b>309</b>	<b>81</b>	<b>1668</b>
Phase I (Reassigned) and Phase II Project Trips	0	0	0	3	1	0	0	8	0	0	0	20	32
<b>Background Plus Project Conditions (Phase I and II)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>87</b>	<b>283</b>	<b>0</b>	<b>268</b>	<b>553</b>	<b>96</b>	<b>0</b>	<b>309</b>	<b>98</b>	<b>1694</b>

Intersection Number: 2  
 Traffix Node Number: 3539  
 Intersection Name: 4th Street and San Fernando Street  
 Peak Hour: PM  
 Count Date: 6/5/18

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Counts	113	1047	121	0	161	158	0	0	0	189	252	0	2041
<b>Existing Conditions</b> (with 1% compound growth if older than 2 yrs)	<b>117</b>	<b>1079</b>	<b>125</b>	<b>0</b>	<b>166</b>	<b>163</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>195</b>	<b>260</b>	<b>0</b>	<b>2105</b>
ATI	10	230	12	0	25	30	0	0	0	27	48	0	382
<b>Background Conditions</b>	<b>127</b>	<b>1309</b>	<b>137</b>	<b>0</b>	<b>191</b>	<b>193</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>222</b>	<b>308</b>	<b>0</b>	<b>2487</b>
Proposed Phase II Project Trips	1	1	0	0	0	0	0	0	0	0	0	0	2
<b>Background Plus Project Conditions (Phase II)</b>	<b>128</b>	<b>1310</b>	<b>137</b>	<b>0</b>	<b>191</b>	<b>193</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>222</b>	<b>308</b>	<b>0</b>	<b>2489</b>
Phase I (Reassigned) and Phase II Project Trips	3	5	1	0	1	0	0	0	0	0	0	0	10
<b>Background Plus Project Conditions (Phase I and II)</b>	<b>130</b>	<b>1314</b>	<b>138</b>	<b>0</b>	<b>192</b>	<b>193</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>222</b>	<b>308</b>	<b>0</b>	<b>2497</b>

**Appendix C**  
**Intersection Vehicle**  
**Queue Analysis**

Third/San Fernando  
EBL  
AM  
Existing Conditions  
Avg. Queue Per Lane in Veh= 0.6  
Percentile = 0.95 2

Third/San Fernando  
EBL  
AM  
Background Conditions  
Avg. Queue Per Lane in Veh= 0.7  
Percentile = 0.95 2

Third/San Fernando  
EBL  
AM  
Background Plus Project Conditions (Phase II)  
Avg. Queue Per Lane in Veh= 0.8  
Percentile = 0.95 2

Third/San Fernando  
EBL  
AM  
Background Plus Project Conditions (Phase I and II)  
Avg. Queue Per Lane in Veh= 1.0  
Percentile = 0.95 3

Individual Probability	Cumulative Probability	Number of Queued Vehicles
0.5250	0.5250	0
0.3383	0.8633	1
0.1090	0.9723	2
0.0234	0.9957	3
0.0038	0.9995	4
0.0005	0.9999	5
0.0001	1.0000	6
0.0000	1.0000	7
0.0000	1.0000	8
0.0000	1.0000	9
0.0000	1.0000	10
0.0000	1.0000	11
0.0000	1.0000	12
0.0000	1.0000	13
0.0000	1.0000	14
0.0000	1.0000	15
0.0000	1.0000	16
0.0000	1.0000	17
0.0000	1.0000	18
0.0000	1.0000	19
0.0000	1.0000	20
0.0000	1.0000	21
0.0000	1.0000	22
0.0000	1.0000	23
0.0000	1.0000	24
0.0000	1.0000	25
0.0000	1.0000	26
0.0000	1.0000	27
0.0000	1.0000	28
0.0000	1.0000	29
0.0000	1.0000	30
0.0000	1.0000	31
0.0000	1.0000	32
0.0000	1.0000	33
0.0000	1.0000	34
0.0000	1.0000	35
0.0000	1.0000	36
0.0000	1.0000	37
0.0000	1.0000	38
0.0000	1.0000	39
0.0000	1.0000	40
0.0000	1.0000	41
0.0000	1.0000	42
0.0000	1.0000	43
0.0000	1.0000	44
0.0000	1.0000	45

Individual Probability	Cumulative Probability	Number of Queued Vehicles
0.4803	0.4803	0
0.3522	0.8325	1
0.1291	0.9617	2
0.0316	0.9932	3
0.0058	0.9990	4
0.0008	0.9999	5
0.0001	1.0000	6
0.0000	1.0000	7
0.0000	1.0000	8
0.0000	1.0000	9
0.0000	1.0000	10
0.0000	1.0000	11
0.0000	1.0000	12
0.0000	1.0000	13
0.0000	1.0000	14
0.0000	1.0000	15
0.0000	1.0000	16
0.0000	1.0000	17
0.0000	1.0000	18
0.0000	1.0000	19
0.0000	1.0000	20
0.0000	1.0000	21
0.0000	1.0000	22
0.0000	1.0000	23
0.0000	1.0000	24
0.0000	1.0000	25
0.0000	1.0000	26
0.0000	1.0000	27
0.0000	1.0000	28
0.0000	1.0000	29
0.0000	1.0000	30
0.0000	1.0000	31
0.0000	1.0000	32
0.0000	1.0000	33
0.0000	1.0000	34
0.0000	1.0000	35
0.0000	1.0000	36
0.0000	1.0000	37
0.0000	1.0000	38
0.0000	1.0000	39
0.0000	1.0000	40
0.0000	1.0000	41
0.0000	1.0000	42
0.0000	1.0000	43
0.0000	1.0000	44
0.0000	1.0000	45

Individual Probability	Cumulative Probability	Number of Queued Vehicles
0.4697	0.4697	0
0.3549	0.8247	1
0.1341	0.9588	2
0.0338	0.9925	3
0.0064	0.9989	4
0.0010	0.9999	5
0.0001	1.0000	6
0.0000	1.0000	7
0.0000	1.0000	8
0.0000	1.0000	9
0.0000	1.0000	10
0.0000	1.0000	11
0.0000	1.0000	12
0.0000	1.0000	13
0.0000	1.0000	14
0.0000	1.0000	15
0.0000	1.0000	16
0.0000	1.0000	17
0.0000	1.0000	18
0.0000	1.0000	19
0.0000	1.0000	20
0.0000	1.0000	21
0.0000	1.0000	22
0.0000	1.0000	23
0.0000	1.0000	24
0.0000	1.0000	25
0.0000	1.0000	26
0.0000	1.0000	27
0.0000	1.0000	28
0.0000	1.0000	29
0.0000	1.0000	30
0.0000	1.0000	31
0.0000	1.0000	32
0.0000	1.0000	33
0.0000	1.0000	34
0.0000	1.0000	35
0.0000	1.0000	36
0.0000	1.0000	37
0.0000	1.0000	38
0.0000	1.0000	39
0.0000	1.0000	40
0.0000	1.0000	41
0.0000	1.0000	42
0.0000	1.0000	43
0.0000	1.0000	44
0.0000	1.0000	45

Individual Probability	Cumulative Probability	Number of Queued Vehicles
0.3598	0.3598	0
0.3678	0.7276	1
0.1880	0.9156	2
0.0641	0.9796	3
0.0164	0.9960	4
0.0033	0.9993	5
0.0006	0.9999	6
0.0001	1.0000	7
0.0000	1.0000	8
0.0000	1.0000	9
0.0000	1.0000	10
0.0000	1.0000	11
0.0000	1.0000	12
0.0000	1.0000	13
0.0000	1.0000	14
0.0000	1.0000	15
0.0000	1.0000	16
0.0000	1.0000	17
0.0000	1.0000	18
0.0000	1.0000	19
0.0000	1.0000	20
0.0000	1.0000	21
0.0000	1.0000	22
0.0000	1.0000	23
0.0000	1.0000	24
0.0000	1.0000	25
0.0000	1.0000	26
0.0000	1.0000	27
0.0000	1.0000	28
0.0000	1.0000	29
0.0000	1.0000	30
0.0000	1.0000	31
0.0000	1.0000	32
0.0000	1.0000	33
0.0000	1.0000	34
0.0000	1.0000	35
0.0000	1.0000	36
0.0000	1.0000	37
0.0000	1.0000	38
0.0000	1.0000	39
0.0000	1.0000	40
0.0000	1.0000	41
0.0000	1.0000	42
0.0000	1.0000	43
0.0000	1.0000	44
0.0000	1.0000	45

Third/San Fernando  
 EBL  
 PM  
 Existing Conditions  
 Avg. Queue Per Lane in Veh= 2.1  
 Percentile = 0.95 5

Third/San Fernando  
 EBL  
 PM  
 Background Conditions  
 Avg. Queue Per Lane in Veh= 2.2  
 Percentile = 0.95 5

Third/San Fernando  
 EBL  
 PM  
 Background Plus Project Conditions (Phase II)  
 Avg. Queue Per Lane in Veh= 2.3  
 Percentile = 0.95 5

Third/San Fernando  
 EBL  
 PM  
 Background Plus Project Conditions (Phase I and II)  
 Avg. Queue Per Lane in Veh= 2.7  
 Percentile = 0.95 6

Individual Probability	Cumulative Probability	Number of Queued Vehicles
0.1280	0.1280	0
0.2632	0.3912	1
0.2705	0.6616	2
0.1853	0.8470	3
0.0952	0.9422	4
0.0392	0.9813	5
0.0134	0.9948	6
0.0039	0.9987	7
0.0010	0.9997	8
0.0002	0.9999	9
0.0000	1.0000	10
0.0000	1.0000	11
0.0000	1.0000	12
0.0000	1.0000	13
0.0000	1.0000	14
0.0000	1.0000	15
0.0000	1.0000	16
0.0000	1.0000	17
0.0000	1.0000	18
0.0000	1.0000	19
0.0000	1.0000	20
0.0000	1.0000	21
0.0000	1.0000	22
0.0000	1.0000	23
0.0000	1.0000	24
0.0000	1.0000	25
0.0000	1.0000	26
0.0000	1.0000	27
0.0000	1.0000	28
0.0000	1.0000	29
0.0000	1.0000	30
0.0000	1.0000	31
0.0000	1.0000	32
0.0000	1.0000	33
0.0000	1.0000	34
0.0000	1.0000	35
0.0000	1.0000	36
0.0000	1.0000	37
0.0000	1.0000	38
0.0000	1.0000	39
0.0000	1.0000	40
0.0000	1.0000	41
0.0000	1.0000	42
0.0000	1.0000	43
0.0000	1.0000	44
0.0000	1.0000	45

Individual Probability	Cumulative Probability	Number of Queued Vehicles
0.1146	0.1146	0
0.2482	0.3628	1
0.2689	0.6317	2
0.1942	0.8259	3
0.1052	0.9311	4
0.0456	0.9766	5
0.0165	0.9931	6
0.0051	0.9982	7
0.0014	0.9996	8
0.0003	0.9999	9
0.0001	1.0000	10
0.0000	1.0000	11
0.0000	1.0000	12
0.0000	1.0000	13
0.0000	1.0000	14
0.0000	1.0000	15
0.0000	1.0000	16
0.0000	1.0000	17
0.0000	1.0000	18
0.0000	1.0000	19
0.0000	1.0000	20
0.0000	1.0000	21
0.0000	1.0000	22
0.0000	1.0000	23
0.0000	1.0000	24
0.0000	1.0000	25
0.0000	1.0000	26
0.0000	1.0000	27
0.0000	1.0000	28
0.0000	1.0000	29
0.0000	1.0000	30
0.0000	1.0000	31
0.0000	1.0000	32
0.0000	1.0000	33
0.0000	1.0000	34
0.0000	1.0000	35
0.0000	1.0000	36
0.0000	1.0000	37
0.0000	1.0000	38
0.0000	1.0000	39
0.0000	1.0000	40
0.0000	1.0000	41
0.0000	1.0000	42
0.0000	1.0000	43
0.0000	1.0000	44
0.0000	1.0000	45

Individual Probability	Cumulative Probability	Number of Queued Vehicles
0.1054	0.1054	0
0.2371	0.3425	1
0.2668	0.6093	2
0.2001	0.8094	3
0.1126	0.9220	4
0.0506	0.9726	5
0.0190	0.9916	6
0.0061	0.9977	7
0.0017	0.9994	8
0.0004	0.9999	9
0.0001	1.0000	10
0.0000	1.0000	11
0.0000	1.0000	12
0.0000	1.0000	13
0.0000	1.0000	14
0.0000	1.0000	15
0.0000	1.0000	16
0.0000	1.0000	17
0.0000	1.0000	18
0.0000	1.0000	19
0.0000	1.0000	20
0.0000	1.0000	21
0.0000	1.0000	22
0.0000	1.0000	23
0.0000	1.0000	24
0.0000	1.0000	25
0.0000	1.0000	26
0.0000	1.0000	27
0.0000	1.0000	28
0.0000	1.0000	29
0.0000	1.0000	30
0.0000	1.0000	31
0.0000	1.0000	32
0.0000	1.0000	33
0.0000	1.0000	34
0.0000	1.0000	35
0.0000	1.0000	36
0.0000	1.0000	37
0.0000	1.0000	38
0.0000	1.0000	39
0.0000	1.0000	40
0.0000	1.0000	41
0.0000	1.0000	42
0.0000	1.0000	43
0.0000	1.0000	44
0.0000	1.0000	45

Individual Probability	Cumulative Probability	Number of Queued Vehicles
0.0657	0.0657	0
0.1789	0.2447	1
0.2435	0.4882	2
0.2210	0.7092	3
0.1504	0.8596	4
0.0819	0.9415	5
0.0372	0.9786	6
0.0144	0.9931	7
0.0049	0.9980	8
0.0015	0.9995	9
0.0004	0.9999	10
0.0001	1.0000	11
0.0000	1.0000	12
0.0000	1.0000	13
0.0000	1.0000	14
0.0000	1.0000	15
0.0000	1.0000	16
0.0000	1.0000	17
0.0000	1.0000	18
0.0000	1.0000	19
0.0000	1.0000	20
0.0000	1.0000	21
0.0000	1.0000	22
0.0000	1.0000	23
0.0000	1.0000	24
0.0000	1.0000	25
0.0000	1.0000	26
0.0000	1.0000	27
0.0000	1.0000	28
0.0000	1.0000	29
0.0000	1.0000	30
0.0000	1.0000	31
0.0000	1.0000	32
0.0000	1.0000	33
0.0000	1.0000	34
0.0000	1.0000	35
0.0000	1.0000	36
0.0000	1.0000	37
0.0000	1.0000	38
0.0000	1.0000	39
0.0000	1.0000	40
0.0000	1.0000	41
0.0000	1.0000	42
0.0000	1.0000	43
0.0000	1.0000	44
0.0000	1.0000	45