

## TECHNICAL MEMORANDUM

*Date:* July 11, 2024

*To:* Pejman Mehrfar, PE, PMP, QSD/P  
Solano County, Department of Resource Management  
Public Works / Engineering  
675 Texas Street, Suite 5500  
Fairfield, CA 94533

*From:* Nayan Amin, T.E

*Subject:* ***Draft Traffic Analysis Methodology and Summary of Preliminary Results for California Forever Development Project.***

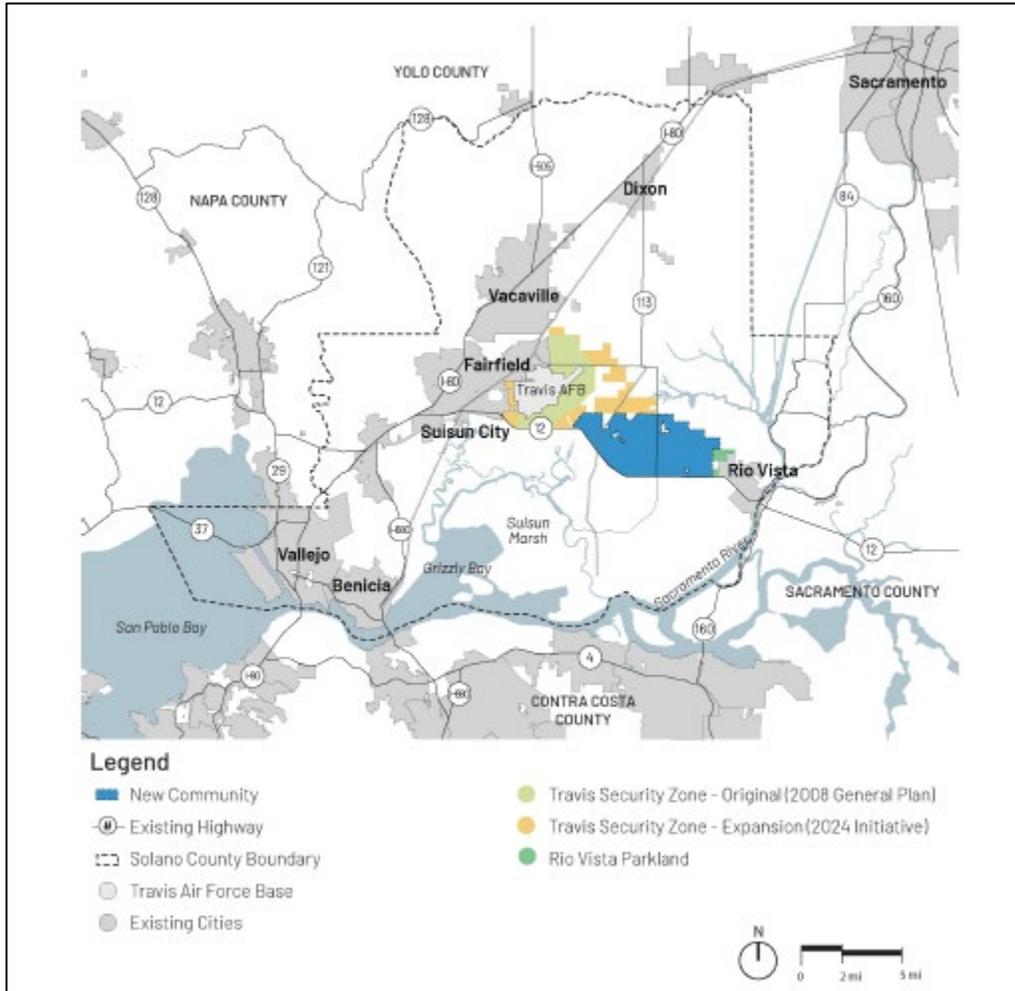
## INTRODUCTION

The California Forever Development project plans for building a dynamic new community, with middle class homes in safe and walkable neighborhoods. The plan also includes a commitment to bring 15,000 good paying local jobs to Solano County, \$500 million in community benefits like down payment assistance for Solano residents, and \$200 million commitment to invest in revitalizing downtowns in existing Solano cities.

The new community is proposed to be built on pasture lands that were rated as being the worst for agriculture and least ecologically valuable in all of Solano County. The plan features neighborhoods centered around local shopping streets and schools, with small blocks of row houses and small apartment buildings, where each family can live within a short walk for most daily needs, including schools. The proposal also includes a requirement that at least 4,000 acres (over 20% of the proposed community) will be used for parks, trails, urban ecological habitat, community gardens, and other types of open space. The community is designed to provide a range of transportation alternatives to cars, including walking, biking, and frequent transit service.

This technical memorandum summarizes the methodology for data collection, traffic operational analysis and travel demand forecasting for the proposed California Forever Development Project in Solano County, California. **Figure 1** illustrates the study area.

**Figure 1: Study Area**



### **Project Study Limits**

To determine enhancements and impacts from the proposed new development, the following freeway mainline segments were evaluated:

1. Interstate (I)-80 between I-680 Ramps to SR 113 Ramps
2. I-680 between Marina Vista Avenue/Waterfront Road and Martinez Benicia Bridge to I-80 Ramps
3. State Route (SR)-12 between I-80 Ramps to I-5 Ramps
4. SR-113 between SR-12 Ramps to I-80 Ramps
5. SR-84 between SR-12 Ramps to Holland Road
6. SR-160 between SR-4 to SR-12

The study freeway mainline segments are evaluated under Existing Conditions, and Future (2040) no-build and build Conditions.

In addition to the freeway segments, the following local roadway segments were evaluated to determine the impacts from the proposed new development:

1. Anderson Road South of Emigh Road
2. Azvedo Road North of Emigh Road
3. Batavia Road near Dixon
4. Binghamto Road near SR 113
5. Birds Landing Road South of SR 12
6. Bunker Station Road East of Binghamton Road
7. Byrnes Road North of Hawkins Road
8. Canright Road West of Azevedo Road
9. Collinsville Road South of Shiloh Road
10. Creed Road West of SR 113
11. Currie Road South of SR 12
12. Dixon Avenue East of A Street
13. Elmira Road East of Vacaville
14. Emigh Road West of Azevedo Road
15. Flannery Road East of SR 113
16. Fry Road East of Lewis Road
17. Goose Haven Road South of Creed Road
18. Hawkins Road East of Lewis Road
19. Holdener Road West of Lewis Road
20. Kidwell Road Overpass
21. Kilkenny Road East of I-80
22. Lambie Road West of SR 113
23. Lewis Road North of Hawkins Road
24. McClosky Road North of SR 12
25. McCormack Road East of SR 113
26. McCory Road North of Gate Road
27. Meridian Road South of Fry Road
28. Midway Road West of SR 113
29. Montezuma Hills Boulevard East of Emigh Road
30. Peabody Road between Fairfield and Vacaville
31. Pedrick Road North of A Street
32. Pitt School Road North of Midway Road
33. Porter Road East of Pitt School Road
34. Robben Road North of Midway Road
35. Robinson Road East of SR 113
36. Salem Road East of SR 113
37. Shiloh Road South of SR 12
38. Sparling Lane South of Kidwell Road
39. Weber Road West of Byrnes Road
40. Willow Road South of Walnut Road

## Traffic Data Collection

TJKM compiled traffic data from Caltrans Traffic Census Program, Caltrans Performance Measurement System (PeMS) Database and from 2023 Solano County Congestion Management Program at the study freeway segments. The A.M. and P.M. peak hour at the study interchanges based on the review of the available data is determined to be 7:00-8:00 A.M. and 5:00-6:00 P.M., respectively.

## Analysis Methodology

### Freeway Operations Methodology

Freeway analyses were conducted using procedures and methodologies consistent with the Highway Capacity Manual (HCM) 2010 (Transportation Research Board, 2010). Similar to intersection level of service (LOS), Freeway facility operations are also described with the term level of service. LOS is a qualitative description of traffic flow based on speed, travel time, delay, and freedom to maneuver, with six levels, ranging from LOS A (i.e., free-flow operating conditions) to LOS F (i.e., heavily congested, over-capacity conditions). LOS E represents “at-capacity” operations. When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F. The V/C ratios and typical freeway speeds associated with each level of LOS are shown in **Table 1**.

**Table 1 Level of Service (LOS) Standards**

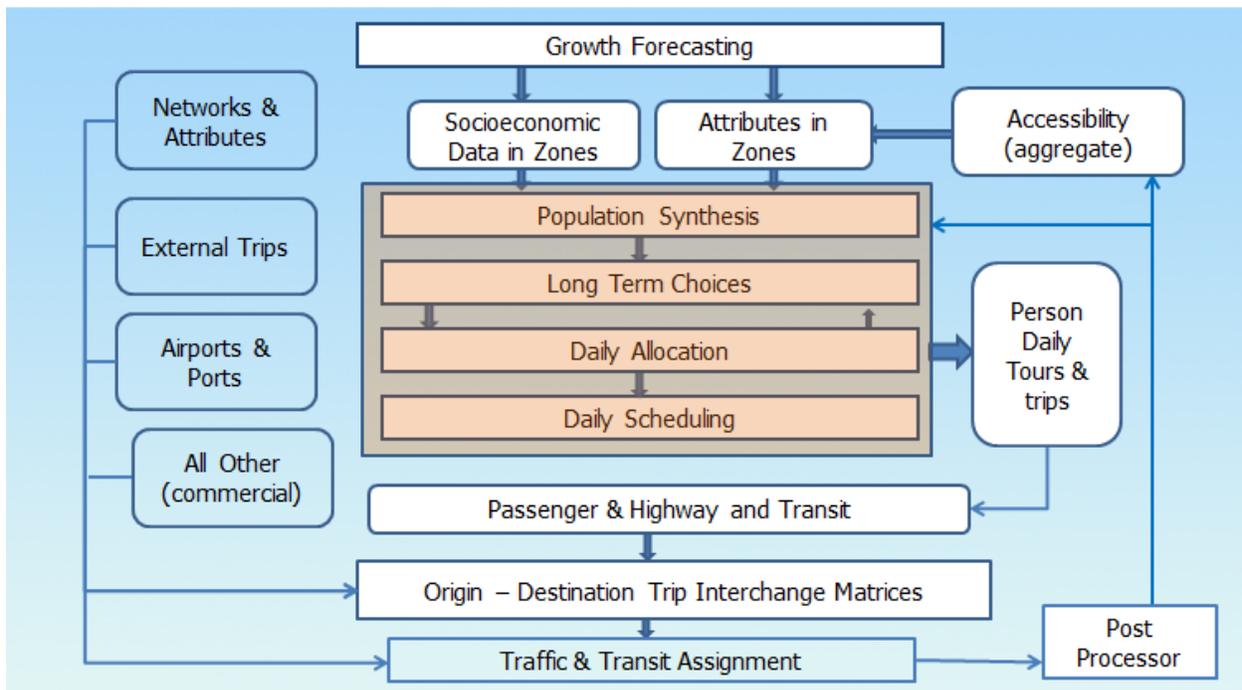
LOS Level	Description	V/C Ratio	Typical Freeway Speed
A	Free-flow conditions with unimpeded maneuverability	0.00 to 0.60	60 mph
B	Reasonably unimpeded operations with slightly restricted maneuverability.	0.61 to 0.70	57 mph
C	Stable operations with somewhat more restrictions. Motorists will experience appreciable tension while driving.	0.71 to 0.80	54 mph
D	Approaching unstable operations where small increases in volume produce substantial increases in delay and decreases in speed.	0.81 to 0.90	46 mph
E	Unstable flow at or near capacity levels with poor levels of comfort and convenience.	0.91 to 1.00	30 mph
F	Forced traffic flow in which the amount of traffic approaching a point exceeds the amount that can be served. Characterized by stop-and-go waves and poor travel times.	Greater than 1.00	<30 mph

**Source:** Solano County – 2023 Congestion Management Program, Highway Capacity Manual, & Virginia DOT

## Travel Demand Model Forecasting Methodology

In order to forecast travel demands for this new city, the Solano Napa Activity Based Model (SNABM) was used. The model has a base year of 2015 and a forecast year of 2040. The SNABM is an activity based model, which model every person’s activity and travel choices across an entire 24 hour day. Activities like school and work have priority and if any additional time is left, discretionary activities are allowed. The SNABM operates in a micro-simulation framework, where travel choices of a person or household are predicted by applying Monte Carlo simulation methodology to behavior choices. By running the Monte Carlo method many times, a reasonable distribution of a person’s travel patterns throughout a day is created. **Figure 2** shows an overview of the SNABM.

**Figure 2: SNABM Model Process**



The main output of the SNABM are the person daily trip tables, which can be used to forecast total number of trips made by a project. In addition, various time of day trip tables are created by the SNABM for use in analyzing assignment volumes on a model roadway network. The SNABM roadway network includes a majority of the major arterials, highways, and freeways within the county.

For the California Forever Project, TJKM identified the travel analysis zones (TAZs) that the California Forever project is located in, and coded in the land uses associated with the project in the forecast year model. For Phase 1, that means a total of 50,000 people, 20,000 households, and 15,000 jobs were coded into the land use file for the SNABM. The updated land use file was then used to run the SNABM for a plus project forecast year scenario.

An additional phase 2 build out scenario was also studied, which coded in a complete buildout of the CA Forever project with a total of 400,000 people, 150,000 households, and 91,000 jobs.

## Forecast Methodology

Forecast travel demand was analyzed for a variety of freeways and highways near the California Forever project site. Segment link volumes were extracted from Interstate 680, Interstate 80, State Route 12, State Route 113, State Route 84, and State Route 160. AM and PM peak hour volumes were analyzed for this project in both directions.

For the study segments, base year and forecast year volumes were extracted from the SNABM to determine a growth rate using the NCHRP 255 Delta method. A plus project model run was conducted to calculate the future project demand. Once the forecast volumes are determined, the volume over capacity ratio (V/C) and the Level of Service per segment can be calculated.

In addition to forecasting future travel demand for the project, the SNABM can also calculate demand in terms of the total number of trips made, both on the production side (residential land uses) and the attraction side (employment land uses). Internal capture of the trips can be analyzed by calculating the trips that go between California Forever TAZs vs those that go outside of the project area to the entire Solano County and beyond.

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**Table 2** shows the total trips and internal trips extracted from the SNABM for the forecast year plus project (phase 1) model run. **Table 3** shows the total trips and internal trips for the full buildout (phase 2) model run.

**Appendix A** contains the SNABM outputs for selected highway segments from the SNABM for the base year, future year, and future year with project scenarios.

**Table 2: California Forever Number of Trips Extracted from SNABM (Phase 1)**

<b>AM Peak Hour Trips</b>			
<b>CA Forever Zones</b>	<b>Production</b>	<b>Attraction</b>	<b>Total</b>
<b>259</b>	121	763	884
<b>260</b>	673	2,303	2,976
<b>264</b>	5,815	2,938	8,753
<b>Total Trips</b>	6,608	6,004	12,612
<b>Internal Trips</b>	4,598	4,599	9,197
<b>% Internal</b>	70%	77%	73%
<b>External Trips</b>	2,010	1,406	3,416
<b>% External</b>	30%	23%	27%
<b>PM Peak Hour Trips</b>			
<b>CA Forever Zones</b>	<b>Production</b>	<b>Attraction</b>	<b>Total</b>
<b>259</b>	989	388	1,378
<b>260</b>	3,925	2,621	6,546
<b>264</b>	4,477	6,364	10,841
<b>Total Trips</b>	9,392	9,373	18,765
<b>Internal Trips</b>	7,125	7,125	14,250
<b>% Internal</b>	76%	76%	76%
<b>External Trips</b>	2,267	2,248	4,515
<b>% External</b>	24%	24%	24%
<b>Daily Trips</b>			
<b>CA Forever Zones</b>	<b>Production</b>	<b>Attraction</b>	<b>Total</b>
<b>259</b>	8,277	8,275	16,551
<b>260</b>	36,809	36,812	73,621
<b>264</b>	65,926	65,927	131,853
<b>Total Trips</b>	111,012	111,013	222,026
<b>Internal Trips</b>	81,420	81,420	162,839
<b>% Internal</b>	74%	74%	74%
<b>External Trips</b>	29,593	29,594	59,186
<b>% External</b>	27%	27%	27%

**Table 3: California Forever Number of Trips Extracted from SNABM (Phase 2 Buildout)**

<b>AM Peak Hour Trips</b>			
<b>CA Forever Zones</b>	<b>Production</b>	<b>Attraction</b>	<b>Total</b>
<b>259</b>	1,322	4,311	5,632
<b>260</b>	4,104	12,416	16,519
<b>264</b>	29,253	15,394	44,647
<b>Total Trips</b>	34,678	32,120	66,799
<b>Internal Trips</b>	28,949	28,950	57,899
<b>% Internal</b>	83%	90%	87%
<b>External Trips</b>	5,729	3,170	8,899
<b>% External</b>	17%	10%	13%
<b>PM Peak Hour Trips</b>			
<b>CA Forever Zones</b>	<b>Production</b>	<b>Attraction</b>	<b>Total</b>
<b>259</b>	5,975	3,661	9,636
<b>260</b>	16,378	13,000	29,379
<b>264</b>	27,596	34,832	62,428
<b>Total Trips</b>	49,949	51,494	101,442
<b>Internal Trips</b>	44,096	44,096	88,192
<b>% Internal</b>	88%	86%	87%
<b>External Trips</b>	5,852	7,398	13,250
<b>% External</b>	12%	14%	13%
<b>Daily Trips</b>			
<b>CA Forever Zones</b>	<b>Production</b>	<b>Attraction</b>	<b>Total</b>
<b>259</b>	66,184	66,185	132,369
<b>260</b>	239,643	239,673	479,316
<b>264</b>	440,963	440,934	881,897
<b>Total Trips</b>	746,790	746,792	1,493,582
<b>Internal Trips</b>	636,461	636,461	1,272,923
<b>% Internal</b>	85%	85%	85%
<b>External Trips</b>	110,329	110,330	220,659
<b>% External</b>	15%	15%	15%

## Trip Generation Analysis

The projected trips generated by the project under Phase 1 alternative are shown in **Table 3** and trips generated by the project under Phase 2 are shown in **Table 4**. TJKM utilized the published trip generation rates from the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 11th Edition (TGM) and consistent with the methodology published in ITE's Trip Generation Handbook, 3rd Edition (TGH).

Under Phase 1 alternative, the project is expected to generate 385,829 daily trips including 22,665 trips during a.m. peak hour and 35,975 trips during p.m. peak hour. With application of internal trip reduction rate of 74% for daily trips, 74% for a.m. peak hour trips and 76% for p.m. peak hour trips, the project is expected to generate 100,316 daily trips including 5,893 a.m. peak hour trips and 8,634 p.m. peak hour trips respectively.

Under Phase 2 alternative, the project is expected to generate 3,086,635 daily trips including 181,320 trips during a.m. peak hour and 287,803 trips during p.m. peak hour. With application of internal trip reduction rate of 85% for daily trips, 87% for a.m. peak hour and p.m. peak hour trips, the project is expected to generate 462,995 daily trips including 23,572 a.m. peak hour trips and 37,414 p.m. peak hour trips respectively.

**Table 3: Trip Generation Calculations - Phase 1 (50K Population and 15K Jobs)**

Land Use	ITE Code	Size	----- Weekday -----													
			Daily		A.M. Peak Hour				P.M. Peak Hour							
			Rate*	Total	Rate*	% In	In	% Out	Out	Total	Rate*	% In	In	% Out	Out	Total
<b>PHASE 1</b>																
<b>Residential</b>																
<b>Single-Family Residential</b>																
Single-Family Detached Housing	220	4,961 DU <sup>(1)</sup>	9.43	46,784	0.70	26%	903	74%	2,570	3,473	0.94	63%	2,938	37%	1,726	4,664
<b>Multi-Family Residential</b>																
Multifamily Housing (Mid-Rise) (Apartments, Townhomes, Condo; max 10 floors; Not Close to Rail Transit)	221	15,042 DU <sup>(1)</sup>	4.54	68,289	0.37	23%	1,280	77%	4,285	5,565	0.39	61%	3,578	39%	2,288	5,866
<b>Non-Residential</b>																
<b>Retail</b>																
Shopping Center (>150 KSF) <sup>(2)</sup>	820	6,430.1 KSF of GFA	37.01	237,979	0.84	62%	3,349	38%	2,052	5,401	3.4	48%	10,494	52%	11,368	21,862
Pass-by Trip Discount <sup>(3)</sup>				45,216			0		0		-19%		1,994		2,160	4,154
<b>Sub-total</b>				<b>192,763</b>			<b>3,349</b>		<b>2,052</b>	<b>5,401</b>			<b>8,500</b>		<b>9,208</b>	<b>17,708</b>
<b>Office</b>																
Business Park <sup>(4)</sup>	770	3,756.8 KSF of GFA	12.44	46,734	1.35	85%	4,311	15%	761	5,072	1.22	26%	1,192	74%	3,391	4,583
<b>Industrial</b>																
Industrial Park <sup>(5)</sup>	130	9,275.6 KSF of GFA	3.37	31,259	0.34	81%	2,555	19%	599	3,154	0.34	22%	694	78%	2,460	3,154
<b>Total Trips - Phase 1</b>				<b>385,829</b>			<b>12,398</b>		<b>10,267</b>	<b>22,665</b>			<b>16,902</b>		<b>19,073</b>	<b>35,975</b>
<b>Total Internal Trips Reduction - Phase 1<sup>(6)</sup></b>				<b>-285,513</b>			<b>-8,679</b>		<b>-7,598</b>	<b>-16,772</b>			<b>-12,846</b>		<b>-14,496</b>	<b>-27,341</b>
<b>Total External Trips - Phase 1</b>				<b>100,316</b>			<b>3,719</b>		<b>2,669</b>	<b>5,893</b>			<b>4,057</b>		<b>4,578</b>	<b>8,634</b>

### Notes:

ITE - Institute of Transportation Engineers; LUC - Land Use Code; DU - Dwelling Units; KSF - Thousand Square Feet; GFA - Gross Floor Area

Primary source unless otherwise specified is ITE's Trip Generation Manual (11th Edition). ITE rates were used in lieu of equations.

\*Denotes ITE rates.

1. Assumed Household Population and residential factor to calculate the number of dwelling units.
2. Assumed Retail, Hotel, Education, and Medical facilities as Shopping Center ITE Landuse. Since, we don't have the size of each facility.
3. ITE Pass-By reduction rate of 19% in the PM peak hour for Retail (ITE Land Use Code 820). Pass by Trip rate of 19% for daily is assumed.
4. Assumed Office use as Business Park ITE Landuse.
5. Assumed Industrial Warehouse, Industrial Light, and Industrial Heavy facilities as Industrial Park ITE Landuse.
6. Internal Trips Reduction has been taken from Travel Demand Model. Daily - 74%; AM - 70%; PM - 76%

**Table 4 Trip Generation Calculations - Phase 2 (Full Buildout - 400K Population)**

Land Use	ITE Code	Size	----- Weekday -----													
			Daily		A.M. Peak Hour				P.M. Peak Hour							
			Rate*	Total	Rate*	% In	In	% Out	Out	Total	Rate*	% In	In	% Out	Out	Total
<b>PHASE 1</b>																
<b>Residential</b>																
<b>Single-Family Residential</b>																
Single-Family Detached Housing	220	39,690 DU <sup>(1)</sup>	9.43	374,273	0.70	26%	7,224	74%	20,559	27,783	0.94	63%	23,504	37%	13,804	37,308
<b>Multi-Family Residential</b>																
Multifamily Housing (Mid-Rise) (Apartments, Townhomes, Condo: max 10 floors; Not Close to Rail Transit)	221	120,333 DU <sup>(1)</sup>	4.54	546,311	0.37	23%	10,240	77%	34,283	44,523	0.39	61%	28,627	39%	18,303	46,930
<b>Non-Residential</b>																
<b>Retail</b>																
Shopping Center (>150 KSF) <sup>(2)</sup>	820	51,441.1 KSF of GFA	37.01	1,903,836	0.84	62%	26,791	38%	16,420	43,211	3.4	48%	83,952	52%	90,948	174,900
Pass-by Trip Discount <sup>(3)</sup>				361,729			0		0	0	-19%	15,951		17,280	33,231	
<b>Sub-total</b>				<b>1,542,107</b>			<b>26,791</b>		<b>16,420</b>	<b>43,211</b>		<b>68,001</b>		<b>73,668</b>	<b>141,669</b>	
<b>Office</b>																
Business Park <sup>(4)</sup>	770	30,054.3 KSF of GFA	12.44	373,875	1.35	85%	34,487	15%	6,086	40,573	1.22	26%	9,533	74%	27,133	36,666
<b>Industrial</b>																
Industrial Park <sup>(5)</sup>	130	74,204.6 KSF of GFA	3.37	250,069	0.34	81%	20,436	19%	4,794	25,230	0.34	22%	5,551	78%	19,679	25,230
<b>Total Trips - Phase 2</b>				<b>3,086,635</b>			<b>99,178</b>		<b>82,142</b>	<b>181,320</b>		<b>135,216</b>		<b>152,587</b>	<b>287,803</b>	
<b>Total Internal Trips Reduction - Phase 2<sup>(6)</sup></b>				<b>-2,623,640</b>			<b>-86,285</b>		<b>-71,464</b>	<b>-157,748</b>		<b>-117,638</b>		<b>-132,751</b>	<b>-250,389</b>	
<b>Total External Trips - Phase 2</b>				<b>462,995</b>			<b>12,893</b>		<b>10,678</b>	<b>23,572</b>		<b>17,578</b>		<b>19,836</b>	<b>37,414</b>	

Notes:

ITE - Institute of Transportation Engineers; LUC - Land Use Code; DU - Dwelling Units; KSF - Thousand Square Feet; GFA - Gross Floor Area

Primary source unless otherwise specified is ITE's Trip Generation Manual (11th Edition). ITE rates were used in lieu of equations.

\*Denotes ITE rates.

1. Assumed Household Population and residential factor to calculate the number of dwelling units.
2. Assumed Retail, Hotel, Education, and Medical facilities as Shopping Center ITE Landuse. Since, we don't have the size of each facility.
3. ITE Pass-By reduction rate of 19% in the PM peak hour for Retail (ITE Land Use Code 820). Pass by Trip rate of 19% for daily is assumed.
4. Assumed Office use as Business Park ITE Landuse.
5. Assumed Industrial Warehouse, Industrial Light, and Industrial Heavy facilities as Industrial Park ITE Landuse.
6. Internal Trips Reduction has been taken from Travel Demand Model. Daily - 85%; AM - 87%; PM - 87%

## Transportation Impact Analysis

The study freeway mainline segments and local street segments were evaluated under following scenarios:

- Existing Conditions
- Future (2040) Conditions and
- Future (2040) with Project Phase 1 Conditions
- Future with Project Phase 2 Conditions

## Freeway Traffic Operations Analysis

### Existing Conditions Analysis

TJKM used the segment volumes and freeway segment capacity from STA CMP program. Based on CMP study, the following capacities have been assumed for the different segments in the study corridor:

- I-680 between Marina Vista Avenue/Waterfront Road and Martinez Benicia Bridge to I-80 Ramps: 2,000 vehicles per hour per lane;
- I-80 between I-680 Ramps to SR 113 Ramps: 2,000 vehicles per hour per lane;
- SR 12 between I-80 Ramps to I-5 Ramps: 900 to 2,000 vehicles per hour per lane;
- SR 113 between SR-12 Ramps to I-80 Ramps: 900 to 2,000 vehicles per hour per lane;
- SR 84 between SR-12 Ramps to Holland Road: 850 vehicles per hour per lane;
- SR 160 between SR-4 to SR-12: 900 vehicles per hour per lane

Segment LOS have been calculated using directional volume to capacity ratios under Existing Conditions. Under Existing Conditions, all of the segments along I-680, I-80, SR 12, SR 113, SR 84 and SR 160 are operating below LOS D or better. However, the actual operating capacities along the study freeway segments would be much lower, approximately between 1,600 to 1,800 vphpl, based on the speed and density which is expected to deteriorate the traffic conditions.

In general, traffic operations analysis is based on the speed and density characteristics for freeways. Based on this, there is a change in travel speeds due to lane reduction, merging and weaving along the freeways. This effects the freeway segment LOS. Using this criteria, most of the segments along I-680, I-80, SR 12 are operating at LOS E or worse as per the congestion maps (INRIX, February 2024) shown in below sections.

Detailed LOS results for the study freeway segments under existing conditions are provided in **Appendix B**. Traffic analyses were conducted using procedures and methodologies consistent with the Highway Capacity Manual (HCM) 2010 (Transportation Research Board, 2010).

## Future Year (2040) No-Build Conditions Analysis

**Appendix C** contains LOS results for the study freeway segments under Future (2040) no project conditions. The annual growth rate was derived comparing Future 2040 and Existing 2015 demands from the Travel Demand Model. The annual growth rate of one percent to two percent was used to forecast the future demands at all the segments.

Under future no-project conditions, following freeway segments are projected to operate at unacceptable level of service.

1. I-680 between Industrial Way and Lake Herman Road is projected to operate at LOS E during AM Peak hour in southbound direction
2. I-680 between Parish Road Marshview Road is projected to operate at LOS E during AM peak hour in southbound direction
3. I-680 between Gold Hill Road and Cordelia Road at I-80 is projected to operate at LOS E in southbound direction during AM peak hour and at LOS E in northbound direction during PM peak hour
4. SR 12 between Virginia Drive and SR 84 junction is projected to operate at LOS F in southbound direction during AM peak hour and at LOS F in northbound direction during PM peak hour.

## Future Year (2040) plus Project Phase 1 Conditions Analysis

**Appendix D** contains LOS results for the study freeway segments under Future (2040) plus project Phase 1 conditions. Future (2040) plus project conditions consists of future demands plus new traffic generated by the Phase 1 development. Project traffic assignment at the study segments were taken from travel demand model.

Under future plus project phase 1 conditions, following freeway segments are projected to operate at unacceptable level of service.

1. I-680 between Industrial Way and Lake Herman Road is projected to operate at LOS E during AM Peak hour in southbound direction
2. I-680 between Parish Road Marshview Road is projected to operate at LOS E during AM peak hour in southbound direction
3. I-680 between Gold Hill Road and Cordelia Road at I-80 is projected to operate at LOS E in southbound direction during AM peak hour and at LOS F in northbound direction during PM peak hour
4. SR 12 between I-80 interchange and Chadbourne Road is projected to operate at LOS E in westbound direction during AM peak and LOS E in eastbound direction during PM peak hour
5. SR 12 between Chadbourne Road and Beck Avenue is projected to operate at LOS E in westbound direction during AM peak hour
6. SR 12 between Olsen Road and SR 113 Junction is projected to operate at LOS Fin westbound direction during AM peak hour and at LOS F in eastbound direction during PM peak hour

7. SR 12 between Virginia Drive and SR 84 junction is projected to operate at LOS F in westbound direction during AM peak hour and at LOS F in eastbound direction during PM peak hour.

### Future Year (2040) plus Project Phase 2 Conditions Analysis

**Appendix E** contains LOS results for the study freeway segments under Future (2040) plus project Phase 1 conditions. Future (2040) plus project conditions consists of future demands plus new traffic generated by the Phase 1 development. Project traffic assignment at the study segments were taken from travel demand model.

Under future plus project phase 1 conditions, following freeway segments are projected to operate at unacceptable level of service.

1. I-680 between Industrial Way and Lake Herman Road is projected to operate at LOS E during AM Peak hour in southbound direction and at LOS E in the northbound direction during PM peak hour
2. I-680 between Parish Road Marshview Road is projected to operate at LOS F during AM peak hour in southbound direction and at LOS E in northbound direction during PM peak hour.
3. I-680 between Gold Hill Road and Cordelia Road at I-80 is projected to operate at LOS E in southbound direction during AM peak hour and at LOS F in northbound direction during PM peak hour.
4. I-80 between Suisun Valley Road and SR 12 at Hale Ranch Road is projected to operate at LOS E in southbound direction during AM peak hour.
5. I-80 between North Texas Street/Manuel Campous Parkway and Cherry Glen Road/Lagoon Valley Road is projected to operate at LOS E in southbound direction during AM peak hour and at LOS E in northbound direction during PM peak hour.
6. I-80 between Cherry Glen Road/Lagoon Valley Road and Cherry Glen Road/Rivera Road is projected to operate at LOS E in southbound direction during PM peak hour.
7. SR 12 between I-80 interchange and Chadbourne Road is projected to operate at LOS F in westbound direction during AM peak and LOS F in eastbound direction during PM peak hour
8. SR 12 between Chadbourne Road and Beck Avenue is projected to operate at LOS F in westbound direction during AM peak hour and LOS F in eastbound direction during PM peak hour.
9. SR 12 between Emperor Drive and Woodlark Drive is projected to operate at LOS E in westbound direction during PM peak hour.
10. SR 12 between Lawler Ranch Parkway and Scally Lane is projected to operate at LOS F in westbound direction during AM peak hour and LOS F in eastbound direction during PM peak hour.
11. SR 12 between Olsen Road and SR 113 Junction is projected to operate at LOS F in westbound direction during AM peak hour and at LOS F in eastbound direction during PM peak hour
12. SR 12 between Virginia Drive and SR 84 junction is projected to operate at LOS F in westbound direction during AM peak hour and at LOS F in eastbound direction during PM peak hour.

13. SR 113 between SR 12 junction and McCormack Road is projected to operate at LOS F in northbound direction during AM peak hour and at LOS F in northbound & southbound directions during PM peak hour.
14. SR 113 between Silveyville Cemetery Road/County Fair Drive and Cherry Street is projected to operate at LOS E in northbound direction during AM peak hour.
15. SR 160 between SR 12 and SR 160 junction is projected to operate at LOS F in southbound direction during AM peak hour and at LOS E in northbound direction during PM peak hour.

### **Freeway Congestion Summary**

INRIX speed data to determine the traffic congestion along the study segments was collected and are illustrated below. Based on the analysis of the traffic congestion, segments that are operating at lower speeds are identified.

### I-680 Northbound Congestion Chart

#	Length	Cumulative Length	Intersection Name	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00
1	0.72	0.43	SR-4	65	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
2	1.24	1.67	Pacheco Boulevard	64	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
3	0.39	1.96	Arthur Road	64	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
4	1.68	3.64	Mocco Road/Marina Vista Avenue/Water Front Road	65	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
5	2.06	5.68	I-780	63	60	61	62	64	63	63	63	63	63	63	63	63	63	63	63	63
6	0.93	6.64	Bayshore Road	65	67	64	63	64	64	64	64	64	64	64	64	64	64	64	64	64
7	0.29	6.93	Industrial Way	65	65	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
8	1.51	8.44	Lake Herman Road	67	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
9	2.20	10.64	Parish Road	68	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
10	2.30	12.94	Marshview Road	70	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
11	2.69	15.63	Gold Hill Road	68	63	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
12	1.72	18.48	I-80	67	63	67	65	64	64	64	64	64	64	64	64	64	64	64	64	64

### I-680 Southbound Congestion Chart

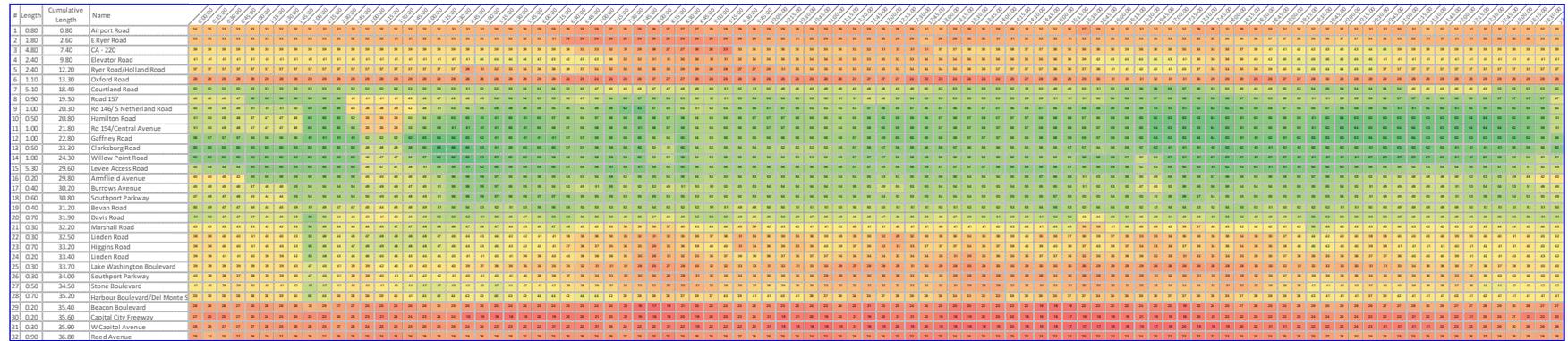
#	Length	Cumulative Length	Intersection Name	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00
1	0.65	0.65	I-80	65	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
2	0.66	2.37	Gold Hill Road	67	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
3	0.66	5.06	Marshview Road	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
4	0.66	7.36	Parish Road	64	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
5	0.66	9.56	Lake Herman Road	65	67	65	64	64	64	64	64	64	64	64	64	64	64	64	64	64
6	0.83	11.07	Industrial Way	65	62	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
7	0.65	11.36	Bayshore Road	64	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
8	0.59	12.29	I-780	64	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
9	0.61	14.35	Mocco Road/Marina Vista Avenue/Water Front Road	64	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
10	0.61	16.03	Arthur Road	64	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
11	0.62	16.42	Pacheco Boulevard	64	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
12	0.93	18.48	SR-4	65	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61

Based on the above charts, I-680 northbound experiences the lower speeds at SR-4 and also between Marsh View Road and I-80 during the PM peak period. I-680 southbound experiences the lower speeds between Arthur Road and SR 4 during the AM peak period.

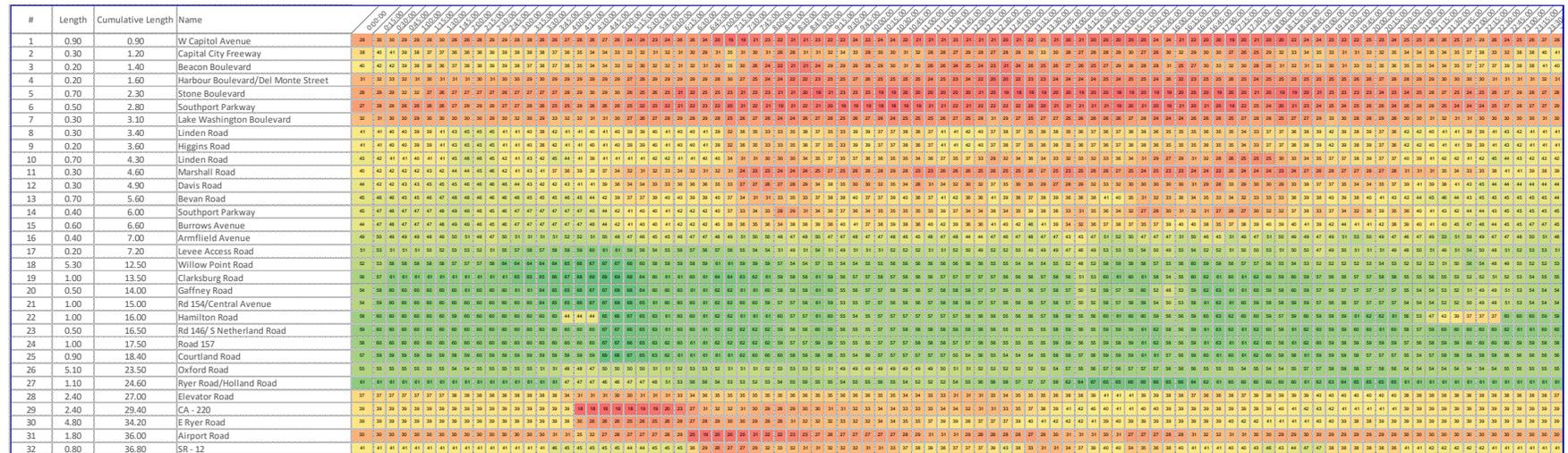




## SR 84 Northbound Congestion Chart



## SR 84 Southbound Congestion Chart



Based on the above charts, SR 84 northbound experiences the congestion at Airport Road, Ryer Road, Oxford Road, Lake Washington Boulevard during AM and PM peak periods. SR 84 southbound experiences the congestion at Capitol Avenue, Lake Washington Boulevard during AM and PM peak periods.

### SR 113 Northbound Congestion Chart

#	Length	Cumulative Length	Name	06:00	06:05	06:10	06:15	06:20	06:25	06:30	06:35	06:40	06:45	06:50	06:55	07:00	07:05	07:10	07:15	07:20	07:25	07:30	07:35	07:40	07:45	07:50	07:55	08:00	08:05	08:10	08:15	08:20	08:25	08:30	08:35	08:40	08:45	08:50	08:55	09:00	09:05	09:10	09:15	09:20	09:25	09:30	09:35	09:40	09:45	09:50	09:55	10:00	10:05	10:10	10:15	10:20	10:25	10:30	10:35	10:40	10:45	10:50	10:55	11:00	11:05	11:10	11:15	11:20	11:25	11:30	11:35	11:40	11:45	11:50	11:55	12:00	12:05	12:10	12:15	12:20	12:25	12:30	12:35	12:40	12:45	12:50	12:55	13:00	13:05	13:10	13:15	13:20	13:25	13:30	13:35	13:40	13:45	13:50	13:55	14:00	14:05	14:10	14:15	14:20	14:25	14:30	14:35	14:40	14:45	14:50	14:55	15:00	15:05	15:10	15:15	15:20	15:25	15:30	15:35	15:40	15:45	15:50	15:55	16:00	16:05	16:10	16:15	16:20	16:25	16:30	16:35	16:40	16:45	16:50	16:55	17:00	17:05	17:10	17:15	17:20	17:25	17:30	17:35	17:40	17:45	17:50	17:55	18:00	18:05	18:10	18:15	18:20	18:25	18:30	18:35	18:40	18:45	18:50	18:55	19:00	19:05	19:10	19:15	19:20	19:25	19:30	19:35	19:40	19:45	19:50	19:55	20:00	20:05	20:10	20:15	20:20	20:25	20:30	20:35	20:40	20:45	20:50	20:55	21:00	21:05	21:10	21:15	21:20	21:25	21:30	21:35	21:40	21:45	21:50	21:55	22:00
1	0.27	1.00	McCormack Road	...																																																																																																																																																																																																
2	1.24	2.00	Flannery Road	...																																																																																																																																																																																																
3	4.00	4.00	Creed Road/Robinson Road	...																																																																																																																																																																																																
4	1.00	7.00	Hastings Road	...																																																																																																																																																																																																
5	0.20	8.00	Rio Dixon Road	...																																																																																																																																																																																																
6	0.20	8.40	Brown Road	...																																																																																																																																																																																																
7	0.20	10.00	Hay Road	...																																																																																																																																																																																																
8	0.40	11.00	Maine Prairie Road	...																																																																																																																																																																																																
9	0.70	11.60	Fry Road	...																																																																																																																																																																																																
10	0.20	12.60	Binghamton Road	...																																																																																																																																																																																																
11	0.20	13.00	Hawkins Road	...																																																																																																																																																																																																
12	0.40	17.10	Midway Road	...																																																																																																																																																																																																
13	0.20	18.10	Parkey Boulevard	...																																																																																																																																																																																																
14	0.20	18.20	Valley Glen Drive/Heritage Lane	...																																																																																																																																																																																																
15	0.70	18.40	Country Fair Drive	...																																																																																																																																																																																																
16	0.40	18.70	W Cherry Street	...																																																																																																																																																																																																
17	0.30	19.00	A Street	...																																																																																																																																																																																																
18	0.20	19.80	Stratford Avenue	...																																																																																																																																																																																																
19	0.10	20.00	Regency Parkway/Industrial Way	...																																																																																																																																																																																																
20	1.00	20.20	Atkinson Ct	...																																																																																																																																																																																																
21	4.00	20.60	N Lincoln Street	...																																																																																																																																																																																																
22	0.50	21.00	I-80	...																																																																																																																																																																																																

### SR 113 Southbound Congestion Chart

#	Length	Cumulative Length	Name	06:00	06:05	06:10	06:15	06:20	06:25	06:30	06:35	06:40	06:45	06:50	06:55	07:00	07:05	07:10	07:15	07:20	07:25	07:30	07:35	07:40	07:45	07:50	07:55	08:00	08:05	08:10	08:15	08:20	08:25	08:30	08:35	08:40	08:45	08:50	08:55	09:00	09:05	09:10	09:15	09:20	09:25	09:30	09:35	09:40	09:45	09:50	09:55	10:00	10:05	10:10	10:15	10:20	10:25	10:30	10:35	10:40	10:45	10:50	10:55	11:00	11:05	11:10	11:15	11:20	11:25	11:30	11:35	11:40	11:45	11:50	11:55	12:00	12:05	12:10	12:15	12:20	12:25	12:30	12:35	12:40	12:45	12:50	12:55	13:00	13:05	13:10	13:15	13:20	13:25	13:30	13:35	13:40	13:45	13:50	13:55	14:00	14:05	14:10	14:15	14:20	14:25	14:30	14:35	14:40	14:45	14:50	14:55	15:00	15:05	15:10	15:15	15:20	15:25	15:30	15:35	15:40	15:45	15:50	15:55	16:00	16:05	16:10	16:15	16:20	16:25	16:30	16:35	16:40	16:45	16:50	16:55	17:00	17:05	17:10	17:15	17:20	17:25	17:30	17:35	17:40	17:45	17:50	17:55	18:00	18:05	18:10	18:15	18:20	18:25	18:30	18:35	18:40	18:45	18:50	18:55	19:00	19:05	19:10	19:15	19:20	19:25	19:30	19:35	19:40	19:45	19:50	19:55	20:00	20:05	20:10	20:15	20:20	20:25	20:30	20:35	20:40	20:45	20:50	20:55	21:00	21:05	21:10	21:15	21:20	21:25	21:30	21:35	21:40	21:45	21:50	21:55	22:00
1	0.65	0.40	N Lincoln Street	...																																																																																																																																																																																																
2	0.66	0.80	Atkinson Ct	...																																																																																																																																																																																																
3	0.66	1.00	Regency Parkway/Industrial Way	...																																																																																																																																																																																																
4	0.66	1.20	Stratford Avenue	...																																																																																																																																																																																																
5	0.66	1.90	A Street	...																																																																																																																																																																																																
6	0.83	2.30	W Cherry Street	...																																																																																																																																																																																																
7	0.65	2.60	Country Fair Drive	...																																																																																																																																																																																																
8	0.59	2.80	Valley Glen Drive/Heritage Lane	...																																																																																																																																																																																																
9	0.61	2.90	Parkey Boulevard	...																																																																																																																																																																																																
10	0.61	3.00	Midway Road	...																																																																																																																																																																																																
11	0.62	7.90	Hawkins Road	...																																																																																																																																																																																																
12	0.93	8.40	Binghamton Road	...																																																																																																																																																																																																
13	0.93	9.40	Fry Road	...																																																																																																																																																																																																
14	0.93	9.90	Maine Prairie Road	...																																																																																																																																																																																																
15	0.93	10.90	Hay Road	...																																																																																																																																																																																																
16	0.93	11.40	Brown Road	...																																																																																																																																																																																																
17	0.93	13.00	Rio Dixon Road	...																																																																																																																																																																																																
18	0.93	14.00	Hastings Road	...																																																																																																																																																																																																
19	0.93	17.00	Creed Road/Robinson Road	...																																																																																																																																																																																																
20	0.93	19.00	Flannery Road	...																																																																																																																																																																																																
21	0.93	20.00	McCormack Road	...																																																																																																																																																																																																
22	0.93	21.00	Highway 12	...																																																																																																																																																																																																

Based on the above charts, SR 113 northbound experiences the congestion between A Street and I-80 during AM and PM peak periods. SR 113 southbound experiences the congestion between Lincoln Street and Valley Glen Drive during AM and PM peak periods.

### SR 160 Northbound Congestion Chart

#	Length	Cumulative Length	Name	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-00:00
1	0.60	0.60	Dakky Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1.50	1.50	E 18th Street	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0.50	1.60	Wilbur Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0.30	1.90	Bridgehead Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	3.20	5.10	Sherman Island Cross Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	1.40	6.50	W Sherman Island Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2.90	9.40	Sherman Island East Levee Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1.40	10.80	Brannan Island Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2.40	13.20	SR-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

### SR 160 Southbound Congestion Chart

#	Length	Cumulative Length	Name	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-00:00
1	2.40	2.40	Brannan Island Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1.40	3.80	Sherman Island East Levee Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2.90	6.70	W Sherman Island Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1.40	8.10	Sherman Island Cross Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	3.20	11.30	Bridgehead Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0.30	11.60	Wilbur Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0.50	12.10	E 18th Street	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0.50	12.60	Oakley Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0.60	13.20	SR-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Based on the above charts, SR 160 northbound experiences the congestion at SR 12 during PM peak periods. SR 160 southbound experiences the congestion at Sherman Island Road during AM peak periods.

## Local Roadways Transportation Impact Analysis

The study local roadway segments are evaluated under following scenarios:

- Existing Conditions,
- Future (2040) Conditions and
- Future (2040) with Project Phase 1 Conditions
- Future Plus Project Phase 2 Conditions

### Existing Conditions Analysis – Local Streets Analysis

TJKM used the model volumes and local roadway segment capacity from SNABM. Based on SNABM, 500 vehicles per hour per lane capacity have been assumed for the study segments in the study corridor. Segment LOS have been calculated using directional volume to capacity ratios under Existing Conditions. Traffic analyses were conducted using procedures and methodologies consistent with the Highway Capacity Manual (HCM) 2010 (Transportation Research Board, 2010). Under existing conditions all of the study segments are operating at acceptable conditions except for the following study segment.

1. Peabody Road between Fairfield and Vacaville operating at LOS F during AM and PM peak conditions in both northbound and southbound direction of travel.

**Appendix F** contains detailed LOS and results for local streets under existing conditions. Future Year (2040) No-Build Conditions Analysis

### Future (2040) no project conditions – Local Streets Analysis

**Appendix G** contains LOS results for the local roadway segments under Future (2040) no project conditions. Travel Demand volumes were used to calculate the LOS under Future (2040) no project conditions. Under future no project conditions following study segments are projected to operate at unacceptable conditions

1. Peabody Road between Fairfield and Vacaville is projected to operate at LOS F during AM and PM peak conditions in both northbound and southbound direction of travel

### Future Year (2040) plus Project Phase 1 Conditions Analysis – Local Streets Analysis

**Appendix H** summarizes LOS results for the local roadway segments under Future (2040) plus project Phase 1 conditions. Future (2040) plus project Phase 1 conditions consists of future demands plus new traffic generated by the Phase 1 development. Project traffic assignment at the study segments were taken from travel demand model. Under future plus project phase 1 conditions following study segments are projected to operate at unacceptable conditions.

1. Flannery Road East of SR 113 is projected to operate at LOS F in eastbound direction during AM peak hour and at LOS F in both eastbound and westbound directions during PM peak hours.

2. McClosky Road North of SR 12 projected to operate at LOS F in southbound direction during AM peak hour and at LOS F in northbound direction and at LOS E in southbound direction during PM peak hours.
3. McCormack Road East of SR 113 is projected to operate at LOS F in eastbound direction during AM and PM peak hours.
4. Peabody Road between Fairfield and Vacaville projected to operate at LOS F in both northbound and southbound directions during AM and PM peak hours

### Future Year (2040) plus Project Phase 2 Conditions Analysis – Local Streets Analysis

**Appendix I** summarizes LOS results for the local roadway segments under Future (2040) plus project Phase 2 conditions. Future (2040) plus project Phase 2 conditions consists of future demands plus new traffic generated by the Phase 2 development. Project traffic assignment at the study segments were taken from travel demand model. Under future plus project phase 2 conditions following study segments are projected to operate at unacceptable conditions.

1. Canright Road West of Azevedo Road is projected to operate at LOS F in northbound direction and LOS E in southbound direction during AM peak hour and at LOS F during PM peak hour in both northbound and southbound directions.
2. Creed Road West of SR 113 is projected to operate at LOS E in the eastbound direction during PM peak hour
3. Flannery Road East of SR 113 is projected to operate at LOS F during AM and PM peak hours in both eastbound and westbound directions
4. Fry Road East of Lewis Road is projected to operate at LOS F in westbound direction during AM peak hour and at LOS F in eastbound direction and LOS E in westbound direction during PM peak hour.
5. Goose Haven Road South of Creed Road is projected to operate at LOS in southbound direction during AM peak hour and at LOS F in northbound direction during PM peak hour.
6. Hawkins Road East of Lewis Road is projected to operate at LOS F in westbound direction during AM peak hour and LOS F in eastbound direction during PM peak hour.
7. Lambie Road West of SR 113 is projected to operate at LOS F in westbound direction during PM peak hour.
8. McClosky Road North of SR 12 is projected to operate at LOS E in northbound direction and at LOS F in southbound direction during AM peak hour and at LOS F in both northbound and southbound direction during PM peak hours.
9. McCormack Road East of SR 113 is projected to operate at LOS F in westbound direction during AM peak hour and at LOS F in both eastbound and westbound directions during PM peak hour.
10. McCory Road North of Gate Road is projected to operate at LOS F in westbound direction during AM peak hour and at LOS F in eastbound direction during PM peak hour.
11. Montezuma Hills Road East of Emigh Road is projected to operate at LOS F in westbound direction during AM peak hour and at LOS F in both eastbound and westbound direction during PM peak hours.

12. Peabody Road between Fairfield and Vacaville is projected to operate at LOS F in both northbound and southbound directions during AM and PM peak hours.
13. Robinson Road East of SR 113 is projected to operate at LOS F in northbound direction during AM peak hour and at LOS F in both northbound and southbound directions during PM peak hour.
14. Shiloh Road South of SR 12 is projected to operate at LOS F in northbound direction during AM peak hour and at LOS F in southbound direction during PM peak hour.

### **Construction Impact Analysis**

The California Forever Project anticipates the construction to last for 10 years for Phase 1 development, including heavy construction, ROW purchases, grading, excavation, and constructing structures. A Construction Management Plan would be prepared that details transportation detours and emergency service routes, and outreach activities for changing traffic constraints throughout the construction period. Project-related construction traffic could include trucks transporting construction materials to construction sites, construction workers commuting to construction sites, and the movement of heavy construction equipment such as cranes, bulldozers, and dump trucks to and from construction sites.

Construction effects would include project-related construction traffic and temporary construction easements interfering with pedestrians, bicyclists, and transit and railroad operations, creating operational hazards, and reducing access to community facilities. Temporary lane or road closures, underground utility work, temporary disruption of transportation system operations and potential damage to roadway pavements and bridges would also be considered effects.

Parking areas, roadway lanes, pedestrian facilities, and bicycle lanes would be restored following construction activities. In addition, truck traffic would be required to use designated truck routes by a Construction Management Plan. The commuting periods for construction workers also generally take place outside of peak hours for street and freeway traffic, and shuttles transporting construction workers from remote parking areas could further reduce effects. The movement of heavy construction equipment would occur during off-peak hours on designated truck routes, and that once on site, heavy construction equipment would remain there until its job was complete, reducing trip counts.

Caltrans encroachment permits and coordination would be required and should be included in construction management plans, temporary traffic control plans, or general best management practices. The construction of California Forever project would involve temporary closures of the freeway interchanges during construction period at the study interchanges.

## VMT Analysis

TJKM conducted a Vehicle Miles Traveled (VMT) analysis of the California Forever project. The project was coded in 3 Travel Analysis Zone (TAZs) within the Solano-Napa Activity Based Model (#259, 260, and #264). Countywide total daily VMT was calculated for the production (population) and attraction (employment) for Solano County with and without project in the forecast year.

**Table 4: VMT Metrics for Solano County Forecast Year Phase 1 (Daily and Annual)**

Solano County	No Project	CA Forever Phase 1	Difference
Population	498,743	548,808	50,065
Employees	150,975	165,988	15,013
VMT/Capita	16.28	16.50	0.22
VMT/Job	30.89	31.77	0.88
Daily Residential VMT	8,119,934	9,055,152	935,218
Annual Residential VMT	2,963,775,910	3,305,130,480	341,354,570
Daily Employment VMT	4,663,847	5,273,254	609,407
Annual Employment VMT	1,165,961,750	1,318,313,500	1,52,351,750

VMT reported from the SNABM consists of two parts; residential (production) and employment (attraction) VMT. Both residential and employment VMT are calculated by taking the distance traveled by vehicle trips in the model multiplied by the distance between each origin and destination TAZ. VMT per Capita is calculated by dividing total residential VMT by the total population, whereas VMT per Job is calculated by dividing total employment VMT by the total number of employees in Solano County.

The CA Forever project increased total residential VMT for Solano County by 935,218 and total employment VMT for Solano County by 609,407. Additional details regarding the CA Forever TAZs are noted in **Table 5**.

**Table 5: VMT Metrics for the CA Forever Project TAZs (Phase 1)**

TAZ	Residential VMT	Population	Employment VMT	Jobs	VMT/Capita	VMT/Job
CA Forever	872,536	50,065	363,278	15,136	17.43	24.00

The California Forever Project TAZs produces a VMT/Capita value of **17.43**, which is slightly higher than the Solano County average of 16.50. Conversely, it's VMT /Job value is **24.00**, which is lower than the Solano County average of 31.77. Total residential VMT produced by the project TAZs is 872,536, and total employment VMT produced by the project is 363,278.

For Phase 2 buildout scenario, TJKM extracted VMT metrics and compared them to the no project condition. The results are summarized in the following table:

**Table 6: VMT Metrics for Solano County Forecast Year Phase 2 (Daily and Annual)**

Solano County	No Project	CA Forever Phase 2	Difference
Population	498,743	898,799	400,056
Employees	150,975	165,988	90,902
VMT/Capita	16.28	16.28	0
VMT/Job	30.89	26.53	4.36
Daily Residential VMT	8,119,934	14,634,145	6,514,211
Annual Residential VMT	2,963,775,910	5,341,462,841	2,377,686,931
Daily Employment VMT	4,663,847	6,416,318	1,752,471
Annual Employment VMT	1,165,961,750	1,604,079,468	438,117,718

Full buildout of the CA Forever project increased total residential VMT for Solano County by 6.5 million, and total employment VMT by 1.75 million. VMT/Capita stayed the same but VMT/Job reduced by 4.36.

Additional details regarding CA Forever TAZs for Phase 2 are noted in **Table 7**.

**Table 7: VMT Metrics for the CA Forever Project TAZs (Phase 1)**

TAZ	Residential VMT	Population	Employment VMT	Jobs	VMT/Capita	VMT/Job
CA Forever	6,032,250	400,056	1,945,334	90,902	15.08	21.40

On full buildout, the CA Forever TAZs produced a VMT/Capita value of **15.08**, which is lower than the Solano County average of 16.28. In addition, VMT/Job value for CA Forever is **21.40**, which is lower than the Solano County average of 26.53.

**Table 8** shows the mode choice assumptions in the SNABM. Automobile use comprise of a majority of mode share for most types of trip/tour purposes. VMT is only calculated for the automobile mode choice.

**Table 8: Travel Mode Choice Assumptions in the SNABM**

Tour Purpose	Automobile	Walk	Bicycle	Transit	All Modes
Work	82.5%	2.4%	2.7%	12.3%	100%
University	64.3%	5.9%	3.2%	26.7%	100%
School	84.3%	10.9%	2.8%	2.1%	100%
At-Work	67.5%	29.3%	2.0%	1.1%	100%
Individual-Discretionary	70.4%	19.7%	3.3%	6.6%	100%
Joint-Discretionary	99.6%	0.0%	0.1%	0.3%	100%
Individual-Maintenance	83.4%	11.3%	1.2%	4.1%	100%

Tour Purpose	Automobile	Walk	Bicycle	Transit	All Modes
Joint-Maintenance	99.8%	0.0%	0.1%	0.1%	100%
All Purposes	<b>80.6%</b>	<b>10.2%</b>	<b>2.2%</b>	<b>7.0%</b>	<b>100%</b>

The SNABM assumes each person takes about **3.54** trips per day, with an average total trip length of **16.69** miles. About **7 percent** of all trips taken within Solano County are by transit.

**Conclusion**

The California Forever project was modeled in the SNABM and the outputs from the model provided a baseline for forecast analysis along with VMT analysis. As expected, the project produces a large number of trips, both on the residential side and the employment side.

Traffic impacts of the California Forever project were studied and the mainline segments were evaluated based on V/C analysis consistent with STA guidelines. TJKM recommends conducting a detailed evaluation of the study freeway mainline segments based on density analysis to identify impacts under all study scenarios. TJKM also evaluated the traffic impacts associated with the local roadway segments. TJKM also recommends evaluating pavement conditions to assess the impacts of the project during the construction period as truck traffic would be the primary factor affecting the pavement design life.

Regarding VMT, the CA Forever project phase 1 produces VMT/capita values higher than the average Solano County VMT/capita metric, but the VMT/job values are lower than the average Solano County VMT/job metric.

Upon full buildout of the CA Forever project, both VMT/capita and VMT/job decreases to below the Solano County average values.

### Appendix A: Volumes Extracted from SNABM for Selected Highway Segments

Route	Location	Existing No Build Model Demand				Future 2040 No Build Model Demand				Future Project Demand - Phase 1 (50k Population+15k Employment)				Future Project Demand - Phase 2 (400k Population+91k Employment)			
		AM		PM		AM		PM		AM		PM		AM		PM	
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
I-680	Between Marina Vista Avenue/Waterfront Road and Benicia Martinez Bridge	2,233	5,755	3,282	5,037	2,840	6,490	3,819	5,229	2,928	6,546	4,435	5,302	2,975	6,902	4,847	5,914
I-680	Between Benicia Martinez Bridge and Bayshore Road	1,788	6,321	3,404	5,000	2,164	6,707	4,067	5,284	2,220	6,737	4,106	5,395	2,240	6,902	4,557	5,751
I-680	Between Bayshore Road and Industrial Way	607	3,088	1,375	2,052	862	3,937	2,783	2,559	956	3,948	2,835	2,636	963	4,131	3,150	2,698
I-680	Between Industrial Way and Lake Herman Road	605	3,105	1,392	2,044	862	3,962	2,817	2,369	956	3,971	2,875	2,529	965	4,168	3,194	2,552
I-680	Between Lake Herman Road and Parish Road	656	3,399	1,714	2,136	947	4,404	3,326	2,510	1,040	4,430	3,396	2,669	1,047	4,669	3,768	2,690
I-680	Between Parish Road Marshview Road	656	3,398	1,711	2,135	947	4,402	3,323	2,507	1,040	4,428	3,394	2,668	1,047	4,667	3,767	2,689
I-680	Between Marshview Road and Gold Hill Road	651	3,391	1,645	2,135	961	4,471	3,286	2,676	1,056	4,480	3,355	2,838	1,064	4,691	3,731	2,857
I-680	Between Gold Hill Road and Cordelia Road @ I-80	1,000	3,271	1,855	2,478	1,228	4,317	3,336	2,790	1,305	4,352	3,739	2,933	1,428	4,543	4,023	2,947
I-80	Between I-680 ramps and Lopes Road	4,433	4,661	7,987	3,651	4,787	6,220	9,264	4,057	4,889	6,487	9,636	4,245	5,084	7,800	11,011	4,454
I-80	Between I-80 Off Ramp and Suisun Valley Road	4,166	7,615	7,633	5,711	4,494	9,027	8,762	6,278	4,615	9,357	9,157	6,477	4,838	10,958	10,575	6,774
I-80	Between Suisun Valley Road and SR12 @ Hale Ranch Road	4,435	8,194	8,293	6,385	4,815	9,785	9,946	7,057	4,933	10,149	10,362	7,289	5,184	11,723	11,819	7,592
I-80	Between Chadbourne Road and Auto Mall Parkway, Fairfield	3,827	7,024	7,067	5,395	4,062	7,715	7,836	5,936	4,150	7,937	8,085	6,120	4,208	8,567	9,100	6,165
I-80	Between Auto Mall Parkway and Rockville Road/W Texas Street, Fairfield	3,957	7,358	7,604	5,732	4,219	8,186	8,437	5,936	4,306	8,444	8,665	6,090	4,361	9,250	9,673	6,148

Route	Location	Existing No Build Model Demand				Future 2040 No Build Model Demand				Future Project Demand - Phase 1 (50k Population+15k Employment)				Future Project Demand - Phase 2 (400k Population+91k Employment)			
		AM		PM		AM		PM		AM		PM		AM		PM	
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
I-80	Between Rockville Road/W Texas Street and Oliver Road, Fairfield	3,834	7,069	7,347	5,418	4,014	7,867	7,702	5,657	4,085	8,129	7,896	5,809	4,172	8,842	8,731	5,878
I-80	Between Oliver Road and Travis Boulevard, Fairfield	4,059	7,440	7,882	5,886	4,318	8,286	8,363	6,384	4,398	8,549	8,544	6,552	4,465	9,243	9,347	6,635
I-80	Between Travis Boulevard and Airbase Parkway, Fairfield	3,792	7,066	7,654	5,523	3,903	7,674	8,411	6,160	3,989	7,910	8,623	6,322	4,060	8,392	9,326	6,407
I-80	Between Airbase Parkway and North Texas Street/Manuel Campos Parkway, Fairfield	3,815	6,037	6,879	5,257	3,833	6,904	7,752	5,650	3,948	7,041	7,943	5,780	3,993	7,465	8,508	5,801
I-80	Between North Texas Street/Manuel Campos Parkway and Cherry Glen Road/Lagoon Valley Road, Vacaville	3,970	6,030	6,945	5,537	4,274	6,972	7,774	6,108	4,465	7,176	7,967	6,236	4,492	7,546	8,527	6,281
I-80	Between Cherry Glen Road/Lagoon Valley Road and Cherry Glen Road/Rivera Road, Vacaville	4,012	6,001	6,936	5,585	4,331	6,836	7,701	6,145	4,414	7,027	7,898	6,278	4,440	7,357	8,340	6,300
I-80	Between Cherry Glen Road/Rivera Road and Alamo Drive, Vacaville	3,551	4,879	5,559	4,669	3,754	5,921	6,785	5,256	3,777	6,108	6,989	5,391	3,796	6,437	7,405	5,411
I-80	Between Alamo Drive and Davis Street, Vacaville	3,719	4,930	5,816	4,897	3,948	5,489	6,554	5,287	3,980	5,667	6,761	5,416	3,997	5,891	7,035	5,428
I-80	Between Davis Street and Cliffside Drive, Vacaville	3,758	4,559	5,761	4,640	3,982	5,238	6,194	5,331	4,013	5,424	6,392	5,460	4,036	5,651	6,547	5,486
I-80	Between Cliffside Drive and Allison Drive/Monte Vista Avenue, Vacaville	3,842	5,281	5,458	5,515	4,081	5,317	6,173	5,624	4,107	5,506	6,374	5,743	4,145	5,652	6,479	5,790

Route	Location	Existing No Build Model Demand				Future 2040 No Build Model Demand				Future Project Demand - Phase 1 (50k Population+15k Employment)				Future Project Demand - Phase 2 (400k Population+91k Employment)			
		AM		PM		AM		PM		AM		PM		AM		PM	
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
I-80	Between Monte Vista Avenue/Nut Tree Parkway, Vacaville	3,174	5,090	4,417	5,218	3,464	5,418	4,704	5,505	3,494	5,600	4,878	5,656	3,525	5,606	4,953	5,683
I-80	Between Nut Tree Road and I-505 Junction @ Orange Drive	3,360	3,998	4,784	4,089	3,683	4,321	5,162	4,427	3,710	4,499	5,335	4,576	3,739	4,519	5,386	4,592
I-80	Between I-505 Junction and Leisure Town Road, Vacaville	3,140	3,832	4,371	3,789	3,367	3,955	4,541	3,900	3,395	4,142	4,722	4,036	3,425	4,149	4,747	4,083
I-80	Between Leisure Town Road and Meridian Road/Weber Road, Vacaville	3,390	4,268	4,786	4,271	3,626	4,431	5,004	4,383	3,651	4,507	5,198	4,518	3,677	4,577	5,247	4,564
I-80	Between Meridian Road/Weber Road and Midway Road, Dixon	3,387	4,214	4,731	4,250	3,619	4,367	4,944	4,353	3,646	4,446	5,142	4,495	3,672	4,520	5,190	4,534
I-80	Between Midway Road and Dixon Avenue/A Street, Dixon	3,397	3,742	4,268	3,999	3,581	3,891	4,345	4,117	3,602	3,934	4,450	4,138	3,630	3,936	4,473	4,160
I-80	Between Dixon Avenue/A Street and Pitt School Road, Dixon	3,322	3,522	3,939	3,852	3,516	3,573	3,941	3,929	3,533	3,626	4,066	3,943	3,568	3,630	4,092	3,978
I-80	Between Pitt School Road and SR 113 Junction @ Milk Farm Road	3,561	3,646	4,186	3,984	3,608	3,689	4,215	4,035	3,630	3,741	4,237	4,052	3,672	3,749	4,266	4,101
SR 113	Between SR 12 Junction and McCormack Road, Rio Vista	212	164	281	157	325	293	403	333	916	730	918	1070	2211	923	1986	2137
SR 113	Between Maine Prairie Road and Fry Road, Dixon	217	163	283	162	332	280	400	338	809	475	738	777	1971	660	1184	2185
SR 113	Between Silveyville Cemetery Road/ County Fair Drive and Cherry Street, Dixon	216	158	277	161	267	202	291	244	315	285	358	276	789	324	421	357
SR 113	Between Mayes Street and A Street, Dixon	256	257	315	426	512	337	562	621	517	358	567	629	559	389	627	718

Route	Location	Existing No Build Model Demand				Future 2040 No Build Model Demand				Future Project Demand - Phase 1 (50k Population+15k Employment)				Future Project Demand - Phase 2 (400k Population+91k Employment)			
		AM		PM		AM		PM		AM		PM		AM		PM	
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
SR 113	Between F Street and H Street, Dixon	139	190	181	290	342	231	388	405	344	233	393	409	385	272	441	442
SR 113	Between E Dorset Drive and I-80 Junction	248	314	293	455	438	343	482	561	439	344	482	562	459	373	513	621
SR 12	Between I-80 Junction and Chadbourne Road, Fairfield	599	1,157	1,211	975	742	2,013	2,091	1,475	823	2,410	2,258	1,659	1017	2851	2703	1894
SR 12	Between Chadbourne Road and Beck Avenue, Fairfield	508	1,193	1,196	877	610	2,032	2,063	1,320	702	2,441	2,246	1,539	940	2863	2682	1808
SR 12	Between Beck Avenue and Pennsylvania Avenue, Fairfield	549	1,324	1,415	1,057	688	2,220	2,488	1,669	785	2,664	2,722	1,947	1050	3000	3046	2190
SR 12	Between Main Street and Marina Boulevard, Suisun City	609	1,525	1,795	1,217	766	2,470	2,961	1,927	918	2,973	3,352	2,294	1202	3335	3812	2614
SR 12	Between Village Drive and Grizzly island Road/Sunset Avenue, Suisun City	511	1,269	1,425	1,057	690	2,152	2,585	1,727	859	2,722	2,944	2,083	1130	3118	3330	2405
SR 12	Between Emperor Drive and Woodlark Drive, Suisun City	442	1,017	1,102	834	617	1,603	1,844	1,244	827	2,259	2,334	1,742	1154	2636	2827	2107
SR 12	Between Lawler Ranch Parkway and Scally Lane, Suisun City	369	625	644	597	538	1,141	1,282	951	797	1,825	1,815	1,507	1149	2214	2361	1926
SR 12	Between Olsen Road and SR 113 Junction, Rio Vista	457	621	560	645	533	949	867	671	829	1,856	1,811	1,302	1235	2409	2466	1759
SR 12	Between Amerada Road and Drouin Drive, Rio Vista	626	793	705	934	802	991	990	973	954	1,021	1,059	1,021	1069	1275	1074	1159
SR 12	Between Virginia Drive and SR 84 Junction @ N Front Street, Rio Vista	598	710	631	839	777	818	824	922	861	826	839	927	870	1020	921	1011
SR 12	Between SR 84 and Solano/Sacramento County Line	699	778	749	932	920	903	961	1,079	1,018	912	974	1,152	1471	922	1203	1435

Route	Location	Existing No Build Model Demand				Future 2040 No Build Model Demand				Future Project Demand - Phase 1 (50k Population+15k Employment)				Future Project Demand - Phase 2 (400k Population+91k Employment)			
		AM		PM		AM		PM		AM		PM		AM		PM	
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
SR 84	Between SR 12 Junction/N Front Street and Oak Tree Alley, Rio Vista	51	100	111	103	78	145	211	175	85	152	340	211	86	796	680	446
SR 84	Between Oak Tree Alley and Airport Road, Rio Vista	39	89	89	78	62	126	174	131	67	133	304	172	73	767	617	400
SR 84	Between Cache Slough Ferry and Ryer Road	10	19	21	19	15	44	44	31	20	46	48	36	26	53	66	56
SR 84	200 feet South of SR 84 & SR 220 Junction	5	9	8	9	5	18	15	8	9	20	19	10	14	28	34	31
SR 84	200 feet South of Miner Slough Bridge/Ryer Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SR 84	Between Miner Slough Bridge/Ryer Road and Holland Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SR 160	Between Oakley Road and 18th Street/Main Street, Oakley	1,170	1,545	2,341	1,227	1,504	2,531	2,873	1,628	1,515	2,580	2,980	1,712	1,547	3,170	3,384	2,045
SR 160	Between Main Street and Wilbur Avenue, Oakley	867	937	1,215	884	976	1,169	1,368	1,055	990	1,266	1,477	1,089	1,012	1,862	1,889	1,468
SR 160	Between Bridgehead Road and Contra Costa/Sacramento County Line	547	486	703	504	602	642	778	638	620	749	877	678	636	1,327	1,293	1,039
SR 160	South of SR 12 & SR 160 Intersection	547	486	703	504	602	642	778	638	620	749	877	678	636	1,327	1,293	1,039

**Appendix B – Existing Conditions LOS and Delay Results – Freeway Operations**

Route	Location	Number of Lanes		Capacity (vphpl)	Existing 2023 Volume				Existing 2023 No Build V/C Ratio				Existing 2023 No Build LOS			
					AM		PM		AM		PM		AM		PM	
		NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
I-680	Between Benicia Martinez Bridge and Bayshore Road	5	4	2,000	2,945	5,488	4,523	3,193	0.295	0.686	0.452	0.399	A	B	A	A
I-680	Between Industrial Way and Lake Herman Road	2	2	2,000	2,061	3,097	2,569	1,986	0.515	0.774	0.642	0.497	A	C	B	A
I-680	Between Parish Road Marshview Road	2	2	2,000	2,007	3,176	2,606	1,948	0.502	0.794	0.652	0.487	A	C	B	A
I-680	Between Gold Hill Road and Cordelia Road @ I-80	2	2	2,000	2,465	3,020	2,941	2,228	0.616	0.755	0.735	0.557	B	C	C	A
I-80	Between I-680 ramps and Lopes Road	5	5	2,000	3,546	3,935	5,260	2,967	0.355	0.394	0.526	0.297	A	A	A	A
I-80	Between I-80 Off Ramp and Suisun Valley Road	6	6	2,000	5,123	7,802	7,625	5,430	0.427	0.650	0.635	0.453	A	B	B	A
I-80	Between Suisun Valley Road and SR12 @ Hale Ranch Road	7	6	2,000	5,673	8,464	8,337	6,081	0.405	0.705	0.596	0.507	A	C	A	A
I-80	Between Auto Mall Parkway and Rockville Road/W Texas Street, Fairfield	5	5	2,000	4,539	6,718	6,540	4,580	0.454	0.672	0.654	0.458	A	B	B	A
I-80	Between Airbase Parkway and North Texas Street/Manuel	5	5	2,000	3,805	6,331	5,794	4,004	0.381	0.633	0.579	0.400	A	B	A	A

Route	Location	Number of Lanes		Capacity (vphpl)	Existing 2023 Volume				Existing 2023 No Build V/C Ratio				Existing 2023 No Build LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
	Campous Parkway, Fairfield															
I-80	Between North Texas Street/Manuel Campous Parkway and Cherry Glen Road/Lagoon Valley Road, Vacaville	4	4	2,000	4,665	6,490	6,554	4,820	0.583	0.811	0.819	0.603	A	D	D	B
I-80	Between Cherry Glen Road/Lagoon Valley Road and Cherry Glen Road/Rivera Road, Vacaville	4	4	2,000	4,487	6,288	6,528	4,705	0.561	0.786	0.816	0.588	A	C	D	A
I-80	Between Nut Tree Road and I-505 Junction @ Orange Drive	4	4	2,000	4,384	4,488	4,800	3,784	0.548	0.561	0.600	0.473	A	A	A	A
I-80	Between Meridian Road/Weber Road and Midway Road, Dixon	3	4	2,000	3,240	4,468	4,008	3,602	0.540	0.559	0.668	0.450	A	A	B	A
I-80	Between Midway Road and Dixon Avenue/A Street, Dixon	3	3	2,000	3,191	4,237	3,813	3,379	0.532	0.706	0.636	0.563	A	C	B	A
I-80	Between Dixon Avenue/A Street and Pitt School Road, Dixon	3	3	2,000	3,435	3,836	3,579	3,316	0.573	0.639	0.597	0.553	A	B	A	A

Route	Location	Number of Lanes		Capacity (vphpl)	Existing 2023 Volume				Existing 2023 No Build V/C Ratio				Existing 2023 No Build LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
I-80	Between Pitt School Road and SR 113 Junction @ Milk Farm Road	4	4	2,000	3,619	4,077	3,659	3,461	0.452	0.510	0.457	0.433	A	A	A	A
SR 12	Between I-80 Junction and Chadbourne Road, Fairfield	2	2	1,600	1,007	2,126	2,128	1,047	0.315	0.664	0.665	0.327	A	B	B	A
SR 12	Between Chadbourne Road and Beck Avenue, Fairfield	2	2	1,400	1,149	1,762	1,769	1,282	0.410	0.629	0.632	0.458	A	B	B	A
SR 12	Between Main Street and Marina Boulevard, Suisun City	2	2	2,000	978	1,913	1,584	977	0.245	0.478	0.396	0.244	A	A	A	A
SR 12	Between Emperor Drive and Woodlark Drive, Suisun City	2	2	1,400	516	1,158	1,240	650	0.184	0.414	0.443	0.232	A	A	A	A
SR 12	Between Lawler Ranch Parkway and Scally Lane, Suisun City	1	1	1,600	321	681	575	335	0.201	0.426	0.359	0.209	A	A	A	A
SR 12	Between Olsen Road and SR 113 Junction, Rio Vista	1	1	1,600	265	663	567	267	0.166	0.414	0.354	0.167	A	A	A	A
SR 12	Between Virginia Drive and SR 84 Junction @ N Front Street, Rio Vista	1	1	900	466	790	709	584	0.518	0.878	0.788	0.649	A	D	C	B

Route	Location	Number of Lanes		Capacity (vphpl)	Existing 2023 Volume				Existing 2023 No Build V/C Ratio				Existing 2023 No Build LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
SR 113	Between SR 12 Junction and McCormack Road, Rio Vista	1	1	1,600	264	146	173	202	0.165	0.091	0.108	0.126	A	A	A	A
SR 113	Between Silveyville Cemetery Road/ County Fair Drive and Cherry Street, Dixon	1	1	900	272	194	216	189	0.302	0.216	0.240	0.210	A	A	A	A
SR 113	Between Mayes Street and A Street, Dixon	1	1	900	448	356	418	513	0.498	0.396	0.464	0.570	A	A	A	A
SR 113	Between F Street and H Street, Dixon	2	2	1,500	449	396	356	456	0.150	0.132	0.119	0.152	A	A	A	A
SR 113	Between E Dorset Drive and I-80 Junction	2	4	2,000	1,759	2,121	2,039	1,403	0.440	0.265	0.510	0.175	A	A	A	A
SR 84	Between Oak Tree Alley and Airport Road, Rio Vista	1	1	850	19	23	22	23	0.022	0.027	0.026	0.027	A	A	A	A
SR 160	South of SR 12 & SR 160 Intersection	1	1	900	184	260	281	253	0.204	0.289	0.312	0.281	A	A	A	A

Appendix C – Future No-Project Conditions LOS and Delay Results – Freeway Operations

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 Demands				Future 2040 No Build V/C Ratio				Future 2040 No Build LOS			
					AM		PM		AM		PM		AM		PM	
		NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
I-680	Between Benicia Martinez Bridge and Bayshore Road	5	4	2,000	3,521	6,562	5,713	4,033	0.352	0.820	0.571	0.504	A	D	A	A
I-680	Between Industrial Way and Lake Herman Road	2	2	2,000	2,464	3,703	3,245	2,508	0.616	0.926	0.811	0.627	B	E	D	B
I-680	Between Parish Road Marshview Road	2	2	2,000	2,400	3,797	3,291	2,460	0.600	0.949	0.823	0.615	A	E	D	B
I-680	Between Gold Hill Road and Cordelia Road @ I-80	2	2	2,000	2,947	3,611	3,714	2,814	0.737	0.903	0.929	0.703	C	E	E	C
I-80	Between I-680 ramps and Lopes Road	5	5	2,000	3,745	4,156	5,546	3,128	0.374	0.416	0.555	0.313	A	A	A	A
I-80	Between I-80 Off Ramp and Suisun Valley Road	6	6	2,000	5,410	8,240	8,039	5,725	0.451	0.687	0.670	0.477	A	B	B	A
I-80	Between Suisun Valley Road and SR12 @ Hale Ranch Road	7	6	2,000	5,991	8,939	8,790	6,411	0.428	0.745	0.628	0.534	A	C	B	A
I-80	Between Auto Mall Parkway and Rockville	5	5	2,000	4,794	7,095	6,895	4,829	0.479	0.709	0.690	0.483	A	C	B	A

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 Demands				Future 2040 No Build V/C Ratio				Future 2040 No Build LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
	Road/W Texas Street, Fairfield															
I-80	Between Airbase Parkway and North Texas Street/Manuel Campous Parkway, Fairfield	5	5	2,000	4,018	6,686	6,109	4,221	0.402	0.669	0.611	0.422	A	B	B	A
I-80	Between North Texas Street/Manuel Campous Parkway and Cherry Glen Road/Lagoon Valley Road, Vacaville	4	4	2,000	4,927	6,854	6,910	5,082	0.616	0.857	0.864	0.635	B	D	D	B
I-80	Between Cherry Glen Road/Lagoon Valley Road and Cherry Glen Road/Rivera Road, Vacaville	4	4	2,000	4,739	6,641	6,882	4,960	0.592	0.830	0.860	0.620	A	D	D	B
I-80	Between Nut Tree Road and I-505 Junction @ Orange Drive	4	4	2,000	4,630	4,740	5,061	3,989	0.579	0.592	0.633	0.499	A	A	B	A
I-80	Between Meridian	3	4	2,000	3,422	4,719	4,226	3,798	0.570	0.590	0.704	0.475	A	A	C	A

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 Demands				Future 2040 No Build V/C Ratio				Future 2040 No Build LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
	Road/Weber Road and Midway Road, Dixon															
I-80	Between Midway Road and Dixon Avenue/A Street, Dixon	3	3	2,000	3,370	4,475	4,020	3,562	0.562	0.746	0.670	0.594	A	C	B	A
I-80	Between Dixon Avenue/A Street and Pitt School Road, Dixon	3	3	2,000	3,628	4,051	3,773	3,496	0.605	0.675	0.629	0.583	B	B	B	A
I-80	Between Pitt School Road and SR 113 Junction @ Milk Farm Road	4	4	2,000	3,822	4,306	3,858	3,649	0.478	0.538	0.482	0.456	A	A	A	A
SR 12	Between I-80 Junction and Chadbourne Road, Fairfield	2	2	1,600	1,266	2,674	2,783	1,369	0.396	0.835	0.870	0.428	A	D	D	A
SR 12	Between Chadbourne Road and Beck Avenue, Fairfield	2	2	1,400	1,445	2,216	2,313	1,676	0.516	0.791	0.826	0.599	A	C	D	A
SR 12	Between Main Street and Marina Boulevard, Suisun City	2	2	2,000	1,230	2,406	2,071	1,278	0.307	0.601	0.518	0.319	A	B	A	A

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 Demands				Future 2040 No Build V/C Ratio				Future 2040 No Build LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
SR 12	Between Emperor Drive and Woodlark Drive, Suisun City	2	2	1,400	649	1,456	1,622	850	0.232	0.520	0.579	0.304	A	A	A	A
SR 12	Between Lawler Ranch Parkway and Scally Lane, Suisun City	1	1	1,600	404	856	752	438	0.252	0.535	0.470	0.274	A	A	A	A
SR 12	Between Olsen Road and SR 113 Junction, Rio Vista	1	1	1,600	333	834	741	349	0.208	0.521	0.463	0.218	A	A	A	A
SR 12	Between Virginia Drive and SR 84 Junction @ N Front Street, Rio Vista	1	1	900	586	993	927	764	0.651	1.104	1.030	0.849	B	F	F	D
SR 113	Between SR 12 Junction and McCormack Road, Rio Vista	1	1	1,600	354	196	235	275	0.221	0.122	0.147	0.172	A	A	A	A
SR 113	Between Silveyville Cemetery Road/ County Fair Drive and Cherry Street, Dixon	1	1	900	364	260	294	257	0.405	0.289	0.326	0.286	A	A	A	A

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 Demands				Future 2040 No Build V/C Ratio				Future 2040 No Build LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
SR 113	Between Mayes Street and A Street, Dixon	1	1	900	600	477	569	698	0.667	0.530	0.632	0.775	B	A	B	C
SR 113	Between F Street and H Street, Dixon	2	2	1,500	601	530	484	620	0.200	0.177	0.161	0.207	A	A	A	A
SR 113	Between E Dorset Drive and I-80 Junction	2	4	2,000					0.589	0.355	0.693	0.239	A	A	B	A
SR 84	Between Oak Tree Alley and Airport Road, Rio Vista	1	1	850	26	31	32	33	0.030	0.036	0.037	0.039	A	A	A	A
SR 160	South of SR 12 & SR 160 Intersection	1	1	900	215	304	318	286	0.239	0.338	0.353	0.318	A	A	A	A

Appendix D - Future Year (2040) plus Project Phase 1 Conditions Analysis – Freeway Operations

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 plus Project Demands Phase 1				Future plus Project Phase 1 V/C Ratio				Future plus Project Phase 1 LOS			
					AM		PM		AM		PM		AM		PM	
		NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
I-680	Between Benicia Martinez Bridge and Bayshore Road	5	4	2,000	3,577	6,592	5,752	4,144	0.358	0.824	0.575	0.518	A	D	A	A
I-680	Between Industrial Way and Lake Herman Road	2	2	2,000	2,558	3,712	3,303	2,669	0.640	0.928	0.826	0.667	B	E	D	B
I-680	Between Parish Road Marshview Road	2	2	2,000	2,493	3,824	3,362	2,621	0.623	0.956	0.841	0.655	B	E	D	B
I-680	Between Gold Hill Road and Cordelia Road @ I-80	2	2	2,000	3,024	3,646	4,117	2,957	0.756	0.911	1.029	0.739	C	E	F	C
I-80	Between I-680 ramps and Lopes Road	5	5	2,000	3,847	4,423	5,918	3,316	0.385	0.442	0.592	0.332	A	A	A	A
I-80	Between I-80 Off Ramp and Suisun Valley Road	6	6	2,000	5,531	8,570	8,434	5,923	0.461	0.714	0.703	0.494	A	C	C	A
I-80	Between Suisun Valley Road and SR12 @ Hale Ranch Road	7	6	2,000	6,109	9,302	9,205	6,643	0.436	0.775	0.658	0.554	A	C	B	A
I-80	Between Auto Mall Parkway and Rockville	5	5	2,000	4,880	7,352	7,123	4,983	0.488	0.735	0.712	0.498	A	C	C	A

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 plus Project Demands Phase 1				Future plus Project Phase 1 V/C Ratio				Future plus Project Phase 1 LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
	Road/W Texas Street, Fairfield															
I-80	Between Airbase Parkway and North Texas Street/Manuel Campous Parkway, Fairfield	5	5	2,000	4,133	6,822	6,299	4,351	0.413	0.682	0.630	0.435	A	B	B	A
I-80	Between North Texas Street/Manuel Campous Parkway and Cherry Glen Road/Lagoon Valley Road, Vacaville	4	4	2,000	5,117	7,059	7,103	5,209	0.640	0.882	0.888	0.651	B	D	D	B
I-80	Between Cherry Glen Road/Lagoon Valley Road and Cherry Glen Road/Rivera Road, Vacaville	4	4	2,000	4,822	6,831	7,079	5,094	0.603	0.854	0.885	0.637	B	D	D	B
I-80	Between Nut Tree Road and I-505 Junction @ Orange Drive	4	4	2,000	4,657	4,918	5,234	4,138	0.582	0.615	0.654	0.517	A	B	B	A
I-80	Between Meridian	3	4	2,000	3,448	4,797	4,424	3,939	0.575	0.600	0.737	0.492	A	A	C	A

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 plus Project Demands Phase 1				Future plus Project Phase 1 V/C Ratio				Future plus Project Phase 1 LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
	Road/Weber Road and Midway Road, Dixon															
I-80	Between Midway Road and Dixon Avenue/A Street, Dixon	3	3	2,000	3,391	4,518	4,125	3,584	0.565	0.753	0.688	0.597	A	C	B	A
I-80	Between Dixon Avenue/A Street and Pitt School Road, Dixon	3	3	2,000	3,644	4,105	3,898	3,511	0.607	0.684	0.650	0.585	B	B	B	A
I-80	Between Pitt School Road and SR 113 Junction @ Milk Farm Road	4	4	2,000	3,843	4,357	3,880	3,666	0.480	0.545	0.485	0.458	A	A	A	A
SR 12	Between I-80 Junction and Chadbourne Road, Fairfield	2	2	1,600	1,348	3,071	2,950	1,553	0.421	0.960	0.922	0.485	A	E	E	A
SR 12	Between Chadbourne Road and Beck Avenue, Fairfield	2	2	1,400	1,538	2,625	2,496	1,895	0.549	0.937	0.891	0.677	A	E	D	B
SR 12	Between Main Street and Marina Boulevard, Suisun City	2	2	2,000	1,381	2,909	2,463	1,644	0.345	0.727	0.616	0.411	A	C	B	A

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 plus Project Demands Phase 1				Future plus Project Phase 1 V/C Ratio				Future plus Project Phase 1 LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
SR 12	Between Emperor Drive and Woodlark Drive, Suisun City	2	2	1,400	859	2,112	2,112	1,347	0.307	0.754	0.754	0.481	A	C	C	A
SR 12	Between Lawler Ranch Parkway and Scally Lane, Suisun City	1	1	1,600	663	1,541	1,285	994	0.414	0.963	0.803	0.621	A	E	D	B
SR 12	Between Olsen Road and SR 113 Junction, Rio Vista	1	1	1,600	629	1,741	1,685	979	0.393	1.088	1.053	0.612	A	F	F	B
SR 12	Between Virginia Drive and SR 84 Junction @ N Front Street, Rio Vista	1	1	900	670	1,002	943	769	0.744	1.113	1.048	0.855	C	F	F	D
SR 113	Between SR 12 Junction and McCormack Road, Rio Vista	1	1	1,600	945	633	751	1,012	0.590	0.396	0.469	0.633	A	A	A	B
SR 113	Between Silveyville Cemetery Road/ County Fair Drive and Cherry Street, Dixon	1	1	900	412	343	361	290	0.458	0.381	0.401	0.322	A	A	A	A

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 plus Project Demands Phase 1				Future plus Project Phase 1 V/C Ratio				Future plus Project Phase 1 LOS			
					AM		PM		AM		PM		AM		PM	
		NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
SR 113	Between Mayes Street and A Street, Dixon	1	1	900	605	498	573	706	0.672	0.553	0.637	0.784	B	A	B	C
SR 113	Between F Street and H Street, Dixon	2	2	1,500	603	532	489	623	0.201	0.177	0.163	0.208	A	A	A	A
SR 113	Between E Dorset Drive and I-80 Junction	2	4	2,000					0.589	0.355	0.694	0.239	A	A	B	A
SR 84	Between Oak Tree Alley and Airport Road, Rio Vista	1	1	850	31	38	162	74	0.037	0.045	0.190	0.087	A	A	A	A
SR 160	South of SR 12 & SR 160 Intersection	1	1	900	234	412	417	326	0.260	0.457	0.464	0.362	A	A	A	A

Appendix E - Future Year (2040) plus Project Phase 2 Conditions Analysis – Freeway Operations

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 plus Project Demands Phase 2				Future plus Project Phase 2 V/C Ratio				Future plus Project Phase 2 LOS			
					AM		PM		AM		PM		AM		PM	
		NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
I-680	Between Benicia Martinez Bridge and Bayshore Road	5	4	2,000	3,597	6,757	6,203	4,500	0.360	0.845	0.620	0.562	A	D	B	A
I-680	Between Industrial Way and Lake Herman Road	2	2	2,000	2,568	3,909	3,622	2,691	0.642	0.977	0.906	0.673	B	E	E	B
I-680	Between Parish Road Marshview Road	2	2	2,000	2,500	4,063	3,735	2,642	0.625	1.016	0.934	0.660	B	F	E	B
I-680	Between Gold Hill Road and Cordelia Road @ I-80	2	2	2,000	3,147	3,837	4,401	2,971	0.787	0.959	1.100	0.743	C	E	F	C
I-80	Between I-680 ramps and Lopes Road	5	5	2,000	4,042	5,736	7,293	3,525	0.404	0.574	0.729	0.353	A	A	C	A
I-80	Between I-80 Off Ramp and Suisun Valley Road	6	6	2,000	5,754	10,171	9,853	6,221	0.480	0.848	0.821	0.518	A	D	D	A
I-80	Between Suisun Valley Road and SR12 @ Hale Ranch Road	7	6	2,000	6,360	10,876	10,662	6,945	0.454	0.906	0.762	0.579	A	E	C	A
I-80	Between Auto Mall Parkway and Rockville	5	5	2,000	4,936	8,158	8,131	5,041	0.494	0.816	0.813	0.504	A	D	D	A

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 plus Project Demands Phase 2				Future plus Project Phase 2 V/C Ratio				Future plus Project Phase 2 LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
	Road/W Texas Street, Fairfield															
I-80	Between Airbase Parkway and North Texas Street/Manuel Campous Parkway, Fairfield	5	5	2,000	4,178	7,247	6,865	4,373	0.418	0.725	0.686	0.437	A	C	B	A
I-80	Between North Texas Street/Manuel Campous Parkway and Cherry Glen Road/Lagoon Valley Road, Vacaville	4	4	2,000	5,145	7,428	7,663	5,255	0.643	0.929	0.958	0.657	B	E	E	B
I-80	Between Cherry Glen Road/Lagoon Valley Road and Cherry Glen Road/Rivera Road, Vacaville	4	4	2,000	4,848	7,162	7,522	5,116	0.606	0.895	0.940	0.639	B	D	E	B
I-80	Between Nut Tree Road and I-505 Junction @ Orange Drive	4	4	2,000	4,686	4,938	5,285	4,154	0.586	0.617	0.661	0.519	A	B	B	A
I-80	Between Meridian	3	4	2,000	3,474	4,871	4,472	3,978	0.579	0.609	0.745	0.497	A	B	C	A

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 plus Project Demands Phase 2				Future plus Project Phase 2 V/C Ratio				Future plus Project Phase 2 LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
	Road/Weber Road and Midway Road, Dixon															
I-80	Between Midway Road and Dixon Avenue/A Street, Dixon	3	3	2,000	3,419	4,520	4,147	3,606	0.570	0.753	0.691	0.601	A	C	B	B
I-80	Between Dixon Avenue/A Street and Pitt School Road, Dixon	3	3	2,000	3,679	4,109	3,924	3,545	0.613	0.685	0.654	0.591	B	B	B	A
I-80	Between Pitt School Road and SR 113 Junction @ Milk Farm Road	4	4	2,000	3,885	4,366	3,909	3,715	0.486	0.546	0.489	0.464	A	A	A	A
SR 12	Between I-80 Junction and Chadbourne Road, Fairfield	2	2	1,600	1,541	3,511	3,395	1,788	0.482	1.097	1.061	0.559	A	F	F	A
SR 12	Between Chadbourne Road and Beck Avenue, Fairfield	2	2	1,400	1,775	3,047	2,932	2,164	0.634	1.088	1.047	0.773	B	F	F	C
SR 12	Between Main Street and Marina Boulevard, Suisun City	2	2	2,000	1,665	3,271	2,922	1,965	0.416	0.818	0.731	0.491	A	D	C	A

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 plus Project Demands Phase 2				Future plus Project Phase 2 V/C Ratio				Future plus Project Phase 2 LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
SR 12	Between Emperor Drive and Woodlark Drive, Suisun City	2	2	1,400	1,186	2,489	2,604	1,713	0.424	0.889	0.930	0.612	A	D	E	B
SR 12	Between Lawler Ranch Parkway and Scally Lane, Suisun City	1	1	1,600	1,015	1,930	1,831	1,413	0.634	1.206	1.144	0.883	B	F	F	D
SR 12	Between Olsen Road and SR 113 Junction, Rio Vista	1	1	1,600	1,035	2,294	2,341	1,437	0.647	1.434	1.463	0.898	B	F	F	D
SR 12	Between Virginia Drive and SR 84 Junction @ N Front Street, Rio Vista	1	1	900	679	1,195	1,024	853	0.754	1.328	1.138	0.948	C	F	F	E
SR 113	Between SR 12 Junction and McCormack Road, Rio Vista	1	1	1,600	2,240	826	1,818	2,079	1.400	0.516	1.136	1.299	F	A	F	F
SR 113	Between Silveyville Cemetery Road/ County Fair Drive and Cherry Street, Dixon	1	1	900	886	382	424	370	0.984	0.425	0.471	0.411	E	A	A	A

Route	Location	Number of Lanes		Capacity (vphpl)	Future 2040 plus Project Demands Phase 2				Future plus Project Phase 2 V/C Ratio				Future plus Project Phase 2 LOS			
		NB/EB	SB/WB		AM		PM		AM		PM		AM		PM	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
SR 113	Between Mayes Street and A Street, Dixon	1	1	900	647	529	633	794	0.719	0.588	0.704	0.883	C	A	C	D
SR 113	Between F Street and H Street, Dixon	2	2	1,500	644	571	537	657	0.215	0.190	0.179	0.219	A	A	A	A
SR 113	Between E Dorset Drive and I-80 Junction	2	4	2,000					0.594	0.359	0.701	0.246	A	A	C	A
SR 84	Between Oak Tree Alley and Airport Road, Rio Vista	1	1	850	37	672	475	302	0.043	0.791	0.559	0.356	A	C	A	A
SR 160	South of SR 12 & SR 160 Intersection	1	1	900	249	990	833	688	0.277	1.099	0.926	0.764	A	<b>F</b>	<b>E</b>	C

**Appendix F – Existing Conditions LOS and Delay Results – Local Streets**

Roadway Location	Number of Lanes		Travel Demand Model Capacity per lane	Existing 2015 No Build Model Demand				Existing 2015 No Build V/C Ratio				Existing 2015 No Build LOS			
	EB/NB	WB/SB		AM		PM		AM		PM		AM		PM	
				EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB
Anderson Road South of Emigh Road	1	1	500	0	1	1	1	0.000	0.002	0.002	0.002	A	A	A	A
Azvedo Road North of Emigh Road	1	1	500	1	2	4	1	0.002	0.004	0.008	0.002	A	A	A	A
Batavia Road near Dixon	1	1	500	5	8	11	7	0.010	0.016	0.022	0.014	A	A	A	A
Binghamto Road near SR 113	1	1	500	1	4	4	2	0.002	0.008	0.008	0.004	A	A	A	A
Birds Landing Road South of SR 12	1	1	500	6	8	8	9	0.012	0.016	0.016	0.017	A	A	A	A
Bunker Station Road East of Binghamton Road	1	1	500	1	3	2	2	0.002	0.006	0.004	0.004	A	A	A	A
Byrnes Road North of Hawkins Road	1	1	500	3	2	2	2	0.006	0.004	0.004	0.004	A	A	A	A
Canright Road West of Azevedo Road	1	1	500	0	1	2	1	0.000	0.002	0.004	0.002	A	A	A	A
Collinsville Road South of Shiloh Road	1	1	500	6	3	5	4	0.012	0.006	0.010	0.008	A	A	A	A
Creed Road West of SR 113	1	1	500	2	0	1	2	0.004	0.000	0.002	0.004	A	A	A	A
Currie Road South of SR 12	1	1	500	1	0	0	0	0.002	0.000	0.000	0.000	A	A	A	A
Dixon Avenue East of A Street	1	1	500	1	7	8	5	0.002	0.014	0.016	0.010	A	A	A	A
Elmira Road East of Vacaville	1	1	500	3	24	27	14	0.006	0.048	0.054	0.028	A	A	A	A
Emigh Road West of Azevedo Road	1	1	500	0	0	0	0	0.000	0.000	0.000	0.000	A	A	A	A
Flannery Road East of SR 113	1	1	500	1	1	1	1	0.002	0.002	0.002	0.002	A	A	A	A
Fry Road East of Lewis Road	1	1	500	4	28	26	14	0.008	0.056	0.052	0.028	A	A	A	A
Goose Haven Road South of Creed Road	1	1	500	0	0	0	0	0.000	0.000	0.000	0.000	A	A	A	A
Hawkins Road East of Lewis Road	1	1	500	11	29	39	20	0.022	0.058	0.078	0.040	A	A	A	A
Holdener Road West of Lewis Road	1	1	500	2	1	1	2	0.004	0.002	0.002	0.004	A	A	A	A
Kidwell Road Overpass	1	1	500	5	1	8	3	0.010	0.002	0.016	0.006	A	A	A	A
Kilkenny Road East of I-80	1	1	500	1	2	1	2	0.002	0.004	0.002	0.004	A	A	A	A
Lambie Road West of SR 113	1	1	500	0	0	0	0	0.000	0.000	0.000	0.000	A	A	A	A
Lewis Road North of Hawkins Road	1	1	500	10	11	12	12	0.020	0.022	0.024	0.024	A	A	A	A

Roadway Location	Number of Lanes		Travel Demand Model Capacity per lane	Existing 2015 No Build Model Demand				Existing 2015 No Build V/C Ratio				Existing 2015 No Build LOS			
	EB/NB	WB/SB		AM		PM		AM		PM		AM		PM	
				EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB
McClosky Road North of SR 12	1	1	500	3	1	3	4	0.006	0.002	0.006	0.008	A	A	A	A
McCormack Road East of SR 113	1	1	500	0	0	0	0	0.000	0.000	0.000	0.000	A	A	A	A
McCory Road North of Gate Road	1	1	500	6	8	8	9	0.012	0.016	0.016	0.017	A	A	A	A
Meridian Road South of Fry Road	1	1	500	7	9	13	10	0.014	0.018	0.026	0.020	A	A	A	A
Midway Road West of SR 113	1	1	500	10	25	22	16	0.020	0.050	0.044	0.032	A	A	A	A
Montezuma Hills Boulevard East of Emigh Road	1	1	500	4	4	5	5	0.008	0.008	0.010	0.010	A	A	A	A
Peabody Road between Fairfield and Vacaville	1	1	500	638	780	1008	939	1.276	1.560	2.016	1.878	F	F	F	F
Pedrick Road North of A Street	1	1	500	1	5	5	4	0.002	0.010	0.010	0.008	A	A	A	A
Pitt School Road North of Midway Road	1	1	500	5	3	4	6	0.010	0.006	0.008	0.012	A	A	A	A
Porter Road East of Pitt School Road	1	1	500	0	1	1	1	0.000	0.002	0.002	0.002	A	A	A	A
Robben Road North of Midway Road	1	1	500	0	0	0	0	0.000	0.000	0.000	0.000	A	A	A	A
Robinson Road East of SR 113	1	1	500	0	0	0	0	0.000	0.000	0.000	0.000	A	A	A	A
Salem Road East of SR 113	1	1	500	0	0	0	0	0.000	0.000	0.000	0.000	A	A	A	A
Shiloh Road South of SR 12	1	1	500	6	4	6	6	0.012	0.008	0.012	0.012	A	A	A	A
Sparling Lane South of Kidwell Road	1	1	500	6	4	5	7	0.012	0.008	0.010	0.014	A	A	A	A
Weber Road West of Byrnes Road	1	1	500	3	15	18	7	0.006	0.030	0.036	0.014	A	A	A	A
Willow Road South of Walnut Road	1	1	500	2	4	5	5	0.004	0.008	0.010	0.010	A	A	A	A

**Appendix G – Future (2040) No-Project Conditions LOS and Delay Results – Local Streets**

Roadway Location	Number of Lanes		Travel Demand Model Capacity per lane	Future 2040 No Build Model Demand				Future No Build V/C Ratio				Future No Build LOS			
	EB/NB	WB/SB		AM		PM		AM		PM		AM		PM	
				EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB
Anderson Road South of Emigh Road	1	1	500	0	1	2	1	0.000	0.002	0.004	0.002	A	A	A	A
Azvedo Road North of Emigh Road	1	1	500	2	4	5	3	0.004	0.008	0.010	0.006	A	A	A	A
Batavia Road near Dixon	1	1	500	7	11	12	9	0.014	0.022	0.024	0.018	A	A	A	A
Binghamto Road near SR 113	1	1	500	1	6	4	3	0.002	0.012	0.008	0.006	A	A	A	A
Birds Landing Road South of SR 12	1	1	500	13	7	12	13	0.026	0.014	0.024	0.026	A	A	A	A
Bunker Station Road East of Binghamton Road	1	1	500	1	3	2	2	0.002	0.006	0.004	0.004	A	A	A	A
Byrnes Road North of Hawkins Road	1	1	500	3	2	3	8	0.006	0.004	0.006	0.016	A	A	A	A
Canright Road West of Azevedo Road	1	1	500	2	4	6	5	0.004	0.008	0.012	0.010	A	A	A	A
Collinsville Road South of Shiloh Road	1	1	500	16	4	10	11	0.032	0.008	0.020	0.022	A	A	A	A
Creed Road West of SR 113	1	1	500	7	1	5	2	0.014	0.002	0.010	0.004	A	A	A	A
Currie Road South of SR 12	1	1	500	0	1	1	2	0.000	0.002	0.002	0.004	A	A	A	A
Dixon Avenue East of A Street	1	1	500	2	8	6	4	0.004	0.016	0.012	0.008	A	A	A	A
Elmira Road East of Vacaville	1	1	500	10	52	61	30	0.020	0.104	0.122	0.060	A	A	A	A
Emigh Road West of Azevedo Road	1	1	500	0	0	0	0	0.000	0.000	0.000	0.000	A	A	A	A
Flannery Road East of SR 113	1	1	500	6	1	1	2	0.012	0.002	0.002	0.004	A	A	A	A
Fry Road East of Lewis Road	1	1	500	48	65	77	75	0.096	0.130	0.154	0.150	A	A	A	A
Goose Haven Road South of Creed Road	1	1	500	1	4	2	3	0.002	0.008	0.004	0.006	A	A	A	A
Hawkins Road East of Lewis Road	1	1	500	45	71	84	68	0.090	0.142	0.168	0.136	A	A	A	A
Holdener Road West of Lewis Road	1	1	500	2	1	2	4	0.004	0.002	0.004	0.008	A	A	A	A
Kidwell Road Overpass	1	1	500	6	1	9	4	0.012	0.002	0.018	0.008	A	A	A	A
Kilkenny Road East of I-80	1	1	500	2	4	3	5	0.004	0.008	0.006	0.010	A	A	A	A
Lambie Road West of SR 113	1	1	500	8	3	6	4	0.016	0.006	0.012	0.008	A	A	A	A
Lewis Road North of Hawkins Road	1	1	500	11	12	11	14	0.022	0.024	0.022	0.028	A	A	A	A

Roadway Location	Number of Lanes		Travel Demand Model Capacity per lane	Future 2040 No Build Model Demand				Future No Build V/C Ratio				Future No Build LOS			
	EB/NB	WB/SB		AM		PM		AM		PM		AM		PM	
				EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB
McClosky Road North of SR 12	1	1	500	1	2	6	3	0.002	0.004	0.012	0.006	A	A	A	A
McCormack Road East of SR 113	1	1	500	0	0	0	0	0.000	0.000	0.000	0.000	A	A	A	A
McCory Road North of Gate Road	1	1	500	13	7	12	13	0.026	0.014	0.024	0.026	A	A	A	A
Meridian Road South of Fry Road	1	1	500	6	13	16	10	0.012	0.026	0.032	0.020	A	A	A	A
Midway Road West of SR 113	1	1	500	26	52	46	41	0.052	0.104	0.092	0.082	A	A	A	A
Montezuma Hills Boulevard East of Emigh Road	1	1	500	7	8	9	10	0.014	0.016	0.018	0.020	A	A	A	A
Peabody Road between Fairfield and Vacaville	1	1	500	650	800	1110	960	1.300	1.600	2.220	1.920	F	F	F	F
Pedrick Road North of A Street	1	1	500	2	6	5	4	0.004	0.012	0.010	0.008	A	A	A	A
Pitt School Road North of Midway Road	1	1	500	5	3	4	6	0.010	0.006	0.008	0.012	A	A	A	A
Porter Road East of Pitt School Road	1	1	500	1	1	2	1	0.002	0.002	0.004	0.002	A	A	A	A
Robben Road North of Midway Road	1	1	500	0	0	0	0	0.000	0.000	0.000	0.000	A	A	A	A
Robinson Road East of SR 113	1	1	500	0	0	0	0	0.000	0.000	0.000	0.000	A	A	A	A
Salem Road East of SR 113	1	1	500	0	0	0	0	0.000	0.000	0.000	0.000	A	A	A	A
Shiloh Road South of SR 12	1	1	500	19	5	12	14	0.038	0.010	0.024	0.028	A	A	A	A
Sparling Lane South of Kidwell Road	1	1	500	7	5	6	8	0.014	0.010	0.012	0.016	A	A	A	A
Weber Road West of Byrnes Road	1	1	500	3	16	18	11	0.006	0.032	0.036	0.022	A	A	A	A
Willow Road South of Walnut Road	1	1	500	5	11	12	10	0.010	0.022	0.024	0.020	A	A	A	A

Appendix H – Future (2040) Plus-Project Phase 1 Conditions LOS and Delay Results – Local Streets

Roadway Location	Number of Lanes		Travel Demand Model Capacity per lane	Future Project Demand - Phase 1 (50k Population+15k Employment)				Future Build Phase1 V/C Ratio				Future Build Phase 1 LOS			
	EB/NB	WB/SB		AM		PM		AM		PM		AM		PM	
				EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB
Anderson Road South of Emigh Road	1	1	500	2	5	6	10	0.004	0.010	0.012	0.020	A	A	A	A
Azvedo Road North of Emigh Road	1	1	500	3	6	10	6	0.006	0.012	0.020	0.012	A	A	A	A
Batavia Road near Dixon	1	1	500	10	11	12	11	0.020	0.022	0.024	0.022	A	A	A	A
Binghamto Road near SR 113	1	1	500	1	6	4	3	0.002	0.012	0.008	0.006	A	A	A	A
Birds Landing Road South of SR 12	1	1	500	21	8	16	25	0.042	0.016	0.032	0.050	A	A	A	A
Bunker Station Road East of Binghamton Road	1	1	500	1	4	2	4	0.002	0.008	0.004	0.008	A	A	A	A
Byrnes Road North of Hawkins Road	1	1	500	11	11	11	12	0.022	0.022	0.022	0.024	A	A	A	A
Canright Road West of Azevedo Road	1	1	500	287	138	248	415	0.574	0.276	0.496	0.830	A	A	A	D
Collinsville Road South of Shiloh Road	1	1	500	16	4	10	14	0.032	0.008	0.020	0.028	A	A	A	A
Creed Road West of SR 113	1	1	500	7	5	5	2	0.014	0.010	0.010	0.004	A	A	A	A
Currie Road South of SR 12	1	1	500	2	5	6	10	0.004	0.010	0.012	0.020	A	A	A	A
Dixon Avenue East of A Street	1	1	500	8	25	25	15	0.016	0.050	0.050	0.030	A	A	A	A
Elmira Road East of Vacaville	1	1	500	10	52	61	30	0.020	0.104	0.122	0.060	A	A	A	A
Emigh Road West of Azevedo Road	1	1	500	3	6	10	6	0.006	0.012	0.020	0.012	A	A	A	A
Flannery Road East of SR 113	1	1	500	997	190	1089	615	1.994	0.380	2.178	1.230	F	A	F	F
Fry Road East of Lewis Road	1	1	500	120	306	325	249	0.240	0.612	0.650	0.498	A	B	B	A
Goose Haven Road South of Creed Road	1	1	500	1	27	3	4	0.002	0.054	0.006	0.008	A	A	A	A
Hawkins Road East of Lewis Road	1	1	500	79	169	179	148	0.158	0.338	0.358	0.296	A	A	A	A
Holdener Road West of Lewis Road	1	1	500	3	2	2	4	0.006	0.004	0.004	0.008	A	A	A	A
Kidwell Road Overpass	1	1	500	6	1	9	4	0.012	0.002	0.018	0.008	A	A	A	A
Kilkenny Road East of I-80	1	1	500	2	4	3	5	0.004	0.008	0.006	0.010	A	A	A	A
Lambie Road West of SR 113	1	1	500	8	83	107	119	0.016	0.166	0.214	0.238	A	A	A	A
Lewis Road North of Hawkins Road	1	1	500	11	12	13	14	0.022	0.024	0.026	0.028	A	A	A	A

Roadway Location	Number of Lanes		Travel Demand Model Capacity per lane	Future Project Demand - Phase 1 (50k Population+15k Employment)				Future Build Phase1 V/C Ratio				Future Build Phase 1 LOS			
	EB/NB	WB/SB		AM		PM		AM		PM		AM		PM	
				EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB
McClosky Road North of SR 12	1	1	500	88	826	865	454	0.176	1.652	1.730	0.908	A	F	F	E
McCormack Road East of SR 113	1	1	500	874	0	1040	328	1.748	0.000	2.080	0.656	F	A	F	B
McCory Road North of Gate Road	1	1	500	13	99	77	17	0.026	0.198	0.154	0.034	A	A	A	A
Meridian Road South of Fry Road	1	1	500	11	15	21	14	0.022	0.030	0.042	0.028	A	A	A	A
Midway Road West of SR 113	1	1	500	36	57	52	47	0.072	0.114	0.104	0.094	A	A	A	A
Montezuma Hills Boulevard East of Emigh Road	1	1	500	7	11	27	12	0.014	0.022	0.054	0.024	A	A	A	A
Peabody Road between Fairfield and Vacaville	1	1	500	697	802	1113	993	1.394	1.604	2.226	1.986	F	F	F	F
Pedrick Road North of A Street	1	1	500	74	38	59	90	0.148	0.076	0.118	0.180	A	A	A	A
Pitt School Road North of Midway Road	1	1	500	5	3	4	6	0.010	0.006	0.008	0.012	A	A	A	A
Porter Road East of Pitt School Road	1	1	500	6	5	8	10	0.012	0.010	0.016	0.020	A	A	A	A
Robben Road North of Midway Road	1	1	500	2	3	3	3	0.004	0.006	0.006	0.006	A	A	A	A
Robinson Road East of SR 113	1	1	500	0	0	0	1	0.000	0.000	0.000	0.002	A	A	A	A
Salem Road East of SR 113	1	1	500	0	0	0	0	0.000	0.000	0.000	0.000	A	A	A	A
Shiloh Road South of SR 12	1	1	500	19	5	12	16	0.038	0.010	0.024	0.032	A	A	A	A
Sparling Lane South of Kidwell Road	1	1	500	7	5	6	8	0.014	0.010	0.012	0.016	A	A	A	A
Weber Road West of Byrnes Road	1	1	500	3	18	18	11	0.006	0.036	0.036	0.022	A	A	A	A
Willow Road South of Walnut Road	1	1	500	5	11	12	11	0.010	0.022	0.024	0.022	A	A	A	A

Appendix I – Future (2040) Plus-Project Phase 2 Conditions LOS and Delay Results – Local Streets

Roadway Location	Number of Lanes		Travel Demand Model Capacity per lane	Future Project Demand - Phase 2 (400k Population)				Future Build_Phase 2 V/C Ratio				Future Build_Phase 2 LOS			
	EB/NB	WB/SB		AM		PM		AM		PM		AM		PM	
				EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB
Anderson Road South of Emigh Road	1	1	500	14	184	178	9	0.028	0.368	0.356	0.018	A	A	A	A
Azvedo Road North of Emigh Road	1	1	500	3	159	149	16	0.006	0.318	0.298	0.032	A	A	A	A
Batavia Road near Dixon	1	1	500	12	11	12	12	0.024	0.022	0.024	0.024	A	A	A	A
Binghamto Road near SR 113	1	1	500	1	6	4	3	0.002	0.012	0.008	0.006	A	A	A	A
Birds Landing Road South of SR 12	1	1	500	395	58	240	340	0.790	0.116	0.480	0.680	C	A	A	B
Bunker Station Road East of Binghamton Road	1	1	500	1	5	3	2	0.002	0.010	0.006	0.004	A	A	A	A
Byrnes Road North of Hawkins Road	1	1	500	11	11	13	14	0.022	0.022	0.026	0.028	A	A	A	A
Canright Road West of Azevedo Road	1	1	500	1192	456	1027	1250	2.384	0.912	2.054	2.500	F	E	F	F
Collinsville Road South of Shiloh Road	1	1	500	16	4	10	14	0.032	0.008	0.020	0.028	A	A	A	A
Creed Road West of SR 113	1	1	500	7	220	463	5	0.014	0.440	0.926	0.010	A	A	E	A
Currie Road South of SR 12	1	1	500	19	41	63	13	0.038	0.082	0.126	0.026	A	A	A	A
Dixon Avenue East of A Street	1	1	500	8	25	25	15	0.016	0.050	0.050	0.030	A	A	A	A
Elmira Road East of Vacaville	1	1	500	10	52	61	30	0.020	0.104	0.122	0.060	A	A	A	A
Emigh Road West of Azevedo Road	1	1	500	3	159	149	16	0.006	0.318	0.298	0.032	A	A	A	A
Flannery Road East of SR 113	1	1	500	689	4042	4041	1949	1.378	8.084	8.082	3.898	F	F	F	F
Fry Road East of Lewis Road	1	1	500	105	636	674	464	0.210	1.272	1.348	0.928	A	F	F	E
Goose Haven Road South of Creed Road	1	1	500	77	554	697	396	0.154	1.108	1.394	0.792	A	F	F	C
Hawkins Road East of Lewis Road	1	1	500	68	527	554	213	0.136	1.054	1.108	0.426	A	F	F	A
Holdener Road West of Lewis Road	1	1	500	4	2	4	4	0.008	0.004	0.008	0.008	A	A	A	A
Kidwell Road Overpass	1	1	500	6	1	9	4	0.012	0.002	0.018	0.008	A	A	A	A
Kilkenny Road East of I-80	1	1	500	2	5	3	5	0.004	0.010	0.006	0.010	A	A	A	A
Lambie Road West of SR 113	1	1	500	409	172	131	518	0.818	0.344	0.262	1.036	D	A	A	F
Lewis Road North of Hawkins Road	1	1	500	11	12	13	14	0.022	0.024	0.026	0.028	A	A	A	A

Roadway Location	Number of Lanes		Travel Demand Model Capacity per lane	Future Project Demand - Phase 2 (400k Population)				Future Build_Phase 2 V/C Ratio				Future Build_Phase 2 LOS			
	EB/NB	WB/SB		AM		PM		AM		PM		AM		PM	
				EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB	EB/NB	WB/SB
McClosky Road North of SR 12	1	1	500	495	2410	2598	1643	0.990	4.820	5.196	3.286	E	F	F	F
McCormack Road East of SR 113	1	1	500	443	4175	3988	1949	0.886	8.350	7.976	3.898	D	F	F	F
McCory Road North of Gate Road	1	1	500	15	583	661	212	0.030	1.166	1.322	0.424	A	F	F	A
Meridian Road South of Fry Road	1	1	500	17	13	22	12	0.034	0.026	0.044	0.024	A	A	A	A
Midway Road West of SR 113	1	1	500	34	58	64	53	0.068	0.116	0.128	0.106	A	A	A	A
Montezuma Hills Boulevard East of Emigh Road	1	1	500	43	966	973	549	0.086	1.932	1.946	1.098	A	F	F	F
Peabody Road between Fairfield and Vacaville	1	1	500	806	800	1118	1163	1.612	1.600	2.236	2.326	F	F	F	F
Pedrick Road North of A Street	1	1	500	80	38	56	91	0.160	0.076	0.112	0.182	A	A	A	A
Pitt School Road North of Midway Road	1	1	500	5	3	4	6	0.010	0.006	0.008	0.012	A	A	A	A
Porter Road East of Pitt School Road	1	1	500	7	5	10	10	0.014	0.010	0.020	0.020	A	A	A	A
Robben Road North of Midway Road	1	1	500	2	3	3	4	0.004	0.006	0.006	0.008	A	A	A	A
Robinson Road East of SR 113	1	1	500	1359	5	681	1318	2.718	0.010	1.362	2.636	F	A	F	F
Salem Road East of SR 113	1	1	500	0	0	0	1	0.000	0.000	0.000	0.002	A	A	A	A
Shiloh Road South of SR 12	1	1	500	767	5	344	832	1.534	0.010	0.688	1.664	F	A	B	F
Sparling Lane South of Kidwell Road	1	1	500	7	5	6	8	0.014	0.010	0.012	0.016	A	A	A	A
Weber Road West of Byrnes Road	1	1	500	3	19	18	11	0.006	0.038	0.036	0.022	A	A	A	A
Willow Road South of Walnut Road	1	1	500	5	12	12	10	0.010	0.024	0.024	0.020	A	A	A	A