

## **Transit Analysis**



## Information on Ridership

As currently projected, the proposed HST program would have approximately 25,000 daily boardings at the Transit Center. Using the most-recent estimates of arrival and departure characteristics of the HST passengers (see the October 16, 2009 letter from Dominic Spaethling at CHSRA to Bradford Townsend at TJPA, referred to as “*2009 Letter*”), information obtained from CHSRA and other sources, the following weekday PM peak hour travel demand by mode was estimated.

The 2009 Business Plan estimated that HST weekday daily boardings at the Transit Center are expected to be 20,600 for inter-regional trips and 4,400 for local trips, and 12% of the inter-regional trips and 17% of local trips are expected to occur during the peak hour, with the strongest directional demand (20% more riders) occurring for outbound local trips during the PM peak hour. These factors are summarized in Table 1 and used to calculate the boardings expected during the PM peak hour at the Transit Center.

**Table 1**  
**Summary of PM Peak Hour Boarding Calculations**

Origin/Destination Market	Daily Boardings	Peak Hour as Percent of Daily	PM Peak Southbound Peaking Factor	PM Peak Boardings
Inter-Regional	20,600	12%	1.0	2,472
Local	4,400	17%	1.2	898
<b>Total</b>	<b>25,000</b>			<b>3,370</b>

Based on data presented in the *2009 Letter*, the PM peak hour alightings are expected to be approximately 53% of the PM peak hour boardings, which correspond to 1,780 PM peak hour alightings.

The *2009 Letter* also included the latest estimates of mode of travel (e.g., by private vehicles, transit, walk, etc.) for HST passengers at the Transit Center. However, this data does not fully account for the unique travel characteristics in downtown San Francisco and the currently-proposed program at the Transit Center (for instance, no rental car facilities or dedicated parking facilities are proposed). As such, modifications to the values were applied. The resulting estimates of the modal distribution are presented in Table 2.

**Table 2**  
**Summary of HST Passenger Mode of Travel**

Source	Pick-up or Drop-off	Drive and Parked Own Vehicle	Rental Car	Taxi	Transit or Shuttle	Bike and Walk	Total
Original CHSRA Estimates	13%	14%	7%	9%	27%	30%	<b>100%</b>
Revised Estimates	13%	12%	0%	10%	33%	32%	<b>100%</b>

For these revised estimates, the following modifications to the original CHSRA estimates were made:

- The percentage of passengers who would drive and park own vehicle was reduced to account for the limited off-street parking available within the vicinity of the Transit Center. With the elimination of the public and private facilities on the site with the development of the Transbay Program, parking occupancy in the study area is projected to be close to 100% of capacity. This lack of availability, which would lead to a corresponding increase in parking costs, would force HST riders to divert to other modes, such as transit or walk/bike.
- Since no rental car facilities are proposed in the Transit Center and there are no nearby rental car offices, all HST passengers wishing to rent a vehicle would need to either take a taxi or transit (or a rental car shuttle) to and from the Transit Center.

For the HST passengers who would take transit or a shuttle, an assignment to the various transit operators was made based on the current and future transit ridership and capacity data in downtown San Francisco and taking into consideration of the likely origin and destination HST passengers in San Francisco and the region. The following presents the estimated distribution of transit riders (rounded to the nearest 5%):

- Muni buses that serve the Transit Center = 30%
- Muni Metro light rail (via the Market Street subway) or buses that do not serve the Transit Center = 30%
- BART to East Bay = 10%
- AC Transit = 10%
- Golden Gate Transit = 5%
- Other shuttles and transit = 20%

Table 3 presents the overall assignment of boarding and alighting HSR passengers at the Transit Center, in terms of primary mode of travel to and from the terminal.

Table 4 presents the actual mode of ingress and egress for HSR passengers at the Transit Center (i.e., vehicle, transit, walk and bike). Since all parking spaces would be located outside the terminal and some transit providers would not directly serve the Transit Center (such as BART, some Muni bus lines, and all Muni Metro light rail lines), these trips were assigned as walk trips to and from the Transit Center. Similarly, all drop-off and pick-up activities and taxis were assigned as vehicle trips to and from the Transit Center.

**Table 3**  
**Summary of PM Peak Boardings and Alightings by Mode**

	Pick-up or Drop-off	Drive & Parked Vehicle	Taxi	Transit or Shuttle				Walk or Bike	Total
Overall Mode Splits	13%	12%	10%	33%				32%	100%
	Pick-up or Drop-off	Drive & Parked Vehicle	Taxi	Muni	AC Transit	BART	GGT	Shuttles & Other	Walk Bike
Boardings	438	404	337	337	101	101	34	202	404 34 3,370
Alightings	231	214	178	178	53	53	18	107	214 18 1,780
<b>Total</b>	<b>670</b>	<b>618</b>	<b>515</b>	<b>515</b>	<b>154</b>	<b>154</b>	<b>52</b>	<b>309</b>	<b>618 52 5,150</b>

**Table 4**  
**PM Peak HST Passengers by Mode of Access at Transit Center**

	Vehicle (Taxi and Pick-up/Drop-off)	Transit (AC Transit, GGT, Muni and Shuttle at Terminal)	Walk (Primary mode, Walk to Transit, Walk to Parking)	Bike	Total
Mode of Access	23%	33%	43%	1%	100%
Boardings	775	1,112	1,449	34	3,370
Alightings	409	587	766	18	1,780
<b>Total</b>	<b>1,184</b>	<b>1,699</b>	<b>2,215</b>	<b>52</b>	<b>5,150</b>



## **Vehicular Traffic Analysis**



### Analysis Methodology

The operation of intersections can be analyzed using the level of service (LOS) methodology, a qualitative description of the performance of an intersection based on the average delay per vehicle. Intersection LOS ranges from LOS A, which indicates free flow or excellent conditions with short delays, to LOS F, which indicates congested or overloaded conditions with extremely long delays. LOS definitions for signalized intersections are described in **Table 1**. In San Francisco, LOS A through LOS D are considered excellent to satisfactory service levels, and LOS E and LOS F represent unacceptable service levels.

**Table 1: Intersection Level of Service Definitions**

LOS	Description	Total Delay (seconds/vehicle)
A	Little or no delay	$\leq 10.0$
B	Short traffic delay	$> 10.0$ and $\leq 20.0$
C	Average traffic delay	$> 20.0$ and $\leq 35.0$
D	Long traffic delay	$> 35.0$ and $\leq 55.0$
E	Very long traffic delay	$> 55.0$ and $\leq 80.0$
F	Extreme traffic delay	$> 80.0$

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

It should be noted that delay for intersections operating at LOS F is typically reported as “greater than 80.0 seconds,” as 80.0 seconds is generally considered the limit of the meaningful range for the analysis methodology. However, since a substantial percentage of the analysis locations are projected to operate at LOS F under future-year scenarios, the actual seconds of delays are reported in order to facilitate comparison between scenarios. As such, changes in delays should only be considered at an order-of-magnitude basis.

The 27 study intersections were evaluated using the 2000 *Highway Capacity Manual* (HCM) methodology<sup>(1)</sup>. For signalized intersections, this methodology determines the capacity of each lane group approaching the intersection. The LOS is then based on average delay (in seconds per vehicle) for the various movements within the intersection. A combined weighted average delay and LOS are presented for the intersection. As required by the City and County of San Francisco, LOS is calculated using Dowling Associates’ Traffix 8.0 software package.

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<sup>(1)</sup> As part of the HCM methodology, adjustments are typically made to the capacity of each intersection to account for various factors that reduce the ability of the streets to accommodate vehicles (such as the downtown nature of the area, number of pedestrians, bus stops, vehicle types, lane widths, grades, on-street parking and queues).

## **2030 plus Project and Public Realm Plan Conditions**

2030 plus Project and Public Realm Plan Conditions assume the rezoning of the Transit Center District soft sites and the roadway improvements proposed under the Public Realm Plan. Those proposed roadway improvements include the following elements:

- Provision of transit-only lanes on the following corridors:
  - Fremont Street between the Transbay Transit Center bus plaza and Mission Street; and,
  - Beale Street between Market Street and the Transbay Transit Center bus plaza;
- Strict enforcement of transit-only lanes on Mission street between Main Street and Third Street (although these lanes are currently present, they are not fully enforced and are used by regular traffic);
- Restriction of private vehicle access on Mission Street between Fremont Street and First Street;
- Establishment of two-way traffic and traffic lane reduction on the following currently one-way facilities:
  - Howard Street between Fremont Street and Second Street;
  - Folsom Street between Main Street and Second Street;
  - Spear Street between Market Street and Harrison Street; and,
  - Main Street between Market Street and Folsom Street
- Provision of median islands and center turn-lanes, resulting in a one lane reduction in each direction, on Second Street between Market Street and Folsom Street;
- Provision of extra-wide sidewalks, resulting in a one lane reduction, on the following corridors:
  - West side of Main Street between Market Street and Harrison Street;
  - West side of Spear Street between Market Street and Harrison Street;
  - East side of Beale Street between Market Street and Harrison Street; and,
  - West side of Fremont Street between Market Street and Mission Street.
- Provision of improved and wider sidewalks along both sides of major corridors within the project area; and,
- Provision of intersection bulb-outs at most locations within the project area.

### Project Contributions- 2030 plus Project

	Intersection	Mvmt	Project Contrib. to Movement	Mvmt Share of Intersection
1	First/Market	SBT	<b>6.8%</b>	<b>45.3%</b>
		EBR	2.7%	10.3%
2	Fremont/Market	NBT	2.8%	53.6%
		NBR	1.2%	12.0%
4	First/Mission	SBT	0.9%	67.5%
		SBR	<b>16.0%</b>	<b>19.8%</b>
		WBT	100.0%	0.9%
5	Fremont/Mission	NBL	100.0%	0.9%
		NBT	2.7%	71.1%
		NBR	4.6%	23.4%
6	Beale/Mission	SBT	0.2%	62.6%
		EBT	<b>8.0%</b>	<b>11.6%</b>
7	Main/Mission	EBT	<b>7.5%</b>	<b>16.8%</b>
		WBL	<b>9.3%</b>	<b>12.0%</b>
		WBT	4.7%	46.0%
8	Second/Howard	WBR	3.0%	3.0%
		SBT	3.1%	22.7%
9	First/ Howard	SBR	<b>14.8%</b>	<b>24.7%</b>
		NBT	<b>18.1%</b>	<b>33.1%</b>
10	Fremont/Howard	WBR	7.6%	3.6%
		WBT	1.5%	18.3%
11	Beale/Howard	NBL	3.3%	3.6%
		WBT	1.5%	18.2%
12	Main/Howard	WBR	33.7%	4.9%
		SBL	3.5%	6.1%
		SBT	<b>5.1%</b>	<b>25.5%</b>
14	Second/Folsom	EBT	<b>8.1%</b>	<b>33.1%</b>
		SBL	1.7%	9.9%
		SBT	3.4%	30.7%
15	First/Folsom	EBT	<b>24.5%</b>	<b>25.4%</b>
		NBT	8.6%	1.6%
16	Fremont/Folsom	EBL	<b>46.4%</b>	<b>18.1%</b>
		EBT	0.6%	23.1%
17	Beale/Folsom	EBT	0.4%	33.0%
		NBT	0.6%	7.0%
18	Main/Folsom	EBT	0.1%	39.4%
		EBR	0.3%	13.8%
19	Spear/Folsom	EBT	0.1%	34.3%
		EBR	0.3%	7.8%
20	The Embarcadero/Folsom	NBT	<b>13.2%</b>	<b>13.2%</b>
		SBT	3.7%	14.6%
21	Second/Harrison	SBR	<b>6.3%</b>	<b>13.0%</b>
		EBT	0.4%	6.0%
22	First/Harrison	SBL	8.7%	0.7%
		SBT	2.0%	43.4%
		EBT	1.5%	1.9%
23	Fremont/Harrison	EBL	37.5%	0.5%
		NBT	0.3%	15.8%
24	Main/Harrison	NBT	4.7%	21.6%
		SBT	3.3%	21.3%
26	Second/Bryant	EBT	4.6%	26.1%

Source: AECOM, 2010.

Notes:

Movements that are impacted by the Project are shown in **bold**.

Level Of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

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Intersection #1 First / Market / Battery / Bush

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Cycle (sec): 60 Critical Vol./Cap.(X): 1.131  
Loss Time (sec): 13 Average Delay (sec/veh): 95.8  
Optimal Cycle: 180 Level Of Service: F

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Street Name: First / Battery / Bush				Market			
Approach: North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Split Phase	Split Phase	Permitted	Permitted			
Rights:	Include	Include	Include	Include			
Min. Green:	0 0 0 0	18 18 0	29 29 29	29 29 0			
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0			
Lanes:	0 0 0 0	1 0 2 0	2 0 0 1	0 1 1 0			

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Volume Module:

Base Vol:	0 0 0	113 1075	262 0	403 254	3 349	0
Growth Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00
Initial Bse:	0 0 0	113 1075	262 0	403 254	3 349	0
User Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00
PHF Adj:	0.98 0.98	0.98 0.98	0.98 0.98	0.98 0.98	0.98 0.98	0.98
PHF Volume:	0 0 0	115 1097	267 0	411 259	3 356	0
Reduc Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0
Reduced Vol:	0 0 0	115 1097	267 0	411 259	3 356	0
PCE Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00
FinalVolume:	0 0 0	115 1097	267 0	411 259	3 356	0

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Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900
Adjustment:	1.00 1.00	1.00 0.64	0.71 0.56	1.00 0.73	0.28 0.73	0.73 1.00	1.00 1.00
Lanes:	0.00 0.00	0.00 1.00	2.00 2.00	0.00 1.00	1.00 0.02	1.98 0.00	0.00 0.00
Final Sat.:	0 0 0	1211 2706	2131 0	1384 540	24 2768	0	0

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Capacity Analysis Module:

Vol/Sat:	0.00 0.00	0.00 0.10	0.41 0.13	0.00 0.30	0.48 0.48	0.13 0.13	0.00 0.00
Crit Moves:	****	****	****	****	****	****	****
Green/Cycle:	0.00 0.00	0.00 0.30	0.30 0.30	0.00 0.48	0.48 0.48	0.48 0.48	0.00 0.00
Volume/Cap:	0.00 0.00	0.00 0.32	1.35 0.42	0.00 0.61	0.99 0.27	0.27 0.27	0.00 0.00
Uniform Del:	0.0 0.0	0.0 16.2	21.0 16.8	0.0 11.4	15.4 9.2	9.2 9.2	0.0 0.0
IncremntDel:	0.0 0.0	0.0 2.3	166 2.0	0.0 4.2	54.1 0.5	0.5 0.5	0.0 0.0
InitQueuDel:	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
Delay Adj:	0.00 0.00	0.00 1.00	1.00 1.00	0.00 1.00	1.00 1.00	1.00 1.00	0.00 0.00
Delay/Veh:	0.0 0.0	0.0 18.5	187 18.8	0.0 15.6	69.6 9.7	9.7 9.7	0.0 0.0
User DelAdj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00
AdjDel/Veh:	0.0 0.0	0.0 18.5	187 18.8	0.0 15.6	69.6 9.7	9.7 9.7	0.0 0.0
LOS by Move:	A A	A B	F B	A B	E E	A A	A A
HCM2kAvgQ:	0 0	0 2	32 3	0 7	10 10	2 2	0 0

Level Of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

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Intersection #2 Fremont / Market / Front

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Cycle (sec): 60 Critical Vol./Cap.(X): 1.261  
Loss Time (sec): 11 Average Delay (sec/veh): 250.7  
Optimal Cycle: 180 Level Of Service: F

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Street Name: Fremont / Front				Market			
Approach: North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Split Phase	Split Phase	Permitted	Permitted			
Rights:	Include	Include	Include	Include			
Min. Green:	27 27	27 0	0 0	0 22	22 0	0 0	22 22
Y+R:	4.0 4.0	4.0 4.0	4.0 4.0	4.0 4.0	4.0 4.0	4.0 4.0	4.0 4.0
Lanes:	0 1 0	0 0 0	0 0 0	0 1 1	0 0 0	0 0 1	1 0 0

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Volume Module:

Base Vol:	63 1410	321 0	0 0	0 7	540 540	0 0	0 304	15
Growth Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00
Initial Bse:	63 1410	321 0	0 0	0 7	540 540	0 0	0 304	15
User Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00
PHF Adj:	0.98 0.98	0.98 0.98	0.98 0.98	0.98 0.98	0.98 0.98	0.98 0.98	0.98 0.98	0.98
PHF Volume:	64 1439	328 0	0 0	0 7	551 551	0 0	0 310	15
Reduc Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0
Reduced Vol:	64 1439	328 0	0 0	0 7	551 551	0 0	0 310	15
PCE Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00
FinalVolume:	64 1439	328 0	0 0	0 7	551 551	0 0	0 310	15

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Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900
Adjustment:	0.75 0.60	0.60 1.00	1.00 1.00	1.00 1.00	0.77 0.62	0.62 1.00	1.00 0.62	0.62
Lanes:	0.06 1.58	0.36 0.00	0.00 0.00	0.00 0.00	0.02 1.98	1.98 0.00	0.00 1.91	0.09
Final Sat.:	81 1815	413 0	0 0	0 30	2327 2327	0 0	0 2248	111

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Capacity Analysis Module:

Vol/Sat:	0.79 0.79	0.79 0.00	0.00 0.00	0.00 0.24	0.24 0.24	0.00 0.00	0.00 0.14	0.14
Crit Moves:	****	****	****	****	****	****	****	****
Green/Cycle:	0.45 0.45	0.45 0.00	0.00 0.00	0.00 0.37	0.37 0.37	0.00 0.00	0.00 0.37	0.37
Volume/Cap:	1.76 1.76	1.76 0.00	0.00 0.00	0.00 0.65	0.65 0.65	0.00 0.00	0.00 0.38	0.38
Uniform Del:	16.5 16.5	16.5 0.0	0.0 0.0	0.0 15.8	15.8 15.8	0.0 0.0	0.0 14.0	14.0
IncremntDel:	346.6 347	346.6 0.0	0.0 0.0	0.0 3.7	3.7 3.7	0.0 0.0	1.3 1.3	1.3
InitQueuDel:	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0
Delay Adj:	1.00 1.00	1.00 0.00	0.00 0.00	0.00 1.00	1.00 1.00	0.00 0.00	0.00 1.00	1.00
Delay/Veh:	363.1 363	363.1 0.0	0.0 0.0	0.0 19.5	19.5 19.5	0.0 0.0	0.0 15.2	15.2
User DelAdj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00
AdjDel/Veh:	363.1 363	363.1 0.0	0.0 0.0	0.0 19.5	19.5 19.5	0.0 0.0	0.0 15.2	15.2
LOS by Move:	F F	F F	A A	A B	B B	A A	A B	B B
HCM2kAvgQ:	87 70	70 0	0 0	0 6	5 5	0 0	0 3	3 3

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
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**Intersection #3 Second / Mission**  
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Cycle (sec): 60 Critical Vol./Cap.(X): 0.885  
Loss Time (sec): 8 Average Delay (sec/veh): 27.6  
Optimal Cycle: 74 Level Of Service: C  
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Street Name: Second Mission  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 21 21 21 21 21 31 31 31 31 31 31  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 1 0 1 0 1 0 1 0 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 173 308 128 21 293 60 1 125 540 4 371 125  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 173 308 128 21 293 60 1 125 540 4 371 125  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 177 314 131 21 299 61 1 128 551 4 379 128  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 177 314 131 21 299 61 1 128 551 4 379 128  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 177 314 131 21 299 61 1 128 551 4 379 128  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.29 0.62 0.52 0.22 0.49 0.41 0.66 0.43 0.66 0.72 0.48 0.72  
Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 0.01 0.99 1.00 0.01 1.63 0.36  
Final Sat.: 550 1173 997 416 922 783 7 817 1245 16 1475 497  
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Capacity Analysis Module:  
Vol/Sat: 0.32 0.27 0.13 0.05 0.32 0.08 0.16 0.16 0.44 0.26 0.26 0.26  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.35 0.35 0.35 0.35 0.35 0.52 0.52 0.52 0.52 0.52 0.52 0.52  
Volume/Cap: 0.92 0.77 0.37 0.15 0.93 0.22 0.30 0.30 0.86 0.50 0.50 0.50  
Uniform Del: 18.7 17.3 14.6 13.4 18.8 13.7 8.3 8.3 12.6 9.4 9.4 9.4  
IncremntDel: 46.1 12.8 3.1 2.1 34.5 1.9 0.3 0.3 11.5 1.7 1.7 1.7  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Delay/Veh: 64.8 30.1 17.6 15.5 53.3 15.6 8.7 8.7 24.1 11.1 11.1 11.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 64.8 30.1 17.6 15.5 53.3 15.6 8.7 8.7 24.1 11.1 11.1 11.1  
LOS by Move: E C B B D B A A C B B B  
HCM2kAvgQ: 7 7 2 0 10 1 2 1 9 5 4 5

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
\*\*\*\*\*  
**Intersection #4 First / Mission**  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.468  
Loss Time (sec): 8 Average Delay (sec/veh): 297.3  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: First Mission  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 0 0 23 23 23 0 29 29 29 29 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 0 0 2 1 0 0 0 0 1 0 0 1 0 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 0 0 0 1536 382 0 0 269 0 0 0 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 0 0 0 1536 382 0 0 269 0 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 0 1567 390 0 0 274 0 0 0 0  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 0 1567 390 0 0 274 0 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 0 0 0 0 1567 390 0 0 274 0 0 0 0  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 1.00 0.70 0.54 0.54 1.00 0.66 0.23 1.00 0.66 1.00  
Lanes: 0.00 0.00 0.00 0.00 2.40 0.60 0.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 0 0 0 0 2488 619 0 0 428 0 0 0 0  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.00 0.63 0.63 0.00 0.00 0.64 0.00 0.00 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.00 0.00 0.00 0.38 0.38 0.00 0.00 0.48 0.00 0.00 0.00  
Volume/Cap: 0.00 0.00 0.00 0.00 1.64 1.64 0.00 0.00 1.33 0.00 0.00 0.00  
Uniform Del: 0.0 0.0 0.0 0.0 18.5 18.5 0.0 0.0 15.5 0.0 0.0 0.0  
IncremntDel: 0.0 0.0 0.0 0.0 293 293.4 0.0 0.0 177.2 0.0 0.0 0.0  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 0.00 0.00 0.00 0.00 1.00 1.00 0.00 0.00 1.00 0.00 0.00 0.00  
Delay/Veh: 0.0 0.0 0.0 0.0 312 311.9 0.0 0.0 192.7 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 0.0 312 311.9 0.0 0.0 192.7 0.0 0.0 0.0  
LOS by Move: A A A A F F A A F A A A A  
HCM2kAvgQ: 0 0 0 0 49 49 0 0 16 0 0 0 0

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
\*\*\*\*\*  
Intersection #5 Fremont / Mission  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.478  
Loss Time (sec): 8 Average Delay (sec/veh): 209.6  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Fremont Mission  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 33 33 33 0 0 0 19 19 0 0 0 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 1 1 0 1 0 0 0 0 0 0 0 0 1  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 1536 495 0 0 0 0 0 0 0 0 103  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 1536 495 0 0 0 0 0 0 0 0 103  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 1567 505 0 0 0 0 0 0 0 0 105  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 1567 505 0 0 0 0 0 0 0 0 105  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 0 1567 505 0 0 0 0 0 0 0 0 105  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.50 0.63 0.22 1.00 1.00 1.00 1.00 0.66 1.00 1.00 0.66 0.74  
Lanes: 0.00 2.00 1.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.00  
Final Sat.: 0 2388 419 0 0 0 0 0 0 0 0 1408  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.66 1.21 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.07  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.55 0.55 0.55 0.00 0.00 0.00 0.32 0.32 0.00 0.00 0.32 0.32  
Volume/Cap: 0.00 1.19 2.19 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.23  
Uniform Del: 0.0 13.5 13.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 15.0  
IncremntDel: 0.0 94.8 550.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 0.00 1.00 1.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.00  
Delay/Veh: 0.0 108 564.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 16.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 108 564.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 16.2  
LOS by Move: A F F A A A A A A A A B  
HCM2kAvgQ: 0 35 45 0 0 0 0 0 0 0 0 2

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
\*\*\*\*\*  
Intersection #6 Beale / Mission  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 0.987  
Loss Time (sec): 8 Average Delay (sec/veh): 178.3  
Optimal Cycle: 119 Level Of Service: F  
\*\*\*\*\*  
Street Name: Beale Mission  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 0 0 21 21 21 0 31 31 31 31 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 0 1 1 0 1 0 1 0 1 0 1  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 0 0 60 1610 19 0 275 258 281 48 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 0 0 60 1610 19 0 275 258 281 48 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 61 1643 19 0 281 263 287 49 0  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 61 1643 19 0 281 263 287 49 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 0 0 0 61 1643 19 0 281 263 287 49 0  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 1.00 0.83 0.83 0.75 1.00 0.57 0.73 0.48 0.57 1.00  
Lanes: 0.00 0.00 0.00 0.07 1.93 1.00 0.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 0 0 0 114 3054 1424 0 1074 1384 903 1074 1900  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.54 0.54 0.01 0.00 0.26 0.19 0.32 0.05 0.00  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.00 0.00 0.35 0.35 0.35 0.00 0.52 0.52 0.52 0.52 0.00  
Volume/Cap: 0.00 0.00 0.00 1.54 1.54 0.04 0.00 0.51 0.37 0.61 0.09 0.00  
Uniform Del: 0.0 0.0 0.0 19.5 19.5 12.8 0.0 9.5 8.7 10.3 7.3 0.0  
IncremntDel: 0.0 0.0 0.0 246.1 246 0.1 0.0 3.3 1.5 5.9 0.3 0.0  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 0.00 0.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 0.00  
Delay/Veh: 0.0 0.0 0.0 265.6 266 13.0 0.0 12.8 10.1 16.2 7.7 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 265.6 266 13.0 0.0 12.8 10.1 16.2 7.7 0.0  
LOS by Move: A A A F F B A B B B A A  
HCM2kAvgQ: 0 0 0 57 57 0 0 4 3 5 1 0

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Base Volume Alternative)  
\*\*\*\*\*  
**Intersection #7 Main / Mission**  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.879  
Loss Time (sec): 8 Average Delay (sec/veh): 104.2  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Main Mission  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Permit+Prot Permitted  
Rights: Include Include Include Include  
Min. Green: 21 21 21 0 0 0 8 31 0 0 0 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 1 0 0 1 0 1 0 0 1 0 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 180 427 173 110 343 0 48 296 0 55 173 79  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 180 427 173 110 343 0 48 296 0 55 173 79  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 184 436 177 112 350 0 49 302 0 56 177 81  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 184 436 177 112 350 0 49 302 0 56 177 81  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 184 436 177 112 350 0 49 302 0 56 177 81  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.81 0.81 0.81 0.87 0.87 1.00 0.47 0.81 0.95 0.77 0.77 0.77  
Lanes: 0.23 0.55 0.22 0.24 0.76 0.00 1.00 2.00 0.00 0.36 1.13 0.51  
Final Sat.: 356 845 342 402 1254 0 892 3093 0 522 1643 750  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.52 0.52 0.52 0.28 0.28 0.00 0.05 0.10 0.00 0.11 0.11 0.11  
Crit Moves: \*\*\*\* \*\*\*\* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
Green/Cycle: 0.35 0.35 0.35 0.00 0.00 0.00 0.51 0.51 0.00 0.00 0.31 0.31  
Volume/Cap: 1.47 1.47 1.47 xxxx xxxx 0.00 0.09 0.19 0.00 xxxx 0.35 0.35  
Uniform Del: 19.5 19.5 19.5 0.0 0.0 0.0 9.4 8.0 0.0 0.0 16.0 16.0  
IncremntDel: 223.0 223.0 0.0 0.0 0.0 0.3 0.3 0.0 0.0 1.1 1.1  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 0.00 0.00 1.00 1.00 0.00 0.00 1.00 1.00  
Delay/Veh: 242.5 242 242.5 0.0 0.0 0.0 9.8 8.3 0.0 0.0 17.1 17.1  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 242.5 242 242.5 0.0 0.0 0.0 9.8 8.3 0.0 0.0 17.1 17.1  
LOS by Move: F F F A A A A A A A B B  
HCM2kAvgQ: 48 48 48 8 8 0 1 2 0 3 2 2

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Base Volume Alternative)  
\*\*\*\*\*  
**Intersection #8 Second / Howard**  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 5.115  
Loss Time (sec): 7 Average Delay (sec/veh): 855.3  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Second Howard  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 21 21 0 0 21 21 0 0 0 0 32 32 32  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 0 1 0 1 0 0 1 0 0 0 0 0 0 1 0 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 441 405 387 0 446 527 0 0 0 0 617 2474 162  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 441 405 387 0 446 527 0 0 0 0 617 2474 162  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 450 413 395 0 455 538 0 0 0 0 630 2524 165  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 450 413 395 0 455 538 0 0 0 0 630 2524 165  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 450 413 395 0 455 538 0 0 0 0 630 2524 165  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.08 0.42 0.82 0.75 0.44 0.44 1.00 1.00 1.00 1.00 0.60 0.60 0.60  
Lanes: 1.00 0.67 0.33 1.00 0.46 0.54 0.00 0.00 0.00 0.00 0.38 1.52 0.10  
Final Sat.: 146 533 509 1425 379 448 0 0 0 0 435 1746 114  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 3.07 0.78 0.78 0.00 1.20 1.20 0.00 0.00 0.00 0.00 1.45 1.45 1.45  
Crit Moves: \*\*\*\* \*\*\*\* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
Green/Cycle: 0.35 0.35 0.35 0.00 0.35 0.35 0.00 0.00 0.00 0.00 0.53 0.53 0.53  
Volume/Cap: 3.75 2.22 2.22 0.00 3.43 3.43 0.00 0.00 0.00 0.00 2.71 2.71 2.71  
Uniform Del: 19.5 19.5 19.5 0.0 19.5 19.5 0.0 0.0 0.0 0.0 14.0 14.0 14.0  
IncremntDel: 1258 556 556.3 0.0 1103 1103 0.0 0.0 0.0 0.0 772.3 772 772.3  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 0.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00  
Delay/Veh: 1277 576 575.8 0.0 1122 1122 0.0 0.0 0.0 0.0 786.3 786 786.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 1277 576 575.8 0.0 1122 1122 0.0 0.0 0.0 0.0 786.3 786 786.3  
LOS by Move: F F F A F F A A A F F F F F  
HCM2kAvgQ: 50 54 105 0 106 106 0 0 0 0 169 169 169

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
\*\*\*\*\*  
Intersection #9 First / Howard  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 2.297  
Loss Time (sec): 11 Average Delay (sec/veh): 420.4  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: First Howard  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 0 0 0 25 25 0 0 0 24 24 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 1 0 2 1 0 0 0 1 0 0 0 2 0 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 0 0 76 1144 1093 0 710 80 0 1869 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 0 0 76 1144 1093 0 710 80 0 1869 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 78 1167 1115 0 724 82 0 1907 0  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 78 1167 1115 0 724 82 0 1907 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 0 0 0 78 1167 1115 0 724 82 0 1907 0  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 1.00 0.75 0.45 0.52 1.00 0.89 0.89 0.65 0.67 1.00  
Lanes: 0.00 0.00 0.00 1.00 2.00 1.00 0.00 0.90 0.10 0.00 2.00 0.00  
Final Sat.: 0 0 0 1424 1696 990 0 1515 171 0 2547 0  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.05 0.69 1.13 0.00 0.48 0.48 0.00 0.75 0.00  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.00 0.00 0.42 0.42 0.42 0.00 0.40 0.40 0.00 0.40 0.00  
Volume/Cap: 0.00 0.00 0.00 0.13 1.65 2.70 0.00 1.20 1.20 0.00 1.87 0.00  
Uniform Del: 0.0 0.0 0.0 10.8 17.5 17.5 0.0 18.0 18.0 0.0 18.0 0.0  
IncremntDel: 0.0 0.0 0.0 0.5 296 770.6 0.0 102 102.0 0.0 396 0.0  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 0.00  
Delay/Veh: 0.0 0.0 0.0 11.3 314 788.1 0.0 120 120.0 0.0 414 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 11.3 314 788.1 0.0 120 120.0 0.0 414 0.0  
LOS by Move: A A A B F F A F F A F A  
HCM2kAvgQ: 0 0 0 1 45 119 0 35 35 0 75 0

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
\*\*\*\*\*  
Intersection #10 Fremont / Howard  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 4.359  
Loss Time (sec): 12 Average Delay (sec/veh): 453.6  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Fremont Howard  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 21 21 21 0 0 0 0 0 0 0 0 27 27  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 1 0 0 0 0 0 0 1 0 0 0 0 0 1 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 580 1312 339 0 0 0 407 221 0 0 1512 159  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 580 1312 339 0 0 0 407 221 0 0 1512 159  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 592 1339 346 0 0 0 415 226 0 0 1543 162  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 592 1339 346 0 0 0 415 226 0 0 1543 162  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 592 1339 346 0 0 0 415 226 0 0 1543 162  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.75 0.78 0.78 1.00 1.00 1.00 0.11 0.11 1.00 1.00 0.82 0.82  
Lanes: 1.00 2.38 0.62 0.00 0.00 0.00 0.65 0.35 0.00 0.00 1.81 0.19  
Final Sat.: 1424 3523 910 0 0 0 135 73 0 0 2829 298  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.42 0.38 0.38 0.00 0.00 0.00 3.07 3.07 0.00 0.00 0.55 0.55  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.35 0.35 0.35 0.00 0.00 0.00 0.45 0.45 0.00 0.00 0.45 0.45  
Volume/Cap: 1.19 1.09 1.09 0.00 0.00 0.00 6.83 6.83 0.00 0.00 1.21 1.21  
Uniform Del: 19.5 19.5 19.5 0.0 0.0 0.0 16.5 16.5 0.0 0.0 16.5 16.5  
IncremntDel: 102.9 50.0 50.0 0.0 0.0 0.0 2644 2644 0.0 0.0 102 102.1  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 0.00 0.00 0.00 1.00 1.00 0.00 0.00 1.00 1.00  
Delay/Veh: 122.4 69.5 69.5 0.0 0.0 0.0 2660 2660 0.0 0.0 119 118.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 122.4 69.5 69.5 0.0 0.0 0.0 2660 2660 0.0 0.0 119 118.6  
LOS by Move: F E E A A A F F A A F F  
HCM2kAvgQ: 26 23 23 0 0 0 80 80 0 0 39 39

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
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Intersection #11 Beale / Howard  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.766  
Loss Time (sec): 10 Average Delay (sec/veh): 221.6  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Beale Howard  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 0 0 31 31 31 0 19 19 19 19 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 1 0 1 1 0 0 0 1 0 0 1 1 0 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 0 0 158 994 894 0 590 55 0 594 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 0 0 158 994 894 0 590 55 0 594 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 161 1014 912 0 602 56 0 606 0  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 161 1014 912 0 602 56 0 606 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 0 0 0 161 1014 912 0 602 56 0 606 0  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 1.00 1.25 0.78 0.44 1.00 0.89 0.89 0.95 0.67 1.00  
Lanes: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 0.91 0.09 0.00 2.00 0.00  
Final Sat.: 0 0 0 2379 1479 843 0 1547 144 0 2537 0  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.07 0.69 1.08 0.00 0.39 0.39 0.00 0.24 0.00  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.00 0.00 0.52 0.52 0.52 0.00 0.32 0.32 0.00 0.32 0.00  
Volume/Cap: 0.00 0.00 0.00 0.13 1.33 2.09 0.00 1.23 1.23 0.00 0.75 0.00  
Uniform Del: 0.0 0.0 0.0 7.5 14.5 14.5 0.0 20.5 20.5 0.0 18.4 0.0  
IncremntDel: 0.0 0.0 0.0 0.2 152 496.2 0.0 119 118.7 0.0 6.5 0.0  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 0.00  
Delay/Veh: 0.0 0.0 0.0 7.7 167 510.7 0.0 139 139.2 0.0 24.9 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 7.7 167 510.7 0.0 139 139.2 0.0 24.9 0.0  
LOS by Move: A A A A F F A F F A C A  
HCM2kAvgQ: 0 0 0 2 54 81 0 31 31 0 7 0

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
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Intersection #12 Main / Howard  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 3.353  
Loss Time (sec): 7 Average Delay (sec/veh): 519.2  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Main Howard  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 20 20 20 0 0 0 33 33 0 0 0 25 25  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 0 1 0 0 0 1 0 0 1 0 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 87 779 17 0 409 0 205 381 0 87 446 70  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 87 779 17 0 409 0 205 381 0 87 446 70  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 89 795 17 0 417 0 209 389 0 89 455 71  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 89 795 17 0 417 0 209 389 0 89 455 71  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 89 795 17 0 417 0 209 389 0 89 455 71  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.81 0.81 0.81 1.00 0.90 1.00 0.13 0.13 0.25 0.26 0.26 0.26  
Lanes: 0.10 0.88 0.02 0.00 1.00 0.00 0.35 0.65 0.00 0.29 1.48 0.23  
Final Sat.: 153 1366 30 0 1710 0 88 163 0 140 718 113  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.58 0.58 0.58 0.00 0.24 0.00 2.38 2.38 0.00 0.63 0.63 0.63  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.33 0.33 0.33 0.00 0.33 0.00 0.55 0.55 0.00 0.55 0.55 0.55  
Volume/Cap: 1.75 1.75 1.75 0.00 0.73 0.00 4.33 4.33 0.00 1.15 1.15 1.15  
Uniform Del: 20.0 20.0 20.0 0.0 17.6 0.0 13.5 13.5 0.0 13.5 13.5 13.5  
IncremntDel: 343.8 344 343.8 0.0 8.1 0.0 1514 1514 0.0 88.5 88.5 88.5  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 0.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
Delay/Veh: 363.8 364 363.8 0.0 25.7 0.0 1527 1527 0.0 102.0 102 102.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 363.8 364 363.8 0.0 25.7 0.0 1527 1527 0.0 102.0 102 102.0  
LOS by Move: F F F A C A F F A F F F  
HCM2kAvgQ: 65 65 65 0 9 0 69 69 0 15 15 15

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
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Intersection #13 Spear / Howard  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.033  
Loss Time (sec): 7 Average Delay (sec/veh): 44.5  
Optimal Cycle: 180 Level Of Service: D  
\*\*\*\*\*  
Street Name: Spear Howard  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 0 0 25 25 25 0 28 28 28 28 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 0 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 42 254 83 97 238 200 39 328 87 124 400 71  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 42 254 83 97 238 200 39 328 87 124 400 71  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 43 259 85 99 243 204 40 335 89 127 408 72  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 43 259 85 99 243 204 40 335 89 127 408 72  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 43 259 85 99 243 204 40 335 89 127 408 72  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.81 0.81 0.81 0.65 0.65 0.65 0.72 0.36 0.36 0.32 0.32 0.64  
Lanes: 0.11 0.67 0.22 0.18 0.45 0.37 0.09 1.51 0.40 0.44 1.43 0.13  
Final Sat.: 170 1027 336 225 553 464 122 1027 272 267 863 153  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.25 0.25 0.25 0.44 0.44 0.44 0.33 0.33 0.33 0.47 0.47 0.47  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.42 0.42 0.42 0.42 0.42 0.42 0.47 0.47 0.47 0.47 0.47 0.47  
Volume/Cap: 0.61 0.61 0.61 1.05 1.05 1.05 0.70 0.70 0.70 1.01 1.01 1.01  
Uniform Del: 13.7 13.7 13.7 17.5 17.5 17.5 12.7 12.7 12.7 16.0 16.0 16.0  
IncremntDel: 4.2 4.2 4.2 54.8 54.8 54.8 6.0 6.0 6.0 40.2 40.2 40.2  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Delay/Veh: 17.9 17.9 17.9 72.3 72.3 72.3 18.7 18.7 18.7 56.2 56.2 56.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 17.9 17.9 17.9 72.3 72.3 72.3 18.7 18.7 18.7 56.2 56.2 56.2  
LOS by Move: B B B E E E B B B E E E  
HCM2kAvgQ: 6 6 6 19 19 19 8 5 5 7 7 14

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
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Intersection #14 Second / Folsom  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 2.236  
Loss Time (sec): 7 Average Delay (sec/veh): 331.9  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Second Folsom  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permit+Prot Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 0 21 21 7 32 0 21 21 21 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 1 0 1 0 1 0 0 1 2 0 1 0 0 0 0 1  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 402 138 248 1024 0 483 1288 172 0 0 0 228  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 402 138 248 1024 0 483 1288 172 0 0 0 228  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 410 141 253 1045 0 493 1314 176 0 0 0 233  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 410 141 253 1045 0 493 1314 176 0 0 0 233  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 0 410 141 253 1045 0 493 1314 176 0 0 0 233  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.81 0.81 0.13 0.44 1.00 0.79 0.50 0.72 1.00 1.00 0.78  
Lanes: 0.00 1.49 0.51 1.00 1.00 0.00 0.57 2.43 1.00 0.00 0.00 1.00  
Final Sat.: 0 2280 783 256 838 0 863 2301 1367 0 0 1479  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.18 0.18 0.99 1.25 0.00 0.57 0.57 0.13 0.00 0.00 0.16  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.35 0.35 0.35 0.53 0.53 0.00 0.35 0.35 0.35 0.00 0.00 0.00  
Volume/Cap: 0.00 0.51 0.51 1.97 2.35 0.00 1.63 1.63 0.37 0.00 0.00 xxxx  
Uniform Del: 0.0 15.5 15.5 20.3 14.1 0.0 19.5 19.5 14.5 0.0 0.0 0.0  
IncremntDel: 0.0 1.8 1.8 461.8 616 0.0 288.5 288 2.2 0.0 0.0 0.0  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 0.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 0.00 0.00 0.00  
Delay/Veh: 0.0 17.2 17.2 482.1 630 0.0 308.0 308 16.7 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 17.2 17.2 482.1 630 0.0 308.0 308 16.7 0.0 0.0 0.0  
LOS by Move: A B B F F A F F B A A A  
HCM2kAvgQ: 0 5 5 22 94 0 64 41 2 0 0 0 4

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Base Volume Alternative)  
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 Intersection #15 First / Folsom  
\*\*\*\*\*  
 Cycle (sec): 60 Critical Vol./Cap.(X): 1.321  
 Loss Time (sec): 9 Average Delay (sec/veh): 143.5  
 Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
 Street Name: First Folsom  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Split Phase Split Phase Permitted Protected  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 30 30 0 0 12 12 9 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 0 0 0 1 2 1 0 0 0 2 0 1 1 0 1 0 0  
 Volume Module:  
 Base Vol: 0 0 0 290 879 0 0 569 329 453 228 0  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 0 0 0 290 879 0 0 569 329 453 228 0  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 0 0 0 296 897 0 0 581 336 462 233 0  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 0 0 296 897 0 0 581 336 462 233 0  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 0 0 0 296 897 0 0 581 336 462 233 0  
 Saturation Flow Module:  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 1.00 1.00 1.00 0.32 0.31 0.91 1.00 0.84 0.52 0.86 0.90 1.00  
 Lanes: 0.00 0.00 0.00 0.96 3.04 0.00 0.00 2.00 1.00 1.00 1.00 0.00  
 Final Sat.: 0 0 0 590 1788 0 0 3184 997 1625 1710 0  
 Capacity Analysis Module:  
 Vol/Sat: 0.00 0.00 0.00 0.50 0.50 0.00 0.00 0.18 0.34 0.28 0.14 0.00  
 Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
 Green/Cycle: 0.00 0.00 0.00 0.50 0.50 0.00 0.00 0.20 0.20 0.15 0.35 0.00  
 Volume/Cap: 0.00 0.00 0.00 1.00 1.00 0.00 0.00 0.91 1.68 1.90 0.39 0.00  
 Uniform Del: 0.0 0.0 0.0 15.0 15.0 0.0 0.0 23.5 24.0 25.5 14.7 0.0  
 IncremmtDel: 0.0 0.0 0.0 26.9 26.9 0.0 0.0 19.6 328.4 418.7 1.9 0.0  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 0.00 0.00 0.00 1.00 1.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00  
 Delay/Veh: 0.0 0.0 0.0 41.9 41.9 0.0 0.0 43.0 352.4 444.2 16.6 0.0  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 0.0 0.0 0.0 41.9 41.9 0.0 0.0 43.0 352.4 444.2 16.6 0.0  
 LOS by Move: A A A D D A A D F F B A  
 HCM2kAvgQ: 0 0 0 12 12 0 0 9 25 37 3 0

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Base Volume Alternative)  
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 Intersection #16 Fremont / Folsom / I-80 WB Off-Ramp  
\*\*\*\*\*  
 Cycle (sec): 75 Critical Vol./Cap.(X): 0.896  
 Loss Time (sec): 16 Average Delay (sec/veh): 187.9  
 Optimal Cycle: 96 Level Of Service: F  
\*\*\*\*\*  
 Street Name: Fremont / I-80 WB Off-Ramp Folsom  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Split Phase Split Phase Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 19 19 19 19 0 21 21 21 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 1 0 1 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0  
 Volume Module:  
 Base Vol: 32 32 15 290 103 0 216 510 183 0 649 0  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 32 32 15 290 103 0 216 510 183 0 649 0  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 33 33 15 296 105 0 220 520 187 0 662 0  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 33 33 15 296 105 0 220 520 187 0 662 0  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 33 33 15 296 105 0 220 520 187 0 662 0  
 Saturation Flow Module:  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 0.80 0.80 0.80 0.86 0.90 1.00 0.49 0.49 0.49 0.95 0.86 0.95  
 Lanes: 0.81 0.81 0.38 1.00 1.00 0.00 0.48 1.12 0.40 0.00 2.00 0.00  
 Final Sat.: 1229 1229 576 1625 1710 0 444 1048 376 0 3249 0  
 Capacity Analysis Module:  
 Vol/Sat: 0.03 0.03 0.03 0.18 0.06 0.00 0.50 0.50 0.50 0.00 0.20 0.00  
 Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
 Green/Cycle: 0.25 0.25 0.25 0.25 0.25 0.00 0.28 0.28 0.28 0.00 0.28 0.00  
 Volume/Cap: 0.10 0.10 0.10 0.72 0.24 0.00 1.77 1.77 1.77 0.00 0.73 0.00  
 Uniform Del: 21.5 21.5 21.5 25.6 22.3 0.0 27.0 27.0 27.0 0.0 24.4 0.0  
 IncremmtDel: 0.3 0.3 0.3 10.3 1.3 0.0 355.5 356 355.5 0.0 5.1 0.0  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 0.00 1.00 0.00  
 Delay/Veh: 21.8 21.8 21.8 35.9 23.6 0.0 382.5 383 382.5 0.0 29.5 0.0  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 21.8 21.8 21.8 35.9 23.6 0.0 382.5 383 382.5 0.0 29.5 0.0  
 LOS by Move: C C C D C A F F F B A  
 HCM2kAvgQ: 1 1 1 8 2 0 37 37 37 0 8 0

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
\*\*\*\*\*  
Intersection #17 Beale / Folsom  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.722  
Loss Time (sec): 8 Average Delay (sec/veh): 220.4  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Beale Folsom  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 0 0 23 23 0 0 29 29 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 0 0 1 0 1 0 0 0 1 0 0 1 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 0 98 170 578 453 0 808 74 74 196 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 0 98 170 578 453 0 808 74 74 196 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 100 173 590 462 0 824 76 76 200 0  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 100 173 590 462 0 824 76 76 200 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 0 100 173 590 462 0 824 76 76 200 0  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 0.75 0.71 0.71 0.71 1.00 0.25 0.25 0.84 0.84 1.00  
Lanes: 1.00 0.00 1.00 0.28 0.97 0.75 0.00 1.83 0.17 0.55 1.45 0.00  
Final Sat.: 1900 0 1424 384 1305 1023 0 864 79 878 2326 0  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.07 0.45 0.45 0.45 0.00 0.95 0.95 0.09 0.09 0.00  
Crit Moves: \*\*\*\* \* \* \* \*  
Green/Cycle: 0.00 0.00 0.38 0.38 0.38 0.38 0.00 0.48 0.48 0.00 0.00 0.00  
Volume/Cap: 0.00 0.00 0.18 1.18 1.18 1.18 0.00 1.98 1.98 xxxx xxxx 0.00  
Uniform Del: 0.0 0.0 12.3 18.5 18.5 18.5 0.0 15.5 15.5 0.0 0.0 0.0  
IncremntDel: 0.0 0.0 0.7 90.7 90.7 90.7 0.0 447 446.6 0.0 0.0 0.0  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 0.00 0.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 0.00 0.00  
Delay/Veh: 0.0 0.0 13.0 109.2 109 109.2 0.0 462 462.1 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 13.0 109.2 109 109.2 0.0 462 462.1 0.0 0.0 0.0  
LOS by Move: A A B F F F A F F A A A  
HCM2kAvgQ: 0 0 1 28 28 28 0 39 39 2 2 0

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
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Intersection #18 Main / Folsom  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.752  
Loss Time (sec): 10 Average Delay (sec/veh): 201.2  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Main Folsom  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 19 19 0 0 0 31 31 31 31 0 31  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 1 0 0 1 0 0 0 1! 0 0 0 1 0 1 0 0 1 0 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 196 172 31 74 271 149 45 979 343 5 0 217  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 196 172 31 74 271 149 45 979 343 5 0 217  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 200 176 32 76 277 152 46 999 350 5 0 221  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 200 176 32 76 277 152 46 999 350 5 0 221  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 200 176 32 76 277 152 46 999 350 5 0 221  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.86 0.73 0.75 0.86 0.86 0.86 0.67 0.41 0.37 0.66 0.95 0.66  
Lanes: 0.49 0.51 1.00 0.15 0.55 0.30 0.04 1.41 0.55 1.00 0.00 1.00  
Final Sat.: 803 705 1424 244 893 491 51 1108 388 1262 0 1262  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.25 0.25 0.02 0.31 0.31 0.31 0.90 0.90 0.90 0.00 0.00 0.18  
Crit Moves: \*\*\*\* \* \* \* \*  
Green/Cycle: 0.32 0.32 0.32 0.00 0.00 0.00 0.52 0.52 0.52 0.52 0.00 0.52  
Volume/Cap: 0.79 0.79 0.07 xxxx xxxx xxxx 1.75 1.75 1.75 0.01 0.00 0.34  
Uniform Del: 18.7 18.7 14.3 0.0 0.0 0.0 14.5 14.5 14.5 7.0 0.0 8.5  
IncremntDel: 12.3 12.3 0.3 0.0 0.0 0.0 340.5 340 340.5 0.0 0.0 1.4  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00 1.00  
Delay/Veh: 31.0 31.0 14.6 0.0 0.0 0.0 355.0 355 355.0 7.0 0.0 9.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 31.0 31.0 14.6 0.0 0.0 0.0 355.0 355 355.0 7.0 0.0 9.9  
LOS by Move: C C B A A A F F F A A A  
HCM2kAvgQ: 8 7 0 8 8 8 87 54 50 0 0 3

Level Of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

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Intersection #19 Spear / Folsom

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Cycle (sec): 60 Critical Vol./Cap.(X): 2.489  
Loss Time (sec): 8 Average Delay (sec/veh): 552.8  
Optimal Cycle: 180 Level Of Service: F

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Street Name:		Spear	Folsom	
Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Permitted	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	23 23 23	0 29 29	29 29 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 1 0 1 0	0 1 0 1 0

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Volume Module:

Base Vol:	23	23	137	164	328	82	292	676	55	19	107	65
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	23	137	164	328	82	292	676	55	19	107	65
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	23	23	140	167	335	84	298	690	56	19	109	66
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	23	140	167	335	84	298	690	56	19	109	66
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	23	23	140	167	335	84	298	690	56	19	109	66

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Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.75	0.75	0.75	0.29	0.29	0.29	0.66	0.20	0.20	0.68	0.68	0.68	
Lanes:	0.12	0.13	0.13	0.75	0.29	0.57	0.14	0.21	1.66	0.13	0.20	1.12	0.68
Final Sat.:	179	179	1068	160	320	80	268	621	51	259	1457	885	

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Capacity Analysis Module:

Vol/Sat:	0.13	0.13	0.13	1.05	1.05	1.05	1.11	1.11	1.11	0.07	0.07	0.07
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.38	0.38	0.38	0.38	0.38	0.38	0.48	0.48	0.48	0.48	0.48	0.48
Volume/Cap:	0.34	0.34	0.34	2.73	2.73	2.73	2.30	2.30	2.30	0.15	0.15	0.15
Uniform Del:	13.1	13.1	13.1	18.5	18.5	18.5	15.5	15.5	15.5	8.7	8.7	8.7
IncremmtDel:	1.7	1.7	1.7	791.7	792	791.7	590.6	591	590.6	0.3	0.3	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	14.8	14.8	14.8	810.2	810	810.2	606.1	606	606.1	8.9	8.9	8.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.8	14.8	14.8	810.2	810	810.2	606.1	606	606.1	8.9	8.9	8.9
LOS by Move:	B	B	B	F	F	F	F	F	F	A	A	A
HCM2kAvgQ:	3	3	3	58	58	58	130	40	40	1	1	1

Level Of Service Computation Report  
2000 HCM Operations Method (Base Volume Alternative)

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Intersection #20 The Embarcadero / Folsom

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Cycle (sec): 90 Critical Vol./Cap.(X): 1.191  
Loss Time (sec): 10 Average Delay (sec/veh): 144.6  
Optimal Cycle: 180 Level Of Service: F

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Street Name:		The Embarcadero	Folsom	
Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Include	Include	Include
Min. Green:	12 49 0	0 0 32	32 31 0	31 0 31 0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	1 0 2 0 0	0 0 1 1 0	1 0 0 0 1	0 0 0 0 0

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Volume Module:

Base Vol:	249	2051	0	0	1596	32	541	0	377	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	249	2051	0	0	1596	32	541	0	377	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	254	2093	0	0	1629	33	552	0	385	0	0	0
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	254	2093	0	0	1629	33	552	0	385	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	254	2093	0	0	1629	33	552	0	385	0	0	0

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Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.74	1.00	1.00	1.02	0.93	0.93	1.00	0.83	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.96	0.04	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1769	2802	0	0	3796	76	1769	0	1583	0	0	0

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Capacity Analysis Module:

Vol/Sat:	0.14	0.75	0.00	0.00	0.43	0.43	0.31	0.00	0.24	0.00	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.13	0.54	0.00	0.00	0.35	0.35	0.34	0.00	0.34	0.00	0.00	0.00
Volume/Cap:	1.10	1.38	0.00	0.00	1.23	1.23	0.92	0.00	0.71	0.00	0.00	0.00
Uniform Del:	39.2	20.7	0.0	0.0	29.3	29.3	28.5	0.0	25.9	0.0	0.0	0.0
IncremmtDel:	90.3	177	0.0	0.0	108	108.3	21.2	0.0	7.9	0.0	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	129.5	197	0.0	0.0	138	137.6	49.7	0.0	33.8	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	129.5	197	0.0	0.0	138	137.6	49.7	0.0	33.8	0.0	0.0	0.0
LOS by Move:	F	F	A	A	F	F	D	A	C	A	A	A
HCM2kAvgQ:	10	66	0	0	42	39	14	0	9	0	0	0

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
\*\*\*\*\*  
Intersection #21 Second / Harrison  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.480  
Loss Time (sec): 10 Average Delay (sec/veh): 167.0  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Second Harrison  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 1 1 0 2 0 1 0 0 1 0 1 0 1 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 74 462 870 223 566 490 20 243 27 134 727 72  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 74 462 870 223 566 490 20 243 27 134 727 72  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 76 471 888 228 578 500 20 248 28 137 742 73  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 76 471 888 228 578 500 20 248 28 137 742 73  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 76 471 888 228 578 500 20 248 28 137 742 73  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.53 0.53 0.40 0.17 0.56 0.56 0.73 0.18 0.73 0.40 0.65 0.65  
Lanes: 0.28 1.72 2.00 0.83 0.63 0.54 0.04 1.91 0.05 1.00 1.82 0.18  
Final Sat.: 276 1724 1504 265 672 582 55 663 74 759 2260 224  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.27 0.27 0.59 0.86 0.86 0.86 0.37 0.37 0.37 0.18 0.33 0.33  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.48 0.48 0.48 0.48 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.57 0.57 1.22 1.78 1.78 1.78 1.07 1.07 1.07 0.51 0.94 0.94  
Uniform Del: 11.0 11.0 15.5 15.5 15.5 15.5 19.5 19.5 19.5 15.5 18.9 18.9  
IncremntDel: 2.4 2.4 111.7 355.9 356 355.9 73.3 73.3 73.3 7.0 18.7 18.7  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Delay/Veh: 13.4 13.4 127.2 371.4 371 371.4 92.8 92.8 92.8 22.4 37.6 37.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 13.4 13.4 127.2 371.4 371 371.4 92.8 92.8 92.8 22.4 37.6 37.6  
LOS by Move: B B F F F F F F C D D  
HCM2kAvgQ: 5 5 24 23 71 71 20 7 20 3 13 13

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
\*\*\*\*\*  
Intersection #22 First / Harrison / I-80 EB On-Ramp  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.496  
Loss Time (sec): 8 Average Delay (sec/veh): 155.7  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: First Harrison  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permit+Prot  
Rights: Include Include Include Include  
Min. Green: 31 0 31 31 31 31 0 6 6 6 11 21 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 1 0 2 0 1 0 0 1 1 0 1 1 1 0 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 1 0 1 21 1488 267 0 66 11 955 654 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 1 0 1 21 1488 267 0 66 11 955 654 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 1 0 1 21 1518 272 0 67 11 974 667 0  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1 0 1 21 1518 272 0 67 11 974 667 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 1 0 1 21 1518 272 0 67 11 974 667 0  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.72 1.00 0.72 0.15 0.52 0.36 1.00 0.80 0.16 0.70 0.78 1.00  
Lanes: 0.50 0.00 0.50 1.00 2.00 1.00 0.00 1.09 0.91 1.82 1.18 0.00  
Final Sat.: 682 0 682 288 1990 685 0 1652 275 2422 1758 0  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.07 0.76 0.40 0.00 0.04 0.04 0.40 0.38 0.00  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.52 0.00 0.52 0.52 0.52 0.52 0.10 0.10 0.10 0.35 0.35 0.00  
Volume/Cap: 0.00 0.00 0.00 0.14 1.47 0.76 0.00 0.41 0.41 1.27 1.08 0.00  
Uniform Del: 6.9 0.0 6.9 7.5 14.4 11.5 0.0 25.3 25.3 22.6 19.5 0.0  
IncremntDel: 0.0 0.0 0.0 2.0 215 14.5 0.0 6.3 6.3 126.6 49.8 0.0  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 0.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00  
Delay/Veh: 6.9 0.0 6.9 9.5 230 25.9 0.0 31.6 31.6 149.2 69.3 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 6.9 0.0 6.9 9.5 230 25.9 0.0 31.6 31.6 149.2 69.3 0.0  
LOS by Move: A A A A F C A C C F E A  
HCM2kAvgQ: 0 0 0 0 48 6 0 2 1 24 16 0

-----  
**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
\*\*\*\*\*  
Intersection #23 Fremont / Harrison / I-80 WB Off-Ramp  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 0.911  
Loss Time (sec): 10 Average Delay (sec/veh): 80.1  
Optimal Cycle: 83 Level Of Service: F  
\*\*\*\*\*  
Street Name: Fremont / I-80 WB Off-Ramp Harrison  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 0 0 0 21 29 29 0 0 29 29  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 1 0 1 0 0 0 0 1 0 1 0 0 0 0 0 2 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 0 0 0 0 279 5 89 0 0 1317 74  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 0 0 0 279 5 89 0 0 1317 74  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 0 0 285 5 91 0 0 1344 76  
Reduc Vol: 0  
Reduced Vol: 0 0 0 0 0 285 5 91 0 0 1344 76  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 0 0 0 0 0 285 5 91 0 0 1344 76  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.95 0.95 0.95 1.00 1.00 0.76 0.83 0.83 1.00 1.00 0.43 0.79  
Lanes: 0.00 0.00 2.00 0.00 0.00 1.00 0.05 0.95 0.00 0.00 2.91 0.09  
Final Sat.: 0 0 3610 0 0 1435 84 1495 0 0 2397 135  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.20 0.06 0.06 0.00 0.00 0.56 0.56  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.00 0.00 0.00 0.00 0.35 0.48 0.48 0.00 0.00 0.48 0.48  
Volume/Cap: 0.00 0.00 0.00 0.00 0.00 0.57 0.13 0.13 0.00 0.00 1.16 1.16  
Uniform Del: 0.0 0.0 0.0 0.0 0.0 15.8 8.5 8.5 0.0 0.0 15.5 15.5  
IncremntDel: 0.0 0.0 0.0 0.0 0.0 4.6 0.3 0.3 0.0 0.0 81.4 81.4  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 0.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 0.00 0.00 1.00 1.00  
Delay/Veh: 0.0 0.0 0.0 0.0 0.0 20.4 8.9 8.9 0.0 0.0 96.9 96.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 0.0 0.0 20.4 8.9 8.9 0.0 0.0 96.9 96.9  
LOS by Move: A A A A A C A A A A F F  
HCM2kAvgQ: 0 0 0 0 0 5 1 1 0 0 18 32

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
\*\*\*\*\*  
Intersection #24 Main / Harrison  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.195  
Loss Time (sec): 9 Average Delay (sec/veh): 73.6  
Optimal Cycle: 180 Level Of Service: E  
\*\*\*\*\*  
Street Name: Main Harrison  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 25 25 25 25 25 25 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 0 1 0 0 1 0 0 1 0 0 0 1! 0 0 0 1 1 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 239 316 22 5 242 205 12 44 28 7 846 41  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 239 316 22 5 242 205 12 44 28 7 846 41  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 244 322 22 5 247 209 12 45 29 7 863 42  
Reduc Vol: 0  
Reduced Vol: 244 322 22 5 247 209 12 45 29 7 863 42  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 244 322 22 5 247 209 12 45 29 7 863 42  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.25 0.87 0.87 0.88 0.88 0.31 0.75 0.75 0.75 0.75 0.73 0.31 0.73  
Lanes: 1.00 0.93 0.07 0.02 0.98 1.00 0.14 0.53 0.33 0.01 2.93 0.06  
Final Sat.: 475 1551 108 34 1632 598 204 747 475 14 1719 83  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.51 0.21 0.21 0.15 0.15 0.35 0.06 0.06 0.06 0.06 0.50 0.50 0.50  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.42 0.42 0.42 0.42 0.42 0.42 0.43 0.43 0.43 0.43 0.43 0.43 0.43  
Volume/Cap: 1.23 0.50 0.50 0.36 0.36 0.84 0.14 0.14 0.14 0.14 1.16 1.16 1.16  
Uniform Del: 17.5 12.9 12.9 12.0 12.0 15.7 10.2 10.2 10.2 10.2 17.0 17.0 17.0  
IncremntDel: 140.3 2.6 2.6 1.5 1.5 27.3 0.5 0.5 0.5 0.5 85.6 85.6 85.6  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Delay/Veh: 157.8 15.5 15.5 13.5 13.5 43.0 10.7 10.7 10.7 10.7 102.6 102.6 102.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 157.8 15.5 15.5 13.5 13.5 43.0 10.7 10.7 10.7 10.7 102.6 102.6 102.6  
LOS by Move: F B B B D B B B B F F F F  
HCM2kAvgQ: 13 5 5 3 3 3 1 1 1 26 11 26

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
\*\*\*\*\*  
Intersection #25 Spear / Harrison  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.203  
Loss Time (sec): 10 Average Delay (sec/veh): 100.6  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Spear Harrison  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 21 0 21 21 21 0 29 29 29 29 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 1 0 0 1 0 0 1 0 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 46 190 143 70 20 542 0 85 65 27 372 27  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 46 190 143 70 20 542 0 85 65 27 372 27  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 47 194 146 71 20 553 0 87 66 28 380 28  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 47 194 146 71 20 553 0 87 66 28 380 28  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 47 194 146 71 20 553 0 87 66 28 380 28  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.80 0.80 0.80 0.53 0.53 0.60 1.00 0.83 0.83 0.23 0.21 0.78  
Lanes: 0.12 0.50 0.38 0.78 0.22 1.00 0.00 0.57 0.43 0.12 1.84 0.04  
Final Sat.: 184 761 573 787 225 1140 0 895 684 53 733 53  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.25 0.25 0.25 0.09 0.09 0.49 0.00 0.10 0.10 0.52 0.52 0.52  
Crit Moves: \*\*\*\* \*\*\*  
Green/Cycle: 0.35 0.35 0.35 0.35 0.35 0.00 0.48 0.48 0.48 0.48 0.48 0.48  
Volume/Cap: 0.73 0.73 0.73 0.26 0.26 1.39 0.00 0.20 0.20 1.07 1.07 1.07  
Uniform Del: 17.0 17.0 17.0 13.9 13.9 19.5 0.0 8.9 8.9 15.5 15.5 15.5  
IncremntDel: 8.5 8.5 8.5 1.8 1.8 188.9 0.0 0.6 0.6 64.8 64.8 64.8  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
Delay/Veh: 25.5 25.5 25.5 15.7 15.7 208.4 0.0 9.5 9.5 80.3 80.3 80.3  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 25.5 25.5 25.5 15.7 15.7 208.4 0.0 9.5 9.5 80.3 80.3 80.3  
LOS by Move: C C C B B F A A A F F F  
HCM2kAvgQ: 8 8 8 1 1 29 0 2 2 8 7 26

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Base Volume Alternative)**  
\*\*\*\*\*  
Intersection #26 Second / Bryant  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.200  
Loss Time (sec): 7 Average Delay (sec/veh): 68.0  
Optimal Cycle: 180 Level Of Service: E  
\*\*\*\*\*  
Street Name: Second Bryant  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 0 26 26 26 26 0 27 27 27 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1 1 1 0 0 2 0 2 1 0 0 0 0 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 651 151 9 650 0 778 787 37 0 0 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 651 151 9 650 0 778 787 37 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 664 154 9 663 0 794 803 38 0 0 0  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 664 154 9 663 0 794 803 38 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 0 664 154 9 663 0 794 803 38 0 0 0  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.39 0.16 0.78 0.78 1.00 0.38 0.31 0.77 1.00 1.00 1.00  
Lanes: 0.00 2.00 1.00 0.03 1.97 0.00 2.00 2.94 0.06 0.00 0.00 0.00  
Final Sat.: 0 1491 298 41 2935 0 1462 1715 81 0 0 0  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.45 0.52 0.23 0.23 0.00 0.54 0.47 0.47 0.00 0.00 0.00  
Crit Moves: \*\*\*\* \*\*\*  
Green/Cycle: 0.00 0.43 0.43 0.43 0.43 0.00 0.45 0.45 0.45 0.00 0.00 0.00  
Volume/Cap: 0.00 1.03 1.19 0.52 0.52 0.00 1.21 1.04 1.04 0.00 0.00 0.00  
Uniform Del: 0.0 17.0 17.0 12.4 12.4 0.0 16.5 16.5 16.5 0.0 0.0 0.0  
IncremntDel: 0.0 39.3 100.5 1.5 1.5 0.0 107.0 42.6 42.6 0.0 0.0 0.0  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 0.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00 0.00  
Delay/Veh: 0.0 56.3 117.5 14.0 14.0 0.0 123.5 59.1 59.1 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 56.3 117.5 14.0 14.0 0.0 123.5 59.1 59.1 0.0 0.0 0.0  
LOS by Move: A E F B B A F E E A A A  
HCM2kAvgQ: 0 13 9 5 5 0 20 12 24 0 0 0

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #1 First / Market / Battery / Bush

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Cycle (sec): 60 Critical Vol./Cap.(X): 1.185  
Loss Time (sec): 13 Average Delay (sec/veh): 118.7  
Optimal Cycle: 180 Level Of Service: F

---

Street Name: First / Battery / Bush				Market			
Approach: North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Split Phase	Split Phase	Permitted	Permitted			
Rights:	Include	Include	Include	Include			
Min. Green:	0 0 0 0	18 18 18 0	29 29 29 29	29 29 29 0			
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0			
Lanes:	0 0 0 0	1 0 2 0	2 0 0 1	0 1 0 1	0 1 1 0	0 0 1 1	0 0 1 0

---

Volume Module:

Base Vol:	0 0 0 113 1075 262 0 403 254 3 349 0
Growth Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:	0 0 0 113 1075 262 0 403 254 3 349 0
Added Vol:	0 0 0 0 78 0 0 0 7 0 0 0
PasserByVol:	0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:	0 0 0 113 1153 262 0 403 261 3 349 0
User Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:	0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume:	0 0 0 115 1177 267 0 411 266 3 356 0
Reduc Vol:	0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:	0 0 0 115 1177 267 0 411 266 3 356 0
PCE Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:	0 0 0 115 1177 267 0 411 266 3 356 0

---

Saturation Flow Module:

Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	1.00 1.00 1.00 0.64 0.71 0.56 1.00 0.73 0.28 0.73 0.73 1.00
Lanes:	0.00 0.00 0.00 1.00 2.00 2.00 0.00 1.00 1.00 0.02 1.98 0.00
Final Sat.:	0 0 0 1211 2706 2131 0 1384 540 24 2768 0

---

Capacity Analysis Module:

Vol/Sat:	0.00 0.00 0.00 0.10 0.43 0.13 0.00 0.30 0.49 0.13 0.13 0.00
Crit Moves:	****
Green/Cycle:	0.00 0.00 0.00 0.30 0.30 0.30 0.00 0.48 0.48 0.48 0.48 0.00
Volume/Cap:	0.00 0.00 0.00 0.32 1.45 0.42 0.00 0.61 1.02 0.27 0.27 0.00
Uniform Del:	0.0 0.0 0.0 16.2 21.0 16.8 0.0 11.4 15.5 9.2 9.2 0.0
IncremntDel:	0.0 0.0 0.0 2.3 209 2.0 0.0 4.2 61.2 0.5 0.5 0.0
InitQueuDel:	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj:	0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00
Delay/Veh:	0.0 0.0 0.0 18.5 230 18.8 0.0 15.6 76.7 9.7 9.7 0.0
User DelAdj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:	0.0 0.0 0.0 18.5 230 18.8 0.0 15.6 76.7 9.7 9.7 0.0
LOS by Move:	A A A B F B A B E A A A
HCM2kAvgQ:	0 0 0 2 37 3 0 7 11 2 2 0

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #2 Fremont / Market / Front

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Cycle (sec): 60 Critical Vol./Cap.(X): 1.284  
Loss Time (sec): 11 Average Delay (sec/veh): 265.7  
Optimal Cycle: 180 Level Of Service: F

---

Street Name: Fremont / Front				Market			
Approach: North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Split Phase	Split Phase	Permitted	Permitted			
Rights:	Include	Include	Include	Include			
Min. Green:	27 27 27	0 0 0	22 22 0	0 0 22 22			
Y+R:	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0	4.0 4.0 4.0 4.0			
Lanes:	0 1 0 1 0	0 0 0 0 0	0 1 1 0 0	0 0 1 1 0	0 0 1 1 0	0 0 1 1 0	0 0 1 1 0

---

Volume Module:

Base Vol:	63 1410 321 0 0 0 7 540 0 0 0 304 15
Growth Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:	63 1410 321 0 0 0 7 540 0 0 0 304 15
Added Vol:	0 40 4 0 0 0 0 0 0 0 0 0
PasserByVol:	0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut:	63 1450 325 0 0 0 7 540 0 0 0 304 15
User Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:	0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume:	64 1480 332 0 0 0 7 551 0 0 0 310 15
Reduc Vol:	0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:	64 1480 332 0 0 0 7 551 0 0 0 310 15
PCE Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:	64 1480 332 0 0 0 7 551 0 0 0 310 15

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Saturation Flow Module:

Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	0.75 0.60 0.60 1.00 1.00 1.00 0.77 0.62 1.00 1.00 0.62 0.62
Lanes:	0.05 1.59 0.36 0.00 0.00 0.00 0.02 1.98 0.00 0.00 1.91 0.09
Final Sat.:	79 1822 408 0 0 0 30 2327 0 0 2248 111

---

Capacity Analysis Module:

Vol/Sat:	0.81 0.81 0.81 0.00 0.00 0.00 0.24 0.24 0.00 0.00 0.00 0.14
Crit Moves:	****
Green/Cycle:	0.45 0.45 0.45 0.45 0.00 0.00 0.00 0.37 0.37 0.00 0.00 0.37
Volume/Cap:	1.80 1.80 1.80 0.00 0.00 0.00 0.65 0.65 0.00 0.00 0.38 0.38
Uniform Del:	16.5 16.5 16.5 0.0 0.0 0.0 15.8 15.8 0.0 0.0 14.0 14.0
IncremntDel:	366.0 366.0 366.0 0.0 0.0 0.0 3.7 3.7 0.0 0.0 1.3 1.3
InitQueuDel:	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj:	1.00 1.00 1.00 0.00 0.00 0.00 1.00 1.00 0.00 0.00 1.00 1.00
Delay/Veh:	382.5 383 382.5 0.0 0.0 0.0 19.5 19.5 0.0 0.0 15.2 15.2
User DelAdj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:	382.5 383 382.5 0.0 0.0 0.0 19.5 19.5 0.0 0.0 15.2 15.2
LOS by Move:	F F F A A A B B B A A A B B B
HCM2kAvgQ:	91 73 73 0 0 0 6 5 0 0 3 3

-----  
**Level Of Service Computation Report**  
**2000 HCM Operations Method (Future Volume Alternative)**  
\*\*\*\*\*  
**Intersection #3 Second / Mission**  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 0.908  
Loss Time (sec): 8 Average Delay (sec/veh): 28.8  
Optimal Cycle: 81 Level Of Service: C  
\*\*\*\*\*  
Street Name: Second Mission  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 21 21 21 21 21 31 31 31 31 31 31  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 1 0 1 0 1 0 1 0 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 173 308 128 21 293 60 1 125 540 4 371 125  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 173 308 128 21 293 60 1 125 540 4 371 125  
Added Vol: 0 0 0 0 0 0 0 0 24 73 16 5  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 173 308 128 21 293 60 1 125 564 77 387 130  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 177 314 131 21 299 61 1 128 576 79 395 133  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 177 314 131 21 299 61 1 128 576 79 395 133  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 177 314 131 21 299 61 1 128 576 79 395 133  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.29 0.62 0.52 0.22 0.49 0.41 0.65 0.43 0.65 0.61 0.40 0.61  
Lanes: 1.00 1.00 1.00 1.00 1.00 0.01 0.99 1.00 0.19 1.48 0.33  
Final Sat.: 550 1173 997 416 922 783 7 816 1243 225 1132 380  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.32 0.27 0.13 0.05 0.32 0.08 0.16 0.16 0.46 0.35 0.35 0.35  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.35 0.35 0.35 0.35 0.35 0.35 0.52 0.52 0.52 0.52 0.52 0.52  
Volume/Cap: 0.92 0.77 0.37 0.15 0.93 0.22 0.30 0.30 0.90 0.68 0.68 0.68  
Uniform Del: 18.7 17.3 14.6 13.4 18.8 13.7 8.3 8.3 13.0 10.8 10.8 10.8  
IncremntDel: 46.1 12.8 3.1 2.1 34.5 1.9 0.3 0.3 14.9 4.1 4.1 4.1  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Delay/Veh: 64.8 30.1 17.6 15.5 53.3 15.6 8.6 8.6 28.0 14.8 14.8 14.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 64.8 30.1 17.6 15.5 53.3 15.6 8.6 8.6 28.0 14.8 14.8 14.8  
LOS by Move: E C B B D B A A C B B B  
HCM2kAvgQ: 7 7 2 0 10 1 2 1 10 7 5 7

-----  
**Level Of Service Computation Report**  
**2000 HCM Operations Method (Future Volume Alternative)**  
\*\*\*\*\*  
**Intersection #4 First / Mission**  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.504  
Loss Time (sec): 8 Average Delay (sec/veh): 327.1  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: First Mission  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 0 0 23 23 23 0 29 29 29 29 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 0 0 2 1 0 0 0 0 1 0 0 1 0 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 0 0 0 1536 382 0 0 269 0 0 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 0 0 0 1536 382 0 0 269 0 0 0  
Added Vol: 0 0 0 0 0 14 73 0 0 0 0 21 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 0 1550 455 0 0 269 0 0 21 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 0 1582 464 0 0 274 0 0 21 0  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 0 1582 464 0 0 274 0 0 21 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 0 0 0 1582 464 0 0 274 0 0 21 0  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 1.00 0.70 0.54 0.54 1.00 0.66 0.23 1.00 0.52 1.00  
Lanes: 0.00 0.00 0.00 0.00 2.32 0.68 0.00 0.00 1.00 0.00 1.00 0.00  
Final Sat.: 0 0 0 0 2392 702 0 0 428 0 988 0  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.00 0.66 0.66 0.00 0.00 0.64 0.00 0.02 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.00 0.00 0.00 0.38 0.38 0.00 0.00 0.48 0.00 0.48 0.00  
Volume/Cap: 0.00 0.00 0.00 0.00 1.73 1.73 0.00 0.00 1.33 0.00 0.04 0.00  
Uniform Del: 0.0 0.0 0.0 0.0 18.5 18.5 0.0 0.0 15.5 0.0 8.2 0.0  
IncremntDel: 0.0 0.0 0.0 0.0 330 329.9 0.0 0.0 177.2 0.0 0.2 0.0  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 0.00 0.00 0.00 0.00 1.00 1.00 0.00 0.00 1.00 0.00 1.00 0.00  
Delay/Veh: 0.0 0.0 0.0 0.0 348 348.4 0.0 0.0 192.7 0.0 8.4 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 0.0 348 348.4 0.0 0.0 192.7 0.0 8.4 0.0  
LOS by Move: A A A A F F A A F A A A  
HCM2kAvgQ: 0 0 0 0 54 54 0 0 16 0 0 0

-----  
**Level Of Service Computation Report**  
**2000 HCM Operations Method (Future Volume Alternative)**  
\*\*\*\*\*  
Intersection #5 Fremont / Mission  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.545  
Loss Time (sec): 8 Average Delay (sec/veh): 239.8  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Fremont Mission  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 33 33 33 0 0 0 19 19 0 0 0 19 19  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 1 1 0 1 0 0 0 0 0 0 0 0 1  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 1536 495 0 0 0 0 0 0 0 0 103  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 1536 495 0 0 0 0 0 0 0 0 103  
Added Vol: 21 43 24 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 21 1579 519 0 0 0 0 0 0 0 0 103  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 21 1611 530 0 0 0 0 0 0 0 0 105  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 21 1611 530 0 0 0 0 0 0 0 0 105  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 21 1611 530 0 0 0 0 0 0 0 0 105  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.42 0.63 0.22 1.00 1.00 1.00 1.00 0.66 1.00 1.00 0.66 0.74  
Lanes: 0.04 1.96 1.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.00  
Final Sat.: 31 2339 419 0 0 0 0 0 0 0 0 0 1408  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.69 0.69 1.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.07  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.55 0.55 0.55 0.00 0.00 0.00 0.32 0.32 0.00 0.00 0.32 0.32  
Volume/Cap: 1.25 1.25 2.30 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.23  
Uniform Del: 13.5 13.5 13.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 15.0  
IncremntDel: 120.1 120 598.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.2  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.00  
Delay/Veh: 133.6 134 611.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 16.2  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 133.6 134 611.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 16.2  
LOS by Move: F F F A A A A A A A A B  
HCM2kAvgQ: 28 40 48 0 0 0 0 0 0 0 0 0 2

-----  
**Level Of Service Computation Report**  
**2000 HCM Operations Method (Future Volume Alternative)**  
\*\*\*\*\*  
Intersection #6 Beale / Mission  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.003  
Loss Time (sec): 8 Average Delay (sec/veh): 178.2  
Optimal Cycle: 131 Level Of Service: F  
\*\*\*\*\*  
Street Name: Beale Mission  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 0 0 21 21 21 0 31 31 31 31 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 0 0 0 1 1 0 1 0 1 0 1 0 1  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 0 0 60 1610 19 0 275 258 281 48 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 0 0 60 1610 19 0 275 258 281 48 0  
Added Vol: 0 0 0 0 4 0 0 0 24 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 60 1614 19 0 299 258 281 48 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 61 1647 19 0 305 263 287 49 0  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 61 1647 19 0 305 263 287 49 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 0 0 61 1647 19 0 305 263 287 49 0  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 1.00 1.00 0.83 0.83 0.75 1.00 0.57 0.73 0.46 0.57 1.00  
Lanes: 0.00 0.00 0.00 0.07 1.93 1.00 0.00 1.00 1.00 1.00 1.00 1.00  
Final Sat.: 0 0 0 114 3055 1424 0 1074 1384 869 1074 1900  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.54 0.54 0.01 0.00 0.28 0.19 0.33 0.05 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.00 0.00 0.35 0.35 0.35 0.00 0.52 0.52 0.52 0.52 0.00  
Volume/Cap: 0.00 0.00 0.00 1.54 1.54 0.04 0.00 0.55 0.37 0.64 0.09 0.00  
Uniform Del: 0.0 0.0 0.0 19.5 19.5 12.8 0.0 9.8 8.7 10.5 7.3 0.0  
IncremntDel: 0.0 0.0 0.0 247.8 248 0.1 0.0 3.9 1.5 6.8 0.3 0.0  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00  
Delay/Veh: 0.0 0.0 0.0 267.3 267 13.0 0.0 13.7 10.1 17.2 7.7 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 267.3 267 13.0 0.0 13.7 10.1 17.2 7.7 0.0  
LOS by Move: A A A F F B A B B B A A  
HCM2kAvgQ: 0 0 0 57 57 0 0 5 3 5 1 0

## Level Of Service Computation Report

## 2000 HCM Operations Method (Future Volume Alternative)

## Intersection #7 Main / Mission

```
*****  
Cycle (sec):          60           Critical Vol./Cap.(X):      1.879  
Loss Time (sec):       8            Average Delay (sec/veh):   103.0  
Optimal Cycle:        180          Level Of Service:          F  
*****
```

Volume Module:												
Base Vol:	180	427	173	110	343	0	48	296	0	55	173	79
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	180	427	173	110	343	0	48	296	0	55	173	79
Added Vol:	0	0	0	0	0	0	0	24	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	180	427	173	110	343	0	48	320	0	55	173	79
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	184	436	177	112	350	0	49	327	0	56	177	81
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	184	436	177	112	350	0	49	327	0	56	177	81
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	184	436	177	112	350	0	49	327	0	56	177	81

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.81	0.81	0.81	0.87	0.87	1.00	0.47	0.81	0.95	0.77	0.77	0.77
Lanes:	0.23	0.55	0.22	0.24	0.76	0.00	1.00	2.00	0.00	0.36	1.13	0.51
Final Sat.:	356	845	342	402	1254	0	892	3093	0	522	1643	750

Capacity Analysis Module:														
Vol/Sat:	0.52	0.52	0.52	0.28	0.28	0.00	0.05	0.11	0.00	0.11	0.11	0.11		
Crit Moves:			****	****			****				****			
Green/Cycle:	0.35	0.35	0.35	0.00	0.00	0.00	0.51	0.51	0.00	0.00	0.31	0.31		
Volume/Cap:	1.47	1.47	1.47	XXXX	XXXX	0.00	0.09	0.21	0.00	XXXX	0.35	0.35		
Uniform Del:	19.5	19.5	19.5	0.0	0.0	0.0	9.4	8.1	0.0	0.0	16.0	16.0		
IncremntDel:	223.0	223	223.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	1.1	1.1		
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00		
Delay/Veh:	242.5	242	242.5	0.0	0.0	0.0	9.8	8.4	0.0	0.0	17.1	17.1		
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
AdjDel/Veh:	242.5	242	242.5	0.0	0.0	0.0	9.8	8.4	0.0	0.0	17.1	17.1		
LOS by Move:	F	F	F	A	A	A	A	A	A	A	B	B		
HCM2kAvgO:	48	48	48	8	8	0	1	2	0	3	2	2		

## Level Of Service Computation Report

## 2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Second / Howard

```
*****  
Cycle (sec):          60           Critical Vol./Cap.(X):      5.214  
Loss Time (sec):       7            Average Delay (sec/veh):   898.0  
Optimal Cycle:        180          Level Of Service:          F  
*****
```

Street Name:	Second			Howard											
Approach:	North Bound		South Bound		East Bound		West Bound								
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
<hr/>															
Control:	Permitted			Permitted			Split Phase			Split Phase					
Rights:	Include			Include			Include			Include					
Min. Green:	21	21	0	0	21	21	0	0	0	32	32	32			
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	0	0	0	0	0	1	0	1

Volume Module:													
Base Vol:	441	405	387	0	446	527	0	0	0	617	2474	162	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	441	405	387	0	446	527	0	0	0	617	2474	162	
Added Vol:	0	0	0	0	0	0	0	0	0	63	122	5	
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:	441	405	387	0	446	527	0	0	0	680	2596	167	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
PHF Volume:	450	413	395	0	455	538	0	0	0	694	2649	170	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	450	413	395	0	455	538	0	0	0	694	2649	170	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	450	413	395	0	455	538	0	0	0	694	2649	170	

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.08	0.42	0.82	0.75	0.44	0.44	1.00	1.00	1.00	0.60	0.60	0.60
Lanes:	1.00	0.67	0.33	1.00	0.46	0.54	0.00	0.00	0.00	0.39	1.51	0.10
Final Sat.:	146	533	509	1425	379	448	0	0	0	452	1727	111

Capacity Analysis Module:													
Vol/Sat:	3.07	0.78	0.78	0.00	1.20	1.20	0.00	0.00	0.00	1.53	1.53	1.53	
Crit Moves:	****									****			
Green/Cycle:	0.35	0.35	0.35	0.00	0.35	0.35	0.00	0.00	0.00	0.53	0.53	0.53	
Volume/Cap:	3.75	2.22	2.22	0.00	3.43	3.43	0.00	0.00	0.00	2.88	2.88	2.88	
Uniform Del:	19.5	19.5	19.5	0.0	19.5	19.5	0.0	0.0	0.0	14.0	14.0	14.0	
IncremntDel:	1258	556	556.3	0.0	1103	1103	0.0	0.0	0.0	846.2	846	846.2	
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Delay Adj:	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	
Delay/Veh:	1277	576	575.8	0.0	1122	1122	0.0	0.0	0.0	860.2	860	860.2	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	1277	576	575.8	0.0	1122	1122	0.0	0.0	0.0	860.2	860	860.2	
LOS by Move:	F	F	F	A	F	F	A	A	A	F	F	F	
HCM2KAvgQ:	50	54	105	0	106	106	0	0	0	183	183	183	

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Future Volume Alternative)  
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**Intersection #9 First / Howard**  
\*\*\*\*\*  
 Cycle (sec): 60 Critical Vol./Cap.(X): 2.546  
 Loss Time (sec): 11 Average Delay (sec/veh): 493.5  
 Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
 Street Name: First Howard  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Split Phase Split Phase Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 25 25 0 0 0 24 24 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 0 0 1 0 2 1 0 0 0 1 0 0 0 2 0 0  
 Volume Module:  
 Base Vol: 0 0 0 76 1144 1093 0 710 80 0 1869 0  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 0 0 0 76 1144 1093 0 710 80 0 1869 0  
 Added Vol: 0 0 0 0 37 190 0 0 0 0 0 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 0 0 0 76 1181 1283 0 710 80 0 1869 0  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 0 0 0 78 1205 1309 0 724 82 0 1907 0  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 0 0 78 1205 1309 0 724 82 0 1907 0  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 0 0 0 78 1205 1309 0 724 82 0 1907 0  
 Saturation Flow Module:  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 1.00 1.00 1.00 0.75 0.44 0.52 1.00 0.89 0.89 0.65 0.67 1.00  
 Lanes: 0.00 0.00 0.00 1.00 2.00 1.00 0.00 0.90 0.10 0.00 2.00 0.00  
 Final Sat.: 0 0 0 1424 1687 984 0 1515 171 0 2547 0  
 Capacity Analysis Module:  
 Vol/Sat: 0.00 0.00 0.00 0.05 0.71 1.33 0.00 0.48 0.48 0.00 0.75 0.00  
 Crit Moves: \*\*\*\*  
 Green/Cycle: 0.00 0.00 0.00 0.42 0.42 0.42 0.00 0.40 0.40 0.00 0.40 0.00  
 Volume/Cap: 0.00 0.00 0.00 0.13 1.71 3.19 0.00 1.20 1.20 0.00 1.87 0.00  
 Uniform Del: 0.0 0.0 0.0 10.8 17.5 17.5 0.0 18.0 18.0 0.0 18.0 0.0  
 IncremntDel: 0.0 0.0 0.0 0.5 324 989.9 0.0 102 102.0 0.0 396 0.0  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 0.00  
 Delay/Veh: 0.0 0.0 0.0 11.3 342 1007 0.0 120 120.0 0.0 414 0.0  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 0.0 0.0 0.0 11.3 342 1007 0.0 120 120.0 0.0 414 0.0  
 LOS by Move: A A A B F F A F F A F A  
 HCM2kAvgQ: 0 0 0 1 48 149 0 35 35 0 75 0

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Future Volume Alternative)  
\*\*\*\*\*  
**Intersection #10 Fremont / Howard**  
\*\*\*\*\*  
 Cycle (sec): 60 Critical Vol./Cap.(X): 4.395  
 Loss Time (sec): 12 Average Delay (sec/veh): 462.0  
 Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
 Street Name: Fremont Howard  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Split Phase Split Phase Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 21 21 21 0 0 0 0 0 0 0 0 27 27  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 2 1 0 0 0 0 0 0 1 0 0 0 0 0 1 1 0  
 Volume Module:  
 Base Vol: 580 1312 339 0 0 0 407 221 0 0 0 1512 159  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 580 1312 339 0 0 0 407 221 0 0 0 1512 159  
 Added Vol: 0 289 0 0 0 0 0 0 0 0 0 0 13  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 580 1601 339 0 0 0 407 221 0 0 0 1512 172  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 592 1634 346 0 0 0 415 226 0 0 0 1543 176  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 592 1634 346 0 0 0 415 226 0 0 0 1543 176  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 592 1634 346 0 0 0 415 226 0 0 0 1543 176  
 Saturation Flow Module:  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 0.75 0.78 0.78 1.00 1.00 1.00 0.11 0.11 1.00 1.00 0.82 0.82  
 Lanes: 1.00 2.48 0.52 0.00 0.00 0.00 0.65 0.35 0.00 0.00 1.80 0.20  
 Final Sat.: 1424 3677 779 0 0 0 135 73 0 0 2805 319  
 Capacity Analysis Module:  
 Vol/Sat: 0.42 0.44 0.44 0.00 0.00 0.00 3.07 3.07 0.00 0.00 0.55 0.55  
 Crit Moves: \*\*\*\*  
 Green/Cycle: 0.35 0.35 0.35 0.00 0.00 0.00 0.45 0.45 0.00 0.00 0.45 0.45  
 Volume/Cap: 1.19 1.27 1.27 0.00 0.00 0.00 6.83 6.83 0.00 0.00 1.22 1.22  
 Uniform Del: 19.5 19.5 19.5 0.0 0.0 0.0 16.5 16.5 0.0 0.0 16.5 16.5  
 IncremntDel: 102.9 126 126.4 0.0 0.0 0.0 2644 2644 0.0 0.0 107 106.7  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 1.00 1.00 1.00 0.00 0.00 0.00 1.00 1.00 0.00 0.00 1.00 1.00  
 Delay/Veh: 122.4 146 145.9 0.0 0.0 0.0 2660 2660 0.0 0.0 123 123.2  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 122.4 146 145.9 0.0 0.0 0.0 2660 2660 0.0 0.0 123 123.2  
 LOS by Move: F F F A A A F F A A F F  
 HCM2kAvgQ: 26 35 35 0 0 0 80 80 0 0 40 40

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Future Volume Alternative)  
 \*\*\*\*\*  
**Intersection #11 Beale / Howard**  
 \*\*\*\*\*  
 Cycle (sec): 60 Critical Vol./Cap.(X): 1.771  
 Loss Time (sec): 10 Average Delay (sec/veh): 222.7  
 Optimal Cycle: 180 Level Of Service: F  
 \*\*\*\*\*  
 Street Name: Beale Howard  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Split Phase Split Phase Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 31 31 31 0 19 19 19 19 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 0 0 1 0 1 1 0 0 0 1 0 0 1 1 0 0  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Volume Module:**  
 Base Vol: 0 0 0 158 994 894 0 590 55 0 594 0  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 0 0 0 158 994 894 0 590 55 0 594 0  
 Added Vol: 0 0 0 0 0 4 0 0 0 0 9 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 0 0 0 158 994 898 0 590 55 0 603 0  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 0 0 0 161 1014 916 0 602 56 0 615 0  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 0 0 161 1014 916 0 602 56 0 615 0  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 0 0 0 161 1014 916 0 602 56 0 615 0  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Saturation Flow Module:**  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 1.00 1.00 1.00 1.25 0.78 0.44 1.00 0.89 0.89 0.95 0.67 1.00  
 Lanes: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 0.91 0.09 0.00 2.00 0.00  
 Final Sat.: 0 0 0 2379 1479 843 0 1547 144 0 2537 0  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Capacity Analysis Module:**  
 Vol/Sat: 0.00 0.00 0.00 0.07 0.69 1.09 0.00 0.39 0.39 0.00 0.24 0.00  
 Crit Moves: \*\*\*\* \* \*\*\*  
 Green/Cycle: 0.00 0.00 0.00 0.52 0.52 0.52 0.00 0.32 0.32 0.00 0.32 0.00  
 Volume/Cap: 0.00 0.00 0.00 0.13 1.33 2.10 0.00 1.23 1.23 0.00 0.77 0.00  
 Uniform Del: 0.0 0.0 0.0 7.5 14.5 14.5 0.0 20.5 20.5 0.0 18.5 0.0  
 IncremntDel: 0.0 0.0 0.0 0.2 152 500.4 0.0 119 118.7 0.0 6.9 0.0  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 0.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 0.00  
 Delay/Veh: 0.0 0.0 0.0 7.7 167 514.9 0.0 139 139.2 0.0 25.4 0.0  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 0.0 0.0 0.0 7.7 167 514.9 0.0 139 139.2 0.0 25.4 0.0  
 LOS by Move: A A A A F F A F F A C A  
 HCM2kAvgQ: 0 0 0 2 54 81 0 31 31 0 7 0

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Future Volume Alternative)  
 \*\*\*\*\*  
**Intersection #12 Main / Howard**  
 \*\*\*\*\*  
 Cycle (sec): 60 Critical Vol./Cap.(X): 3.376  
 Loss Time (sec): 7 Average Delay (sec/veh): 523.9  
 Optimal Cycle: 180 Level Of Service: F  
 \*\*\*\*\*  
 Street Name: Main Howard  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Permitted Permitted Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 20 20 20 0 0 0 33 33 0 0 0 25 25  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 1! 0 0 0 0 1 0 0 0 1 0 1 0 0  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Volume Module:**  
 Base Vol: 87 779 17 0 409 0 205 381 0 87 446 70  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 87 779 17 0 409 0 205 381 0 87 446 70  
 Added Vol: 3 0 0 0 0 0 0 0 0 0 0 7 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 90 779 17 0 409 0 205 381 0 87 453 70  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 92 795 17 0 417 0 209 389 0 89 462 71  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 92 795 17 0 417 0 209 389 0 89 462 71  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 92 795 17 0 417 0 209 389 0 89 462 71  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Saturation Flow Module:**  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 0.81 0.81 0.81 1.00 0.90 1.00 0.13 0.13 0.25 0.26 0.26 0.26  
 Lanes: 0.10 0.88 0.02 0.00 1.00 0.00 0.35 0.65 0.00 0.28 1.49 0.23  
 Final Sat.: 157 1359 30 0 1710 0 87 162 0 138 721 111  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Capacity Analysis Module:**  
 Vol/Sat: 0.58 0.58 0.58 0.00 0.24 0.00 2.40 2.40 0.00 0.64 0.64 0.64  
 Crit Moves: \*\*\* \*\*\*  
 Green/Cycle: 0.33 0.33 0.33 0.00 0.33 0.00 0.55 0.55 0.00 0.55 0.55 0.55  
 Volume/Cap: 1.75 1.75 1.75 0.00 0.73 0.00 4.36 4.36 0.00 1.17 1.17 1.17  
 Uniform Del: 20.0 20.0 20.0 0.0 17.6 0.0 13.5 13.5 0.0 13.5 13.5 13.5  
 IncremntDel: 347.3 347.3 347.3 0.0 8.1 0.0 1529 1529 0.0 93.6 93.6 93.6  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 1.00 1.00 1.00 0.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00  
 Delay/Veh: 367.3 367 367.3 0.0 25.7 0.0 1542 1542 0.0 107.1 107 107.1  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 367.3 367 367.3 0.0 25.7 0.0 1542 1542 0.0 107.1 107 107.1  
 LOS by Move: F F F A C A F F A F F F  
 HCM2kAvgQ: 66 66 66 0 9 0 69 69 0 15 15 15

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Future Volume Alternative)  
 \*\*\*\*\*  
**Intersection #13 Spear / Howard**  
 \*\*\*\*\*  
 Cycle (sec): 60 Critical Vol./Cap.(X): 1.040  
 Loss Time (sec): 7 Average Delay (sec/veh): 45.8  
 Optimal Cycle: 180 Level Of Service: D  
 \*\*\*\*\*  
 Street Name: Spear Howard  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Permitted Permitted Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 25 25 25 0 28 28 28 28 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 0 1 0 1 0  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Volume Module:**  
 Base Vol: 42 254 83 97 238 200 39 328 87 124 400 71  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 42 254 83 97 238 200 39 328 87 124 400 71  
 Added Vol: 0 0 0 0 0 2 0 0 0 0 5 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 42 254 83 97 238 202 39 328 87 124 405 71  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 43 259 85 99 243 206 40 335 89 127 413 72  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 43 259 85 99 243 206 40 335 89 127 413 72  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 43 259 85 99 243 206 40 335 89 127 413 72  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Saturation Flow Module:**  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 0.81 0.81 0.81 0.65 0.65 0.65 0.72 0.36 0.36 0.32 0.32 0.64  
 Lanes: 0.11 0.67 0.22 0.18 0.44 0.38 0.09 1.51 0.40 0.44 1.43 0.13  
 Final Sat.: 170 1026 335 224 550 467 122 1026 272 265 866 152  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Capacity Analysis Module:**  
 Vol/Sat: 0.25 0.25 0.25 0.44 0.44 0.44 0.33 0.33 0.33 0.48 0.48 0.48  
 Crit Moves: \*\*\*\*  
 Green/Cycle: 0.42 0.42 0.42 0.42 0.42 0.42 0.47 0.47 0.47 0.47 0.47 0.47  
 Volume/Cap: 0.61 0.61 0.61 1.06 1.06 1.06 0.70 0.70 0.70 1.02 1.02 1.02  
 Uniform Del: 13.7 13.7 13.7 17.5 17.5 17.5 12.7 12.7 12.7 16.0 16.0 16.0  
 IncremntDel: 4.2 4.2 4.2 56.4 56.4 56.4 6.0 6.0 6.0 42.7 42.7 42.7  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Delay/Veh: 17.9 17.9 17.9 73.9 73.9 73.9 18.7 18.7 18.7 58.7 58.7 58.7  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 17.9 17.9 17.9 73.9 73.9 73.9 18.7 18.7 18.7 58.7 58.7 58.7  
 LOS by Move: B B B E E E B B B E E E  
 HCM2kAvgQ: 7 7 7 20 20 20 8 5 5 8 8 8 15

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Future Volume Alternative)  
 \*\*\*\*\*  
**Intersection #14 Second / Folsom**  
 \*\*\*\*\*  
 Cycle (sec): 60 Critical Vol./Cap.(X): 2.358  
 Loss Time (sec): 7 Average Delay (sec/veh): 374.2  
 Optimal Cycle: 180 Level Of Service: F  
 \*\*\*\*\*  
 Street Name: Second Folsom  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Permitted Permit+Prot Split Phase Split Phase  
 Rights: Include Include Include Include  
 Min. Green: 0 21 21 7 32 0 21 21 21 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 1 1 0 1 0 1 0 0 1 2 0 1 0 0 0 0 1  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Volume Module:**  
 Base Vol: 0 402 138 248 1024 0 483 1288 172 0 0 0 228  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 0 402 138 248 1024 0 483 1288 172 0 0 0 228  
 Added Vol: 0 0 70 9 55 0 0 113 0 0 0 0 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 0 402 208 257 1079 0 483 1401 172 0 0 0 228  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 0 410 212 262 1101 0 493 1430 176 0 0 0 233  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 410 212 262 1101 0 493 1430 176 0 0 0 233  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 0 410 212 262 1101 0 493 1430 176 0 0 0 233  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Saturation Flow Module:**  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 1.00 0.80 0.80 0.12 0.44 1.00 0.79 0.50 0.72 1.00 1.00 0.78  
 Lanes: 0.00 1.32 0.68 1.00 1.00 0.00 0.54 2.46 1.00 0.00 0.00 1.00  
 Final Sat.: 0 1991 1030 236 838 0 806 2337 1367 0 0 1479  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Capacity Analysis Module:**  
 Vol/Sat: 0.00 0.21 0.21 1.11 1.31 0.00 0.61 0.61 0.13 0.00 0.00 0.16  
 Crit Moves: \*\*\*\*  
 Green/Cycle: 0.35 0.35 0.35 0.53 0.53 0.00 0.35 0.35 0.35 0.00 0.00 0.00  
 Volume/Cap: 0.00 0.59 0.59 2.20 2.48 0.00 1.75 1.75 0.37 0.00 0.00 xxxx  
 Uniform Del: 0.0 16.0 16.0 20.9 14.1 0.0 19.5 19.5 14.5 0.0 0.0 0.0  
 IncremntDel: 0.0 2.4 2.4 564.6 672 0.0 340.2 340 2.2 0.0 0.0 0.0  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 0.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 0.00 0.00 0.00  
 Delay/Veh: 0.0 18.4 18.4 585.5 687 0.0 359.7 360 16.7 0.0 0.0 0.0  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 0.0 18.4 18.4 585.5 687 0.0 359.7 360 16.7 0.0 0.0 0.0  
 LOS by Move: A B B F F A F F B A A A  
 HCM2kAvgQ: 0 6 6 24 102 0 73 47 2 0 0 0 4

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Future Volume Alternative)  
 \*\*\*\*\*  
**Intersection #15 First / Folsom**  
 \*\*\*\*\*  
 Cycle (sec): 60 Critical Vol./Cap.(X): 1.339  
 Loss Time (sec): 9 Average Delay (sec/veh): 162.1  
 Optimal Cycle: 180 Level Of Service: F  
 \*\*\*\*\*  
 Street Name: First Folsom  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 -----|-----|-----|-----|  
 Control: Split Phase Split Phase Permitted Protected  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 30 30 0 0 12 12 9 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 0 0 0 1 2 1 0 0 0 2 0 1 1 0 1 0 0  
 -----|-----|-----|-----|  
**Volume Module:**  
 Base Vol: 0 0 0 290 879 0 0 0 569 329 453 228 0  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 0 0 0 290 879 0 0 0 569 329 453 228 0  
 Added Vol: 0 0 0 5 31 0 0 0 185 0 0 0 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 0 0 0 295 910 0 0 0 754 329 453 228 0  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 0 0 0 301 929 0 0 0 769 336 462 233 0  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 0 0 301 929 0 0 0 769 336 462 233 0  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 0 0 0 301 929 0 0 0 769 336 462 233 0  
 -----|-----|-----|-----|  
**Saturation Flow Module:**  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 1.00 1.00 1.00 0.32 0.31 0.91 1.00 0.84 0.52 0.86 0.90 1.00  
 Lanes: 0.00 0.00 0.00 0.94 3.06 0.00 0.00 2.00 1.00 1.00 1.00 0.00  
 Final Sat.: 0 0 0 582 1795 0 0 3184 997 1625 1710 0  
 -----|-----|-----|-----|  
**Capacity Analysis Module:**  
 Vol/Sat: 0.00 0.00 0.00 0.52 0.52 0.00 0.00 0.24 0.34 0.28 0.14 0.00  
 Crit Moves: \*\*\*\* \*\*\*\*  
 Green/Cycle: 0.00 0.00 0.00 0.50 0.50 0.00 0.00 0.20 0.20 0.15 0.35 0.00  
 Volume/Cap: 0.00 0.00 0.00 1.03 1.03 0.00 0.00 1.21 1.68 1.90 0.39 0.00  
 Uniform Del: 0.0 0.0 0.0 15.0 15.0 0.0 0.0 24.0 24.0 25.5 14.7 0.0  
 IncremntDel: 0.0 0.0 0.0 35.4 35.4 0.0 0.0 108 328.4 418.7 1.9 0.0  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 0.00 0.00 0.00 1.00 1.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00  
 Delay/Veh: 0.0 0.0 0.0 50.4 50.4 0.0 0.0 132 352.4 444.2 16.6 0.0  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 0.0 0.0 0.0 50.4 50.4 0.0 0.0 132 352.4 444.2 16.6 0.0  
 LOS by Move: A A A D D A A F F F B A  
 HCM2kAvgQ: 0 0 0 13 13 0 0 19 25 37 3 0

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Future Volume Alternative)  
 \*\*\*\*\*  
**Intersection #16 Fremont / Folsom / I-80 WB Off-Ramp**  
 \*\*\*\*\*  
 Cycle (sec): 75 Critical Vol./Cap.(X): 1.072  
 Loss Time (sec): 16 Average Delay (sec/veh): 312.8  
 Optimal Cycle: 180 Level Of Service: F  
 \*\*\*\*\*  
 Street Name: Fremont / I-80 WB Off-Ramp Folsom  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 -----|-----|-----|-----|  
 Control: Split Phase Split Phase Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 19 19 19 19 0 21 21 21 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 1 0 1 0 1 0 0 1 0 1 0 0 1 0 1 0 1 0  
 -----|-----|-----|-----|  
**Volume Module:**  
 Base Vol: 32 32 15 290 103 0 216 510 183 0 649 0  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 32 32 15 290 103 0 216 510 183 0 649 0  
 Added Vol: 0 3 0 0 0 0 0 187 3 0 0 0 0 0 0 0 0 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 32 35 15 290 103 0 403 513 183 0 649 0  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 33 36 15 296 105 0 411 523 187 0 662 0  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 33 36 15 296 105 0 411 523 187 0 662 0  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 33 36 15 296 105 0 411 523 187 0 662 0  
 -----|-----|-----|-----|  
**Saturation Flow Module:**  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 0.80 0.80 0.80 0.86 0.90 1.00 0.47 0.47 0.47 0.95 0.86 0.95  
 Lanes: 0.78 0.85 0.37 1.00 1.00 0.00 0.73 0.94 0.33 0.00 2.00 0.00  
 Final Sat.: 1186 1297 556 1625 1710 0 649 826 295 0 3249 0  
 -----|-----|-----|-----|  
**Capacity Analysis Module:**  
 Vol/Sat: 0.03 0.03 0.03 0.18 0.06 0.00 0.63 0.63 0.63 0.00 0.20 0.00  
 Crit Moves: \*\*\*\* \*\*\*\*  
 Green/Cycle: 0.25 0.25 0.25 0.25 0.25 0.00 0.28 0.28 0.28 0.00 0.28 0.00  
 Volume/Cap: 0.11 0.11 0.11 0.72 0.24 0.00 2.26 2.26 2.26 0.00 0.73 0.00  
 Uniform Del: 21.5 21.5 21.5 25.6 22.3 0.0 27.0 27.0 27.0 0.0 24.4 0.0  
 IncremntDel: 0.3 0.3 0.3 10.3 1.3 0.0 575.0 575.0 575.0 0.0 5.1 0.0  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 0.00 1.00 0.00  
 Delay/Veh: 21.8 21.8 21.8 35.9 23.6 0.0 602.0 602 602.0 0.0 29.5 0.0  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 21.8 21.8 21.8 35.9 23.6 0.0 602.0 602 602.0 0.0 29.5 0.0  
 LOS by Move: C C C D C A F F F B A  
 HCM2kAvgQ: 1 1 1 8 2 0 54 54 54 0 8 0

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 Level Of Service Computation Report  
 2000 HCM Operations Method (Future Volume Alternative)  
 \*\*\*\*\*  
 Intersection #17 Beale / Folsom  
 \*\*\*\*\*  
 Cycle (sec): 60 Critical Vol./Cap.(X): 1.726  
 Loss Time (sec): 8 Average Delay (sec/veh): 221.7  
 Optimal Cycle: 180 Level Of Service: F  
 \*\*\*\*\*  
 Street Name: Beale Folsom  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 -----|-----|-----|-----|  
 Control: Permitted Permitted Split Phase Split Phase  
 Rights: Include Include Include Include  
 Min. Green: 0 0 23 23 0 0 29 29 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 1 0 0 0 1 0 1 0 0 0 1 1 0 0 1 1 0 0  
 -----|-----|-----|-----|  
 Volume Module:  
 Base Vol: 0 0 98 170 578 453 0 808 74 74 196 0  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 0 0 98 170 578 453 0 808 74 74 196 0  
 Added Vol: 0 0 0 0 0 0 3 0 0 0 0 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 0 0 98 170 578 453 0 811 74 74 196 0  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 0 0 100 173 590 462 0 828 76 76 200 0  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 0 100 173 590 462 0 828 76 76 200 0  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 0 0 100 173 590 462 0 828 76 76 200 0  
 -----|-----|-----|-----|  
 Saturation Flow Module:  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 1.00 1.00 0.75 0.71 0.71 0.71 1.00 0.25 0.25 0.84 0.84 1.00  
 Lanes: 1.00 0.00 1.00 0.28 0.97 0.75 0.00 1.83 0.17 0.55 1.45 0.00  
 Final Sat.: 1900 0 1424 384 1305 1023 0 864 79 878 2326 0  
 -----|-----|-----|-----|  
 Capacity Analysis Module:  
 Vol/Sat: 0.00 0.00 0.07 0.45 0.45 0.45 0.00 0.96 0.96 0.09 0.09 0.00  
 Crit Moves: \*\*\*\* \* \*\*\* \*\*\*  
 Green/Cycle: 0.00 0.00 0.38 0.38 0.38 0.38 0.00 0.48 0.48 0.00 0.00 0.00  
 Volume/Cap: 0.00 0.00 0.18 1.18 1.18 1.18 0.00 1.98 1.98 xxxx xxxx 0.00  
 Uniform Del: 0.0 0.0 12.3 18.5 18.5 18.5 0.0 15.5 15.5 0.0 0.0 0.0  
 IncremntDel: 0.0 0.0 0.7 90.7 90.7 90.7 0.0 450 449.6 0.0 0.0 0.0  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 0.00 0.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 0.00 0.00  
 Delay/Veh: 0.0 0.0 13.0 109.2 109 109.2 0.0 465 465.1 0.0 0.0 0.0  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 0.0 0.0 13.0 109.2 109 109.2 0.0 465 465.1 0.0 0.0 0.0  
 LOS by Move: A A B F F F A F F A A A  
 HCM2kAvgQ: 0 0 1 28 28 28 0 39 39 2 2 0

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 Level Of Service Computation Report  
 2000 HCM Operations Method (Future Volume Alternative)  
 \*\*\*\*\*  
 Intersection #18 Main / Folsom  
 \*\*\*\*\*  
 Cycle (sec): 60 Critical Vol./Cap.(X): 1.756  
 Loss Time (sec): 10 Average Delay (sec/veh): 202.2  
 Optimal Cycle: 180 Level Of Service: F  
 \*\*\*\*\*  
 Street Name: Main Folsom  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 -----|-----|-----|-----|  
 Control: Split Phase Split Phase Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 19 19 0 0 0 31 31 31 31 0 31  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 1 0 0 1 0 0 0 1! 0 0 0 1 0 0 1 0 1 0  
 -----|-----|-----|-----|  
 Volume Module:  
 Base Vol: 196 172 31 74 271 149 45 979 343 5 0 217  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 196 172 31 74 271 149 45 979 343 5 0 217  
 Added Vol: 0 1 0 0 0 0 1 1 0 0 0 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 196 173 31 74 271 149 46 980 343 5 0 217  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 200 177 32 76 277 152 47 1000 350 5 0 221  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 200 177 32 76 277 152 47 1000 350 5 0 221  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 200 177 32 76 277 152 47 1000 350 5 0 221  
 -----|-----|-----|-----|  
 Saturation Flow Module:  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 0.86 0.73 0.75 0.86 0.86 0.86 0.67 0.41 0.37 0.66 0.95 0.66  
 Lanes: 0.49 0.51 1.00 0.15 0.55 0.30 0.04 1.42 0.54 1.00 0.00 1.00  
 Final Sat.: 801 707 1424 244 893 491 52 1107 387 1262 0 1262  
 -----|-----|-----|-----|  
 Capacity Analysis Module:  
 Vol/Sat: 0.25 0.25 0.02 0.31 0.31 0.31 0.90 0.90 0.90 0.00 0.00 0.18  
 Crit Moves: \*\*\*\* \* \*\*\* \*\*\*  
 Green/Cycle: 0.32 0.32 0.32 0.00 0.00 0.00 0.52 0.52 0.52 0.52 0.00 0.52  
 Volume/Cap: 0.79 0.79 0.07 xxxx xxxx xxxx 1.75 1.75 1.75 0.01 0.00 0.34  
 Uniform Del: 18.7 18.7 14.3 0.0 0.0 0.0 14.5 14.5 14.5 7.0 0.0 8.5  
 IncremntDel: 12.4 12.4 0.3 0.0 0.0 0.0 342.2 342.2 342.2 0.0 0.0 1.4  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 1.00 1.00 1.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00 1.00  
 Delay/Veh: 31.1 31.1 14.6 0.0 0.0 0.0 356.7 357 356.7 7.0 0.0 9.9  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 31.1 31.1 14.6 0.0 0.0 0.0 356.7 357 356.7 7.0 0.0 9.9  
 LOS by Move: C C B A A A F F F A A A  
 HCM2kAvgQ: 8 7 0 8 8 8 88 54 50 0 0 3

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Future Volume Alternative)**  
\*\*\*\*\*  
Intersection #19 Spear / Folsom  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 2.490  
Loss Time (sec): 8 Average Delay (sec/veh): 553.5  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Spear Folsom  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 0 0 23 23 23 0 29 29 29 29 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 0 1 0 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 23 23 137 164 328 82 292 676 55 19 107 65  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 23 23 137 164 328 82 292 676 55 19 107 65  
Added Vol: 0 0 0 0 0 0 0 1 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 23 23 137 164 328 82 292 677 55 19 107 65  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 23 23 140 167 335 84 298 691 56 19 109 66  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 23 23 140 167 335 84 298 691 56 19 109 66  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 23 23 140 167 335 84 298 691 56 19 109 66  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.75 0.75 0.75 0.29 0.29 0.29 0.66 0.20 0.20 0.68 0.68 0.68  
Lanes: 0.12 0.13 0.13 0.75 0.29 0.57 0.14 0.21 1.66 0.13 0.20 1.12 0.68  
Final Sat.: 179 179 1068 160 320 80 268 621 50 259 1457 885  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.13 0.13 0.13 1.05 1.05 1.05 1.11 1.11 1.11 0.07 0.07 0.07  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.38 0.38 0.38 0.38 0.38 0.38 0.48 0.48 0.48 0.48 0.48 0.48  
Volume/Cap: 0.34 0.34 0.34 2.73 2.73 2.73 2.30 2.30 2.30 0.15 0.15 0.15  
Uniform Del: 13.1 13.1 13.1 18.5 18.5 18.5 15.5 15.5 15.5 8.7 8.7 8.7  
IncremntDel: 1.7 1.7 1.7 791.7 792 791.7 591.9 592 591.9 0.3 0.3 0.3  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Delay/Veh: 14.8 14.8 14.8 810.2 810 810.2 607.4 607 607.4 8.9 8.9 8.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 14.8 14.8 14.8 810.2 810 810.2 607.4 607 607.4 8.9 8.9 8.9  
LOS by Move: B B B F F F F F A A A  
HCM2kAvgQ: 3 3 3 58 58 58 130 40 40 1 1 1

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Future Volume Alternative)**  
\*\*\*\*\*  
Intersection #20 The Embarcadero / Folsom  
\*\*\*\*\*  
Cycle (sec): 90 Critical Vol./Cap.(X): 1.191  
Loss Time (sec): 10 Average Delay (sec/veh): 144.6  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: The Embarcadero Folsom  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Protected Protected Split Phase Split Phase  
Rights: Include Include Include Include  
Min. Green: 12 49 0 0 32 32 31 0 31 0 0 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 2 0 0 0 0 1 1 0 1 0 0 0 1 0 0 0 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 249 2051 0 0 1596 32 541 0 377 0 0 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 249 2051 0 0 1596 32 541 0 377 0 0 0  
Added Vol: 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 249 2051 0 0 1596 32 541 0 378 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 254 2093 0 0 1629 33 552 0 386 0 0 0  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 254 2093 0 0 1629 33 552 0 386 0 0 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 254 2093 0 0 1629 33 552 0 386 0 0 0  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.93 0.74 1.00 1.00 1.02 0.93 0.93 1.00 0.83 1.00 1.00 1.00  
Lanes: 1.00 2.00 0.00 0.00 1.96 0.04 1.00 0.00 1.00 0.00 0.00 0.00  
Final Sat.: 1769 2802 0 0 3796 76 1769 0 1583 0 0 0  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.14 0.75 0.00 0.00 0.43 0.43 0.31 0.00 0.24 0.00 0.00 0.00  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.13 0.54 0.00 0.00 0.35 0.35 0.34 0.00 0.34 0.00 0.00 0.00  
Volume/Cap: 1.10 1.38 0.00 0.00 1.23 1.23 0.92 0.00 0.72 0.00 0.00 0.00  
Uniform Del: 39.2 20.7 0.0 0.0 29.3 29.3 28.5 0.0 25.9 0.0 0.0 0.0  
IncremntDel: 90.3 177 0.0 0.0 108 108.3 21.2 0.0 8.0 0.0 0.0 0.0  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00  
Delay/Veh: 129.5 197 0.0 0.0 138 137.6 49.7 0.0 33.9 0.0 0.0 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 129.5 197 0.0 0.0 138 137.6 49.7 0.0 33.9 0.0 0.0 0.0  
LOS by Move: F F A A F F D A C A A A  
HCM2kAvgQ: 10 66 0 0 42 39 14 0 9 0 0 0

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Future Volume Alternative)**  
\*\*\*\*\*  
Intersection #21 Second / Harrison  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.557  
Loss Time (sec): 10 Average Delay (sec/veh): 186.7  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: Second Harrison  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 29 29 29 29 29 29 21 21 21 21 21 21  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 1 1 0 2 0 1 0 0 1 0 1 0 1 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 74 462 870 223 566 490 20 243 27 134 727 72  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 74 462 870 223 566 490 20 243 27 134 727 72  
Added Vol: 0 70 0 0 22 33 0 1 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 74 532 870 223 588 523 20 244 27 134 727 72  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 76 543 888 228 600 534 20 249 28 137 742 73  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 76 543 888 228 600 534 20 249 28 137 742 73  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 76 543 888 228 600 534 20 249 28 137 742 73  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.52 0.52 0.40 0.16 0.54 0.54 0.73 0.18 0.73 0.40 0.65 0.65  
Lanes: 0.24 1.76 2.00 0.81 0.63 0.56 0.04 1.91 0.05 1.00 1.82 0.18  
Final Sat.: 242 1739 1504 247 650 579 54 663 73 757 2260 224  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.31 0.31 0.59 0.92 0.92 0.92 0.38 0.38 0.38 0.18 0.33 0.33  
Crit Moves: \*\*\*\* \*\*\*\*  
Green/Cycle: 0.48 0.48 0.48 0.48 0.48 0.48 0.35 0.35 0.35 0.35 0.35 0.35  
Volume/Cap: 0.65 0.65 1.22 1.91 1.91 1.91 1.07 1.07 1.07 0.52 0.94 0.94  
Uniform Del: 11.6 11.6 15.5 15.5 15.5 15.5 19.5 19.5 19.5 15.5 18.9 18.9  
IncremntDel: 3.4 3.4 111.7 414.0 414 414.0 74.6 74.6 74.6 7.0 18.7 18.7  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Delay/Veh: 15.0 15.0 127.2 429.5 429 429.5 94.1 94.1 94.1 22.5 37.6 37.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 15.0 15.0 127.2 429.5 429 429.5 94.1 94.1 94.1 22.5 37.6 37.6  
LOS by Move: B B F F F F F F C D D  
HCM2kAvgQ: 6 6 24 25 78 78 20 7 20 3 13 13

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Future Volume Alternative)**  
\*\*\*\*\*  
Intersection #22 First / Harrison / I-80 EB On-Ramp  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.513  
Loss Time (sec): 8 Average Delay (sec/veh): 161.9  
Optimal Cycle: 180 Level Of Service: F  
\*\*\*\*\*  
Street Name: First Harrison  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permit+Prot  
Rights: Include Include Include Include  
Min. Green: 31 0 31 31 31 31 0 6 6 6 11 21 0  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 0 1! 0 0 1 0 2 0 1 0 0 1 1 0 1 1 1 0 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 1 0 1 21 1488 267 0 66 11 955 654 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 1 0 1 21 1488 267 0 66 11 955 654 0  
Added Vol: 0 0 0 2 30 0 0 1 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 1 0 1 23 1518 267 0 67 11 955 654 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 1 0 1 23 1549 272 0 68 11 974 667 0  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 1 0 1 23 1549 272 0 68 11 974 667 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 1 0 1 23 1549 272 0 68 11 974 667 0  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.72 1.00 0.72 0.15 0.52 0.36 1.00 0.80 0.16 0.70 0.78 1.00  
Lanes: 0.50 0.00 0.50 1.00 2.00 1.00 0.00 1.10 0.90 1.82 1.18 0.00  
Final Sat.: 681 0 681 287 1990 685 0 1663 273 2422 1758 0  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.08 0.78 0.40 0.00 0.04 0.04 0.40 0.38 0.00  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.52 0.00 0.52 0.52 0.52 0.52 0.10 0.10 0.10 0.35 0.35 0.00  
Volume/Cap: 0.00 0.00 0.00 0.16 1.50 0.76 0.00 0.41 0.41 1.27 1.08 0.00  
Uniform Del: 6.9 0.0 6.9 7.5 14.4 11.5 0.0 25.3 25.3 22.6 19.5 0.0  
IncremntDel: 0.0 0.0 0.0 2.2 229 14.5 0.0 6.3 6.3 126.6 49.8 0.0  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 0.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 0.00  
Delay/Veh: 6.9 0.0 6.9 9.8 243 25.9 0.0 31.7 31.7 149.2 69.3 0.0  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 6.9 0.0 6.9 9.8 243 25.9 0.0 31.7 31.7 149.2 69.3 0.0  
LOS by Move: A A A A F C A C C F E A  
HCM2kAvgQ: 0 0 0 0 50 6 0 2 1 24 16 0

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Future Volume Alternative)**  
\*\*\*\*\*  
Intersection #23 Fremont / Harrison / I-80 WB Off-Ramp  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 0.911  
Loss Time (sec): 10 Average Delay (sec/veh): 80.0  
Optimal Cycle: 83 Level Of Service: E  
\*\*\*\*\*  
Street Name: Fremont / I-80 WB Off-Ramp Harrison  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Split Phase Split Phase Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 0 0 0 0 21 29 29 0 0 29 29  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 0 1 0 1 0 0 0 0 1 0 1 0 0 0 0 0 2 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 0 0 0 0 279 5 89 0 0 1317 74  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 0 0 0 279 5 89 0 0 1317 74  
Added Vol: 0 0 0 0 0 3 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 0 0 0 279 8 89 0 0 1317 74  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 0 0 0 0 285 8 91 0 0 1344 76  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 0 285 8 91 0 0 1344 76  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 0 0 0 0 285 8 91 0 0 1344 76  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.95 0.95 0.95 1.00 1.00 0.76 0.80 0.80 1.00 1.00 0.43 0.79  
Lanes: 0.00 0.00 2.00 0.00 0.00 1.00 0.08 0.92 0.00 0.00 2.91 0.09  
Final Sat.: 0 0 3610 0 0 1435 125 1388 0 0 2397 135  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.20 0.07 0.07 0.00 0.00 0.56 0.56  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.00 0.00 0.00 0.00 0.00 0.35 0.48 0.48 0.00 0.00 0.48 0.48  
Volume/Cap: 0.00 0.00 0.00 0.00 0.00 0.57 0.14 0.14 0.00 0.00 1.16 1.16  
Uniform Del: 0.0 0.0 0.0 0.0 0.0 15.8 8.6 8.6 0.0 0.0 15.5 15.5  
IncremntDel: 0.0 0.0 0.0 0.0 0.0 4.6 0.4 0.4 0.0 0.0 81.4 81.4  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 0.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 0.00 0.00 1.00 1.00  
Delay/Veh: 0.0 0.0 0.0 0.0 0.0 20.4 9.0 9.0 0.0 0.0 96.9 96.9  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 0.0 0.0 0.0 0.0 20.4 9.0 9.0 0.0 0.0 96.9 96.9  
LOS by Move: A A A A A C A A A A F F  
HCM2kAvgQ: 0 0 0 0 5 1 1 0 0 0 18 32

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**Level Of Service Computation Report**  
**2000 HCM Operations Method (Future Volume Alternative)**  
\*\*\*\*\*  
Intersection #24 Main / Harrison  
\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 1.195  
Loss Time (sec): 9 Average Delay (sec/veh): 73.6  
Optimal Cycle: 180 Level Of Service: E  
\*\*\*\*\*  
Street Name: Main Harrison  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Permitted Permitted Permitted Permitted  
Rights: Include Include Include Include  
Min. Green: 25 25 25 25 25 25 26 26 26 26 26 26  
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
Lanes: 1 0 0 1 0 0 1 0 0 1 0 0 0 1 1 1 0  
-----|-----|-----|-----|  
Volume Module:  
Base Vol: 239 316 22 5 242 205 12 44 28 7 846 41  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 239 316 22 5 242 205 12 44 28 7 846 41  
Added Vol: 0 1 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 239 317 22 5 242 205 12 44 28 7 846 41  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
PHF Volume: 244 323 22 5 247 209 12 45 29 7 863 42  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 244 323 22 5 247 209 12 45 29 7 863 42  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 244 323 22 5 247 209 12 45 29 7 863 42  
-----|-----|-----|-----|  
Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.25 0.87 0.87 0.88 0.88 0.31 0.75 0.75 0.75 0.75 0.73 0.31 0.73  
Lanes: 1.00 0.94 0.06 0.02 0.98 1.00 0.14 0.53 0.33 0.01 2.93 0.06  
Final Sat.: 475 1551 108 34 1632 598 204 747 475 14 1719 83  
-----|-----|-----|-----|  
Capacity Analysis Module:  
Vol/Sat: 0.51 0.21 0.21 0.15 0.15 0.35 0.06 0.06 0.06 0.50 0.50 0.50  
Crit Moves: \*\*\*\*  
Green/Cycle: 0.42 0.42 0.42 0.42 0.42 0.42 0.43 0.43 0.43 0.43 0.43 0.43  
Volume/Cap: 1.23 0.50 0.50 0.36 0.36 0.84 0.14 0.14 0.14 0.14 1.16 1.16 1.16  
Uniform Del: 17.5 12.9 12.9 12.0 12.0 15.7 10.2 10.2 10.2 10.2 17.0 17.0 17.0  
IncremntDel: 140.3 2.6 2.6 1.5 1.5 27.3 0.5 0.5 0.5 0.5 85.6 85.6 85.6  
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Delay/Veh: 157.8 15.5 15.5 13.5 13.5 43.0 10.7 10.7 10.7 10.7 102.6 103 102.6  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 157.8 15.5 15.5 13.5 13.5 43.0 10.7 10.7 10.7 10.7 102.6 103 102.6  
LOS by Move: F B B B D B B B F F F  
HCM2kAvgQ: 13 5 5 3 3 3 1 1 1 26 11 26

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Future Volume Alternative)  
 \*\*\*\*\*  
**Intersection #25 Spear / Harrison**  
 \*\*\*\*\*  
 Cycle (sec): 60 Critical Vol./Cap.(X): 1.203  
 Loss Time (sec): 10 Average Delay (sec/veh): 100.6  
 Optimal Cycle: 180 Level Of Service: F  
 \*\*\*\*\*  
 Street Name: Spear Harrison  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Permitted Permitted Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 21 0 21 21 21 0 29 29 29 29 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 1! 0 0 0 1 0 0 1 0 0 1 0 1 0  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Volume Module:**  
 Base Vol: 46 190 143 70 20 542 0 85 65 27 372 27  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 46 190 143 70 20 542 0 85 65 27 372 27  
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 46 190 143 70 20 542 0 85 65 27 372 27  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 47 194 146 71 20 553 0 87 66 28 380 28  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 47 194 146 71 20 553 0 87 66 28 380 28  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 47 194 146 71 20 553 0 87 66 28 380 28  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Saturation Flow Module:**  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 0.80 0.80 0.80 0.53 0.53 0.60 1.00 0.83 0.83 0.23 0.21 0.78  
 Lanes: 0.12 0.50 0.38 0.78 0.22 1.00 0.00 0.57 0.43 0.12 1.84 0.04  
 Final Sat.: 184 761 573 787 225 1140 0 895 684 53 733 53  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Capacity Analysis Module:**  
 Vol/Sat: 0.25 0.25 0.25 0.09 0.09 0.49 0.00 0.10 0.10 0.52 0.52 0.52  
 Crit Moves: \*\*\*\*  
 Green/Cycle: 0.35 0.35 0.35 0.35 0.35 0.35 0.00 0.48 0.48 0.48 0.48 0.48  
 Volume/Cap: 0.73 0.73 0.73 0.26 0.26 1.39 0.00 0.20 0.20 1.07 1.07 1.07  
 Uniform Del: 17.0 17.0 17.0 13.9 13.9 19.5 0.0 8.9 8.9 15.5 15.5 15.5  
 IncremntDel: 8.5 8.5 8.5 1.8 1.8 188.9 0.0 0.6 0.6 64.8 64.8 64.8  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Delay/Veh: 25.5 25.5 25.5 15.7 15.7 208.4 0.0 9.5 9.5 80.3 80.3 80.3  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 25.5 25.5 25.5 15.7 15.7 208.4 0.0 9.5 9.5 80.3 80.3 80.3  
 LOS by Move: C C C B B F A A A F F F  
 HCM2kAvgQ: 8 8 8 1 1 29 0 2 2 8 7 26

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**Level Of Service Computation Report**  
 2000 HCM Operations Method (Future Volume Alternative)  
 \*\*\*\*\*  
**Intersection #26 Second / Bryant**  
 \*\*\*\*\*  
 Cycle (sec): 60 Critical Vol./Cap.(X): 1.229  
 Loss Time (sec): 7 Average Delay (sec/veh): 77.9  
 Optimal Cycle: 180 Level Of Service: E  
 \*\*\*\*\*  
 Street Name: Second Bryant  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Permitted Permitted Split Phase Split Phase  
 Rights: Include Include Include Include  
 Min. Green: 0 26 26 26 26 0 27 27 27 0 0 0  
 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0  
 Lanes: 0 0 1 1 0 1 1 0 0 2 0 2 1 0 0 0 0 0 0  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Volume Module:**  
 Base Vol: 0 651 151 9 650 0 778 787 37 0 0 0  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 0 651 151 9 650 0 778 787 37 0 0 0  
 Added Vol: 0 32 0 0 22 0 38 0 0 0 0 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 0 683 151 9 672 0 816 787 37 0 0 0  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98  
 PHF Volume: 0 697 154 9 686 0 833 803 38 0 0 0  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 0 697 154 9 686 0 833 803 38 0 0 0  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 FinalVolume: 0 697 154 9 686 0 833 803 38 0 0 0  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Saturation Flow Module:**  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 1.00 0.39 0.16 0.78 0.78 1.00 0.38 0.31 0.77 1.00 1.00 1.00  
 Lanes: 0.00 2.00 1.00 0.03 1.97 0.00 2.00 2.94 0.06 0.00 0.00 0.00  
 Final Sat.: 0 1493 299 39 2934 0 1462 1715 81 0 0 0  
 -----|-----|-----|-----|-----|-----|-----|-----|  
**Capacity Analysis Module:**  
 Vol/Sat: 0.00 0.47 0.52 0.23 0.23 0.00 0.57 0.47 0.47 0.00 0.00 0.00  
 Crit Moves: \*\*\*\*  
 Green/Cycle: 0.00 0.43 0.43 0.43 0.43 0.00 0.45 0.45 0.45 0.00 0.00 0.00  
 Volume/Cap: 0.00 1.08 1.19 0.54 0.54 0.00 1.27 1.04 1.04 0.00 0.00 0.00  
 Uniform Del: 0.0 17.0 17.0 12.6 12.6 0.0 16.5 16.5 16.5 0.0 0.0 0.0  
 IncremntDel: 0.0 55.0 99.5 1.6 1.6 0.0 131.5 42.6 42.6 0.0 0.0 0.0  
 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Delay Adj: 0.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 0.00 0.00 0.00  
 Delay/Veh: 0.0 72.0 116.5 14.2 14.2 0.0 148.0 59.1 59.1 0.0 0.0 0.0  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 0.0 72.0 116.5 14.2 14.2 0.0 148.0 59.1 59.1 0.0 0.0 0.0  
 LOS by Move: A E F B B A F E E A A A  
 HCM2kAvgQ: 0 15 9 6 6 0 22 12 24 0 0 0



## **Non-Motorized Mode Analysis**



Crosswalk Level of Service Calculation

Table 1A - PM 2030 No Project - Crosswalk Level of Service Calculation

Intersection	Crosswalk	Pedestrian Green Time	Pedestrians per 15 minutes		N <sub>TV</sub>	Length (L <sub>d</sub> )	Width (W <sub>d</sub> )
			Inbound (V <sub>di</sub> )	Outbound (V <sub>do</sub> )			
			East/North	West/South			
1st & Howard	N <sub>crosswalk</sub>	18.5	110	95	0.0	37	12
	E <sub>crosswalk</sub>	27	111	88	0.0	38	9
	S <sub>crosswalk</sub>	18.5	92	85	0.0	48	11.5
	W <sub>crosswalk</sub>	27	89	88	18.2	37	9.5
Fremont & Howard	N <sub>crosswalk</sub>	20	93	77	2.7	47	11
	E <sub>crosswalk</sub>	33	144	89	5.7	37	10
	S <sub>crosswalk</sub>	20	109	72	0.0	50	11
	W <sub>crosswalk</sub>	33	82	86	0.0	45	9
Beale & Folsom	N <sub>crosswalk</sub>	30	32	26	0.0	43	11.5
	E <sub>crosswalk</sub>	27	21	37	1.6	48	9
	S <sub>crosswalk</sub>	30	30	25	1.2	38	9
	W <sub>crosswalk</sub>	27	19	22	7.6	49	9
Fremont & Mission	N <sub>crosswalk</sub>	19	239	255	1.8	48	13.5
	E <sub>crosswalk</sub>	25	228	286	4.2	38.5	14
	S <sub>crosswalk</sub>	19	281	202	0.0	48	13
	W <sub>crosswalk</sub>	25	260	398	0.0	46.5	14
1st & Mission	N <sub>crosswalk</sub>	26	233	145	0.0	41	14.5
	E <sub>crosswalk</sub>	23	256	315	0.0	44.5	14.5
	S <sub>crosswalk</sub>	21	264	242	4.6	42	16.5
	W <sub>crosswalk</sub>	21	229	232	6.5	44.5	15

Table 1B - PM 2030 No Project - Crosswalk Level of Service Calculation

Intersection	Crosswalk	T <sub>SE</sub>	Pedestrians per Cycle		N	t	T	M	LOS
			Inbound (V <sub>di</sub> )	Outbound (V <sub>do</sub> )					
1st & Howard	N <sub>crosswalk</sub>	5867	7	6	5	15	204	29	C
	E <sub>crosswalk</sub>	7377	7	6	4	15	202	36	C
	S <sub>crosswalk</sub>	6427	6	6	4	18	211	30	C
	W <sub>crosswalk</sub>	710	6	6	4	15	176	4	F
Fremont & Howard	N <sub>crosswalk</sub>	5703	6	5	4	18	199	29	C
	E <sub>crosswalk</sub>	7994	10	6	4	15	230	35	C
	S <sub>crosswalk</sub>	7071	7	5	4	18	222	32	C
	W <sub>crosswalk</sub>	10761	5	6	4	17	192	56	B
Beale & Folsom	N <sub>crosswalk</sub>	11797	2	2	1	16	61	194	A
	E <sub>crosswalk</sub>	8114	1	2	2	17	67	121	A
	S <sub>crosswalk</sub>	7959	2	2	1	14	53	151	A
	W <sub>crosswalk</sub>	6102	1	1	1	18	48	126	A
Fremont & Mission	N <sub>crosswalk</sub>	6924	16	17	13	20	646	11	E
	E <sub>crosswalk</sub>	8140	15	19	14	17	578	14	E
	S <sub>crosswalk</sub>	7577	19	13	11	19	616	12	E
	W <sub>crosswalk</sub>	11951	17	27	19	20	886	13	E
1st & Mission	N <sub>crosswalk</sub>	11975	16	10	7	16	408	29	C
	E <sub>crosswalk</sub>	10739	17	21	16	19	717	15	E
	S <sub>crosswalk</sub>	7381	18	16	12	17	580	13	E
	W <sub>crosswalk</sub>	5874	15	15	12	18	555	11	E

Crosswalk Level of Service Calculation

Table 2A - PM 2030 Project - Crosswalk Level of Service Calculation

Intersection	Crosswalk	Pedestrian Green Time	Pedestrians per 15 minutes		N <sub>TV</sub>	Length (L <sub>d</sub> )	Width (W <sub>d</sub> )
			Inbound (V <sub>di</sub> )	Outbound (V <sub>do</sub> )			
			East/North	West/South			
1st & Howard	N <sub>crosswalk</sub>	18.5	145	111	0.0	37	12
	E <sub>crosswalk</sub>	27	148	109	0.0	38	9
	S <sub>crosswalk</sub>	18.5	123	99	0.0	48	11.5
	W <sub>crosswalk</sub>	27	117	106	18.2	37	9.5
Fremont & Howard	N <sub>crosswalk</sub>	20	108	108	2.7	47	11
	E <sub>crosswalk</sub>	33	170	107	5.7	37	10
	S <sub>crosswalk</sub>	20	124	103	0.0	50	11
	W <sub>crosswalk</sub>	33	120	108	0.0	45	9
Beale & Folsom	N <sub>crosswalk</sub>	30	34	28	0.0	43	11.5
	E <sub>crosswalk</sub>	27	23	39	1.6	48	9
	S <sub>crosswalk</sub>	30	32	27	1.2	38	9
	W <sub>crosswalk</sub>	27	22	24	7.6	49	9
Fremont & Mission	N <sub>crosswalk</sub>	19	275	322	1.8	48	13.5
	E <sub>crosswalk</sub>	25	266	357	4.2	38.5	14
	S <sub>crosswalk</sub>	19	324	282	0.0	48	13
	W <sub>crosswalk</sub>	25	303	469	0.0	46.5	14
1st & Mission	N <sub>crosswalk</sub>	26	280	169	0.0	41	14.5
	E <sub>crosswalk</sub>	23	285	359	0.0	44.5	14.5
	S <sub>crosswalk</sub>	21	316	269	4.6	42	16.5
	W <sub>crosswalk</sub>	21	257	273	6.5	44.5	15

Table 2B - PM 2030 Project - Crosswalk Level of Service Calculation

Intersection	Crosswalk	T <sub>SE</sub>	Pedestrians per Cycle		N	t	T	M	LOS
			Inbound (V <sub>di</sub> )	Outbound (V <sub>do</sub> )					
1st & Howard	N <sub>crosswalk</sub>	5867	10	7	6	15	258	23	D
	E <sub>crosswalk</sub>	7377	10	7	5	16	267	28	C
	S <sub>crosswalk</sub>	6427	8	7	5	18	268	24	D
	W <sub>crosswalk</sub>	710	8	7	5	15	225	3	F
Fremont & Howard	N <sub>crosswalk</sub>	5703	7	7	6	18	259	22	D
	E <sub>crosswalk</sub>	7994	11	7	5	15	276	29	C
	S <sub>crosswalk</sub>	7071	8	7	5	19	284	25	C
	W <sub>crosswalk</sub>	10761	8	7	5	17	264	41	B
Beale & Folsom	N <sub>crosswalk</sub>	11797	2	2	1	16	65	182	A
	E <sub>crosswalk</sub>	8114	2	3	2	17	71	114	A
	S <sub>crosswalk</sub>	7959	2	2	1	14	56	142	A
	W <sub>crosswalk</sub>	6102	1	2	1	18	53	116	A
Fremont & Mission	N <sub>crosswalk</sub>	6924	18	21	17	20	808	9	E
	E <sub>crosswalk</sub>	8140	18	24	17	18	727	11	E
	S <sub>crosswalk</sub>	7577	22	19	15	20	806	9	E
	W <sub>crosswalk</sub>	11951	20	31	23	21	1073	11	E
1st & Mission	N <sub>crosswalk</sub>	11975	19	11	8	16	490	24	C
	E <sub>crosswalk</sub>	10739	19	24	18	19	825	13	E
	S <sub>crosswalk</sub>	7381	21	18	14	17	682	11	E
	W <sub>crosswalk</sub>	5874	17	18	14	18	652	9	E

## Crosswalk Level of Service Calculation

**Definition:**

TS	= available time-space ( $\text{ft}^2\text{-sec}$ )
L	= crosswalk length (ft)
W <sub>E</sub>	= effective crosswalk width (ft)
WALK + FDW	= effective pedestrian green time (s)
S <sub>p</sub>	= average speed of pedestrian (ft/s); 3.5 sec
G	= green time for phase (s)

**Calculation:**

$$TS = L_d W_E ((WALK+FDW) - L/2S_p)$$

N <sub>ped</sub>	= number of pedestrians crossing during an interval (p)	N <sub>ped</sub> = V <sub>do</sub> (C-G <sub>c</sub> )/C
v	= pedestrian volume (p/15-min)	
C	= cycle length (s)	t = 3.2+L/S <sub>p</sub> +(2.7*N/W <sub>E</sub> )
t	= total crossing time (s)	
T	= total crosswalk occupancy time (p-s)	T = (V <sub>di</sub> + V <sub>do</sub> )*t
V <sub>di</sub>	= inbound pedestrian volume (p/cycle)	
V <sub>do</sub>	= outbound pedestrian volume (p/cycle)	

TS <sub>TV</sub>	= time-space occupied by turning vehicles ( $\text{ft}^2\text{-s}$ )	TS <sub>TV</sub> = 40*N <sub>TV</sub> *W <sub>E</sub>
N <sub>TV</sub>	= number of vehicles during the green phase (veh)	
W <sub>E</sub>	= effective width of crosswalk (ft)	
TS <sub>E</sub>	= effective time-space ( $\text{ft}^2\text{-s}$ )	TS-TS <sub>TV</sub>
M	= circulation area per pedestrian ( $\text{ft}^2/\text{p}$ )	M = TS <sub>E</sub> /T
TS	= time-space ( $\text{ft}^2\text{-s}$ )	
T	= total crosswalk occupancy time (p-s)	

Average Flow LOS Criteria for Walkways and Sidewalks	
LOS	space ( $\text{ft}^2/\text{p}$ )
A	>60
B	>40-60
C	>24-40
D	>15-24
E	>8-15
F	$\leq 8$

Source: Exhibit 18-3 Average Flow LOS  
 Criteria for Walkways and Sidewalks, Highway Capacity Manual 2000

## Corner Level of Service Calculation

### Definition

		Calculations
TS	= available time-space (ft <sup>2</sup> -sec)	
W <sub>a,b</sub>	= effective width of sidewalks (ft)	$TS = C(W_a W_b - 0.215R^2)$
R	= radius of corner curb (ft)	
C	= cycle length (s)	
Q <sub>tdo</sub>	= total ped waiting time, major street, one cycle (p-s)	$Q_{tdo} = V_{do} R_{mi}^2 / 2C$
V <sub>do</sub>	= number of peds waiting, major street, one cycle (p/cycle)	
R <sub>mi</sub>	= the minor-street red phase (s)	
Q <sub>tco</sub>	= total ped waiting time, minor street, one cycle (p-s)	$Q_{tco} = V_{co} R_{mj}^2 / 2C$
V <sub>co</sub>	= number of peds waiting, minor street, one cycle (p/cycle)	
R <sub>mj</sub>	= the major-street red phase (s)	
TS <sub>c</sub>	= total time-space available for circulating peds (ft <sup>2</sup> -sec)	$TS_c = TS - [5(Q_{tdo} + Q_{tco})]$
M	= circulation area per pedestrian (ft <sup>2</sup> /p)	
v <sub>tot</sub>	= total number of circulation pedestrians, one cycle	$V_{tot} = v_{ci} + v_{co} + v_{di} + v_{do} + v_{a,b}$
		$M = TS_c / 4v_{tot}$

LOS Criteria for Pedestrian Queuing Areas	
LOS	Space (ft <sup>2</sup> /p)
A	>13
B	>10-13
C	>6-10
D	>3-6
E	>2-3
F	≤2

Source: Exhibit 18-7 Average Flow LOS  
 Criteria for Walkways and Sidewalks, Highway Capacity Manual 2000

Corner Level of Service Calculation

Table 3A - PM 2030 No Project - Corner Level of Service Calculation

Intersection	Corner	Flow, p/15-min					Flow, P/15 min * 1/60 = p/s				
		Vdi <sub>major</sub>	Vdo <sub>major</sub>	Vci <sub>minor</sub>	Vco <sub>minor</sub>	V <sub>a,b</sub>	Vdi <sub>major</sub>	Vdo <sub>major</sub>	Vci <sub>minor</sub>	Vco <sub>minor</sub>	V <sub>a,b</sub>
1st & Howard	NEcorner	27	27	36	21	5.55	0.12	0.11	0.12	0.10	0.02
	SEcorner	19	19	21	36	4.75	0.10	0.10	0.10	0.11	0.02
	SWcorner	19	19	24	24	4.3	0.10	0.09	0.10	0.10	0.02
	NWcorner	27	27	24	24	5.1	0.10	0.10	0.11	0.08	0.02
Fremont & Howard	NEcorner	18	33	84	31	8.3	0.10	0.09	0.16	0.10	0.02
	SEcorner	34	28	31	84	8.85	0.12	0.08	0.10	0.16	0.02
	SWcorner	28	34	11	24	4.85	0.08	0.12	0.09	0.10	0.02
	NWcorner	33	18	24	11	4.3	0.09	0.10	0.10	0.09	0.02
Beale & Folsom	NEcorner	18	15	26	9	3.4	0.04	0.03	0.04	0.02	0.01
	SEcorner	16	15	9	26	3.3	0.03	0.03	0.02	0.04	0.01
	SWcorner	15	16	4	10	2.25	0.03	0.03	0.02	0.02	0.01
	NWcorner	18	15	10	4	2.35	0.03	0.03	0.02	0.02	0.01
Fremont & Mission	NEcorner	143	156	79	172	27.5	0.27	0.28	0.25	0.32	0.06
	SEcorner	128	64	172	79	22.15	0.31	0.22	0.32	0.25	0.06
	SWcorner	64	128	65	195	22.6	0.22	0.31	0.29	0.44	0.06
	NWcorner	156	143	195	65	27.95	0.28	0.27	0.44	0.29	0.06
1st & Mission	NEcorner	97	55	144	117	20.65	0.26	0.16	0.28	0.35	0.05
	SEcorner	67	134	117	144	23.1	0.29	0.27	0.35	0.28	0.06
	SWcorner	134	67	148	110	22.95	0.27	0.29	0.25	0.26	0.05
	NWcorner	55	97	110	148	20.5	0.16	0.26	0.26	0.25	0.05

Table 3B - PM 2030 No Project - Corner Level of Service Calculation

Intersection	Corner	R	W <sub>a,major</sub>	W <sub>b,minor</sub>	C	R <sub>major</sub>	R <sub>minor</sub>	Q <sub>tc</sub>	Q <sub>tdo</sub>	TS	TS <sub>c</sub>	M	LOS
1st & Howard	NEcorner	15	17	15	60	30	35	65	44	12398	11854	105	A
	SEcorner	15	17	17	60	30	35	58	51	14438	13892	132	A
	SWcorner	15	17	17	60	30	35	58	44	14438	13930	141	A
	NWcorner	15	17	15	60	30	35	62	34	12398	11918	122	A
Fremont & Howard	NEcorner	15	18	15	60	27	40	68	36	13298	12775	113	A
	SEcorner	15	16	17	60	27	40	64	58	13418	12807	110	A
	SWcorner	15	17	15	60	27	40	97	35	12398	11738	120	A
	NWcorner	15	16	14	60	27	40	83	33	10538	9958	105	A
Beale & Folsom	NEcorner	15	26	23	60	34.5	26.5	10	13	32978	32861	1014	A
	SEcorner	15	13	19	60	34.5	26.5	10	25	11918	11745	372	A
	SWcorner	15	14	14	60	34.5	26.5	12	15	8858	8725	323	A
	NWcorner	15	11	21	60	34.5	26.5	11	13	10958	10836	389	A
Fremont & Mission	NEcorner	15	16	17	60	32.5	27.5	107	168	13418	12042	43	A
	SEcorner	15	16	17	60	32.5	27.5	85	134	13418	12323	44	A
	SWcorner	15	15	9	60	32.5	27.5	118	234	5198	3438	11	B
	NWcorner	15	16	16	60	32.5	27.5	100	153	12458	11192	35	A
1st & Mission	NEcorner	15	17	17	60	28	32	82	137	14438	13340	50	A
	SEcorner	15	17	9	60	28	32	137	111	6278	5033	17	A
	SWcorner	15	17	17	60	28	32	150	101	14438	13182	49	A
	NWcorner	15	17	17	60	28	32	133	100	14438	13274	56	A

Corner Level of Service Calculation

Table 4A - PM 2030 Project - Corner Level of Service Calculation

Intersection	Corner	Flow, p/15-min					Flow, P/15 min * 1/60 = p/s				
		Vdi <sub>major</sub>	Vdo <sub>major</sub>	Vci <sub>minor</sub>	Vco <sub>minor</sub>	V <sub>a,b</sub>	Vdi <sub>major</sub>	Vdo <sub>major</sub>	Vci <sub>minor</sub>	Vco <sub>minor</sub>	V <sub>a,b</sub>
1st & Howard	NEcorner	27	27	36	21	5.55	0.16	0.12	0.16	0.12	0.03
	SEcorner	19	19	21	36	4.75	0.15	0.12	0.14	0.13	0.03
	SWcorner	19	19	24	24	4.3	0.14	0.11	0.13	0.12	0.02
	NWcorner	27	27	24	24	5.1	0.13	0.12	0.13	0.11	0.02
Fremont & Howard	NEcorner	18	33	84	31	8.3	0.12	0.12	0.19	0.12	0.03
	SEcorner	34	28	31	84	8.85	0.14	0.11	0.12	0.19	0.03
	SWcorner	28	34	11	24	4.85	0.11	0.14	0.13	0.12	0.03
	NWcorner	33	18	24	11	4.3	0.12	0.12	0.12	0.13	0.02
Beale & Folsom	NEcorner	18	15	26	9	3.4	0.04	0.03	0.04	0.02	0.01
	SEcorner	16	15	9	26	3.3	0.04	0.03	0.02	0.04	0.01
	SWcorner	15	16	4	10	2.25	0.03	0.04	0.02	0.03	0.01
	NWcorner	18	15	10	4	2.35	0.03	0.03	0.03	0.02	0.01
Fremont & Mission	NEcorner	143	156	79	172	27.5	0.31	0.36	0.30	0.40	0.07
	SEcorner	128	64	172	79	22.15	0.36	0.31	0.40	0.30	0.07
	SWcorner	64	128	65	195	22.6	0.31	0.36	0.34	0.52	0.08
	NWcorner	156	143	195	65	27.95	0.36	0.31	0.52	0.34	0.08
1st & Mission	NEcorner	97	55	144	117	20.65	0.31	0.19	0.32	0.40	0.06
	SEcorner	67	134	117	144	23.1	0.35	0.30	0.40	0.32	0.07
	SWcorner	134	67	148	110	22.95	0.30	0.35	0.29	0.30	0.06
	NWcorner	55	97	110	148	20.5	0.19	0.31	0.30	0.29	0.05

Table 4B - PM 2030 Project - Corner Level of Service Calculation

Intersection	Corner	R	W <sub>a,major</sub>	W <sub>b,minor</sub>	C	R <sub>major</sub>	R <sub>minor</sub>	Q <sub>tco</sub>	Q <sub>tdo</sub>	TS	TS <sub>c</sub>	M	LOS
1st & Howard	NEcorner	15	17	15	60	30	35	76	55	12398	11747	82	A
	SEcorner	15	17	17	60	30	35	73	58	14438	13783	103	A
	SWcorner	15	17	17	60	30	35	67	53	14438	13836	111	A
	NWcorner	15	17	15	60	30	35	74	49	12398	11781	95	A
Fremont & Howard	NEcorner	15	18	15	60	27	40	96	43	13298	12602	91	A
	SEcorner	15	16	17	60	27	40	91	69	13418	12617	90	A
	SWcorner	15	17	15	60	27	40	110	44	12398	11630	92	A
	NWcorner	15	16	14	60	27	40	96	48	10538	9816	79	A
Beale & Folsom	NEcorner	15	26	23	60	34.5	26.5	11	14	32978	32852	956	A
	SEcorner	15	13	19	60	34.5	26.5	10	26	11918	11735	351	A
	SWcorner	15	14	14	60	34.5	26.5	12	16	8858	8718	301	A
	NWcorner	15	11	21	60	34.5	26.5	12	14	10958	10826	362	A
Fremont & Mission	NEcorner	15	16	17	60	32.5	27.5	135	209	13418	11694	34	A
	SEcorner	15	16	17	60	32.5	27.5	118	156	13418	12047	35	A
	SWcorner	15	15	9	60	32.5	27.5	136	275	5198	3141	8	C
	NWcorner	15	16	16	60	32.5	27.5	115	178	12458	10990	29	A
1st & Mission	NEcorner	15	17	17	60	28	32	96	156	14438	13176	43	A
	SEcorner	15	17	9	60	28	32	153	124	6278	4891	14	A
	SWcorner	15	17	17	60	28	32	180	119	14438	12942	41	A
	NWcorner	15	17	17	60	28	32	159	112	14438	13082	48	A