Appendix C
Traffic Analysis

ESA

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May 3, 2010

Ms. Audrey Tendell
Lennar Homes of California
One California Street, Suite 2700
San Francisco, CA 94111

Re: Near-Term and Cumulative Traffic Analysis for the Alice Griffith Project in San Francisco, CA

Dear Ms. Tendell:

Fehr & Peers has conducted a traffic impact analysis of the proposed redevelopment of the Alice Griffith Housing Project ("Proposed Project"). This transportation analysis is based on the *Candlestick Point – Hunters Point Shipyard Phase II Development Plan Transportation Study Final Report*, ("CP/HPS Study"). As part of the CP/HPS Study, Fehr & Peers prepared detailed traffic generation forecasts for the CP/HPS project as well as other nearby and regional cumulative development to represent year 2030 conditions. Those forecasts included the Proposed Project. Using the Cumulative conditions reflected in the CP/HPS Study, Fehr & Peers conducted an analysis to determine the project-related impacts associated with the Proposed Project.

The Proposed Project would replace the existing 256 affordable housing units, as well as construct 954 new market-rate housing units for a total of 1,210 housing units.

The remainder of this letter describes the study methodology and criteria used to determine significant impacts, project-related travel demand forecasts, and the resultant traffic impact analysis.

STUDY METHODOLOGY

This section describes the methods used to analyze the operations of study facilities.

Study Locations

The following intersections were analyzed for weekday AM and PM peak hour conditions:

1. Third Street/Carroll Avenue
2. Third Street/Gilman Avenue-Paul Avenue
3. Third Street/Jamestown Avenue
4. Bayshore Boulevard/Hester Avenue/US 101 southbound off-ramp
5. Ingalls Street/Carroll Avenue
6. Ingalls Street/Egbert Avenue
7. Arelious Walker/Gilman Avenue

The following freeway ramp junctions were also analyzed for weekday AM and PM peak hour conditions:

1. US 101 Southbound Off-Ramp to Bayshore Boulevard
2. US 101 Northbound Off-Ramp to Third Street

Study Scenarios

Potential traffic impacts of the Proposed Project were analyzed under two scenarios as described below.

- ***Existing Plus Project Conditions*** reflect the existing conditions data collected in December 2007 for the CP/HPS Study, including AM and PM peak hour traffic volumes, intersection lane geometries and traffic control devices.

  For Existing Plus Project conditions, Proposed Project vehicle trips generated during the AM and PM peak hour were added to the Existing traffic volumes. Traffic operations were analyzed at each study intersection under Existing and Existing Plus Project Conditions.

- ***Cumulative Conditions*** As part of the CP/HPS Study, Fehr & Peers prepared detailed traffic generation forecasts for the CP/HPS project. These forecasts included the Proposed Project as well as other nearby cumulative development to represent Cumulative conditions.

  Based on the traffic forecasts and cumulative traffic impacts identified in the CP/HPS Study, Fehr & Peers determined whether the Proposed Project would contribute considerably to cumulative traffic impacts under Cumulative conditions at the study facilities.

  To determine cumulative traffic impacts, a 'Cumulative No Project' scenario was developed by subtracting the net difference of new vehicle trips generated by the Proposed Project and the existing land use the cumulative conditions forecasts. Project vehicle trip distribution and assignment would likely remain the same as under Existing Conditions. However, because Proposed Project travel demand would likely change under year 2030 conditions, due to the mix of land uses and improved transit service proposed for the area, Proposed Project vehicle trip generation was recalculated.

Significance Criteria

The San Francisco Planning Department methodology by which significant contributions to cumulative traffic impacts are determined is as follows:

- The threshold for a significant adverse impact on traffic has been established as deterioration in the LOS at a signalized intersection from LOS D or better to LOS E or LOS F, or from LOS E to LOS F. The operational impacts on unsignalized intersections are considered potentially significant if project-related traffic causes the level of service at the worst approach to deteriorate from LOS D or better to LOS E or LOS F and Caltrans signal warrants would be met, or causes Caltrans signal warrants to be met when the worst approach is already at LOS E or LOS F.
- In addition, a project would have a significant adverse effect if it would cause major traffic hazards, or would contribute considerably to the cumulative traffic increases that would cause the deterioration in intersection and freeway LOS to unacceptable levels (i.e., to LOS E or LOS F).

TRAVEL DEMAND FORECASTS

The travel demand forecasts for the Proposed Project were developed using data collected at the existing Alice Griffith Housing Project site, the San Francisco *Transportation Impact Analysis Guidelines for Environmental Review* ("SF Guidelines"), and the CP/HPS Study. Near-Term and Cumulative trip generation rates were calculated separately for the project, since the fundamental

transportation characteristics of the neighborhood are expected to change over the next 20 years as the CP/HPS project is built out.

Near-Term Trip Generation Rates

As part of the Proposed Project, the existing affordable housing units on the Alice Griffith Housing Project site would be replaced. For near-term conditions, trip generation forecasts for the replacement of these units were based on empirical data collected at the Alice Griffith Housing Project entrance on Fitzgerald Avenue at Hawes Street. As shown in **Table 1**, the existing site has 241 occupied housing units and generates 143 vehicle trips during the AM peak hour and 159 vehicle trips during the PM peak hour. The resulting trip generation rates are approximately 0.59 trips per occupied unit during the AM peak hour and 0.66 trips per occupied unit during the PM peak hour.

TABLE 1
TRIP GENERATION RATES

			Near-Term Trip Rates		Cumulative Trip Rate[3]	
Occupied Housing Units	**AM Peak Hour Vehicle Trips**	**PM Peak Hour Vehicle Trips**	**AM Peak Hour**	**PM Peak Hour**	**AM**	**PM**
Affordable Housing[1]					0.25	0.28
241	143	159	0.59	0.66		
Market Rate Housing[2]						
Studio/1 Bedroom			0.71	0.79		
2+ Bedrooms			0.95	1.05		

Notes:
1. Based on vehicle counts collected at the Alice Griffith Housing Project in April 2010.
2. *SF Guidelines*, 2002. AM trip rates were calculated using the ratio of AM/PM trips (0.9) observed for the existing project.
3. From the effective vehicle trip rates in the CP/HPS Study.
Source: Fehr & Peers, 2010

The Proposed Project includes the construction of approximately 950 new market-rate housing units. Near-term trip generation rates for these units were based on the *SF Guidelines*. The *SF Guidelines* do not contain AM peak hour trip generation rates, so near-term PM peak hour trip generation rates were estimated by factoring the PM peak hour rates by 0.9, which is based on the AM and PM peak hour trip difference observed in the surveyed trip rates.

Cumulative Trip Generation Rates

As identified in the CP/HPS Study, several land use and transportation improvements have been identified in the project study area over the next 20 years. These improvements, along with a project design that encourages walking and biking for shorter neighborhood trips and encourages transit use to and from citywide and regional destinations, will serve to reduce the number of vehicle trips generated by new housing units as development and transit service in the area increases. The average vehicular trip generation rate per dwelling unit from the CP/HPS Study, shown in **Table 1**, are general rates that can be applied to all housing types, regardless of style or income diversity.

As shown, these rates are lower than current auto trip generation rates. This reduction in vehicle trips per household reflects future investments in transit service to the neighborhood and increased land use development, including better land use diversity, in the area.

Table 2 summarizes the number of vehicle trips expected to be generated by the Proposed Project under near-term and cumulative conditions. As shown, the project would generate approximately 756 new AM peak hour vehicle trips and 840 new PM peak hour vehicle trips under near-term conditions. Under Cumulative conditions, when walking and transit use will be greater, the Proposed Project is expected to generate 302 new AM peak hour vehicle trips and 340 new PM peak hour vehicle trips.

This analysis assumes that the market-rate housing units would be equally split between studio/1 bedroom and 2 bedroom+.

TABLE 2
PROJECT TRIP GENERATION

		Number of Units	Near-Term			Cumulative		
			Rate (AM/PM)	AM Trips	PM Trips	Rate (AM/PM)	AM Trips	PM Trips
Affordable Housing		256	0.59/0.66	151	169	0.25/0.28	64	72
Market Rate Housing	Studio/1 Bedroom	477	0.71/0.79	339	377	0.25/0.28	119	134
	2 Bedroom+	477	0.95/1.05	266	294	0.25/0.28	119	134
Total		**1,210**	**0.62/0.69**	**756**	**840**	**0.25/0.28**	**302**	**340**

Source: Fehr & Peers, 2010

TRAFFIC IMPACT ANALYSIS

This section describes the results of the intersection traffic impact analysis conducted for the Existing, Existing Plus Project, Cumulative No Project and Cumulative Plus Project Scenarios.

Existing and Existing Plus Project Intersection Analysis

Table 3 presents a comparison of the intersection LOS analysis for Existing and Existing Plus Project conditions for the weekday AM and PM peak hours. Existing Plus Project intersection volumes **(Figure 3)** were developed by adding the near-term project trip generation **(Figure 2)** to existing roadway turning movements **(Figure 1)**.

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TABLE 3
INTERSECTION OPERATIONS – EXISTING CONDITIONS

Intersection	Control	Peak Hour	No Project		Plus Project	
			Delay[1]	LOS[2]	Delay[1]	LOS[2]
1. Third Street/Carroll Avenue	Signal	AM	12	B	16	B
		PM	14	B	40	D
2. Third Street/Gilman-Paul Avenue	Signal	AM	27	C	43	D
		PM	24	C	39	D
3. Third Street/Jamestown Avenue	Signal	AM	13	B	13	B
		PM	14	B	15	B
4. Bayshore Blvd/Hester Ave/US 101 SB	Signal	AM	28	C	31	C
		PM	13	C	14	B
5. Ingalls Street/Carroll Avenue	All-Way Stop	AM	8 (SB)	A	10 (NB)	A
		PM	8 (SB)	A	10 (EB)	A
6. Ingalls Street/Egbert Avenue	All-Way Stop	AM	8 (SB)	A	8 (SB)	A
		PM	8 (SB)	A	8 (SB)	A
7. Arelious Walker/Gilman Avenue	Side-Street Stop	AM	9 (SB)	A	10 (SB)	A
		PM	9 (SB)	A	10 (SB)	A

Notes:
1. Delay measured in seconds per vehicle.
2. For stop-controlled intersections, delay and LOS presented for worst approach.

Source: Fehr & Peers, 2010.

In general, with the addition of Project-generated vehicle trips to the study area roadway network, congestion levels would increase. However, all study intersections would continue to operate at acceptable levels of service (LOS D or better) in both peak hours with the addition of project-related traffic. Therefore, impacts to intersections would be ***less than significant***.

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Existing and Existing Plus Project Freeway Analysis

Table 4 presents a comparison of the freeway ramp junction LOS analysis for Existing and Existing Plus Project conditions for the weekday AM and PM peak hours.

TABLE 4
RAMP JUNCTION OPERATIONS & IMPACT SUMMARY – EXISTING CONDITIONS

Ramp Junction	Peak Hour	No Project		Plus Project	
		LOS	Density[1,2]	LOS	Density[1,2]
1. SB US 101 off-ramp to Bayshore Boulevard	AM	D	31	D	31
	PM	D	30	D	31
2. NB US 101 off-ramp to Third Street	AM	D	30	D	30
	PM	D	35	D	35

Notes:
1. Density of vehicles measured in passenger cars per mile per lane.
2. Ramp Junctions operating at LOS E or LOS F conditions highlighted in **bold**
3. Significance findings: PI = Project Impact, NSC = No Significant Contribution, SC/PI = Significant Contribution/Project Impact.

Source: Fehr & Peers, 2010.

As shown, both ramp junctions would operate at acceptable levels of service (LOS D or better) in both peak hours with the addition of project-related traffic. Therefore, impacts to freeway ramp junctions would be ***less than significant***.

Cumulative and Cumulative Plus Project Intersection Analysis

Based on the traffic forecasts and cumulative traffic impacts identified in the CP/HPS Study, Cumulative conditions **(Figure 6)** were analyzed. To determine cumulative traffic impacts, a 'Cumulative No Project' scenario was developed by subtracting the net difference of new vehicle trips generated by the Proposed Project **(Figure 4)** and the existing land use from the Cumulative Plus Project condition **(Figure 5)** identified in the CP/HPS Study. **Table 5** presents a comparison of the intersection LOS analysis for Cumulative No Project and Cumulative Plus Project conditions for the weekday AM and PM peak hours.

In general, with the addition of Project-generated vehicle trips to the study area roadway network and other cumulative traffic growth, congestion levels would increase. The following four intersections would operate at LOS E or F during one or both peak hours under Cumulative No Project and Cumulative Plus Project conditions:

- Third Street/Carroll Avenue (PM Peak Hour)
- Third Street/Gilman Avenue-Paul Avenue (AM/PM Peak Hour)
- Third Street/Jamestown Avenue (AM/PM Peak Hour)
- Bayshore Boulevard/Hester Avenue/US 101(AM/PM Peak Hour)

At intersections that would operate at LOS E or LOS F under Cumulative No Project conditions, and would continue to operate at LOS E or LOS F under Cumulative Plus Project conditions, the Project-generated vehicle trips were reviewed to determine whether the increase would contribute considerably to critical movements operating at LOS E or LOS F. **Table 5** summarizes the Project

contribution to the critical movements. As shown, the Proposed Project would contribute a cumulatively considerable amount of traffic to critical movements expected to operate unacceptably under Cumulative Plus Project conditions at the intersection of Third Street/Carroll Avenue. The Proposed Project's contribution during the PM peak hour would be considered a ***significant impact***.

TABLE 5
INTERSECTION OPERATIONS & IMPACT SUMMARY – CUMULATIVE CONDITIONS

Intersection	Control	Peak Hour	Cumulative No Project		Cumulative Plus Project		Cumulative Impact[3]
			Delay[1]	LOS[2]	Delay[1]	LOS[2]	
1. Third Street/Carroll Avenue	Signal	AM PM	21 **62**	C **E**	23 **75**	C **E**	**SC/PI**
2. Third Street/Gilman-Paul Avenue	Signal	AM PM	**>80** **>80**	**F** **F**	**>80** **>80**	**F** **F**	**NSC[4]**
3. Third Street/Jamestown Avenue	Signal	AM PM	**>80** **>80**	**F** **F**	**>80** **>80**	**F** **F**	**NSC**
4. Bayshore Blvd/Hester Ave/US 101 SB	Signal	AM PM	**>80** **>80**	**F** **F**	**>80** **>80**	**F** **F**	**NSC**
5. Ingalls Street/Carroll Avenue	Signal	AM PM	28 38	C D	28 38	C D	
6. Ingalls Street/Egbert Avenue	All-Way Stop	AM PM	9 (SB) 9 (SB)	A A	9 (NB) 9 (SB)	A A	
7. Arelious Walker/Gilman Avenue	Signal	AM PM	31 36	C D	30 36	C D	

Notes:

1. Delay measured in seconds per vehicle. For stop-controlled intersections, delay and LOS presented for worst approach.
2. Intersections operating at LOS E or LOS F conditions highlighted in **bold**
3. Significance findings: CI = Cumulative Impact; NSC = No Significant Contribution; SC/PI = Significant Contribution/Project Impact.
4. Project contributes a substantial amount of traffic to the critical southbound left movement during the AM peak hour; however, the movement is expected to operate at LOS D under Cumulative Plus Project Conditions.

Source: Fehr & Peers, 2010.

As described in the CP/HPS Study, the degradation in operations at the intersection of Third Street and Carroll Avenue would primarily be due to Project-related traffic increases on Carroll Avenue and Third Street. Traffic signals on intersections along Third Street are timed to prioritize transit movements along Third Street. The SFMTA has indicated that there may be slight adjustments to the traffic signal timing for intersections along Third Street that could be implemented that would reduce auto delay at signalized intersections without degrading transit travel times. However, those improvements would not be enough to improve intersection operating conditions to acceptable levels. To accommodate additional right-of-way needed for additional lanes, Third Street would need to be widened to the east and the west. This would require demolition of existing structures and substantial right-of-way acquisition, or reduction in

corner sidewalk width and prohibition of on-street parking along Third Street. Widening Third Street or reducing the corner sidewalk space at this location would be inconsistent with the pedestrian environment created by the Third Street Light Rail Project. Widening of Third Street would make the pedestrian crossing of Third Street longer, and would require more dedicated pedestrian crossing time as part of the signal phasing plan. Because the mitigation measure would worsen the pedestrian conditions, the measure was not further considered. Traffic impacts at this intersection under the Project conditions would remain ***significant and unavoidable***.

Cumulative and Cumulative Plus Project Freeway Analysis

Table 6 presents a comparison of the freeway facility LOS analysis for Cumulative No Project and Cumulative Plus Project conditions for the weekday PM peak hour. As shown, the study ramp junctions would operate at LOS E or LOS F under Cumulative No Project and Cumulative Plus Project conditions; however, the Proposed Project would not contribute a cumulatively considerable amount of traffic to either of the ramps and impacts to freeway facilities would be considered ***less than significant.***

TABLE 6
RAMP JUNCTION OPERATIONS & IMPACT SUMMARY – CUMULATIVE CONDITIONS, PM PEAK HOUR

Ramp Junction	No Project		Plus Project		Project Volume	2030 Volume	Project Contribution	Significant Findings[6]
	LOS	Density[1,2]	LOS	Density				
1. SB US 101 off-ramp to Bayshore Boulevard	**37** **37**	**E** **E**	**37** **38**	**E** **E**	7 18	860 1,063	0.8% 1.7%	NSC
2. NB US 101 off-ramp to Third Street	**35** **>40**	**E** **F**	**36** **>40**	**E** **F**	5 12	226 446	2.2% 2.7%	NSC

Notes:
1. Density of vehicles per segment measured in passenger cars per mile per lane.
2. Ramp Junctions operating at LOS E or LOS F conditions highlighted in **bold**
3. Significance findings: PI = Project Impact, NSC = No Significant Contribution, SC/PI = Significant Contribution/Project Impact.

Source: Fehr & Peers, 2010.

In summary, as shown in **Table 5**, of the three intersections that would operate at LOS F under Cumulative Plus Project conditions, Project contributions were determined to be less than significant; however, the project would result in a cumulative impact at Third Street/Carroll Avenue. As shown in **Table 6**, study freeway facilities that would operate at LOS E or F under Project conditions; however, Project contributions were determined to be less than significant as shown in Table 6.

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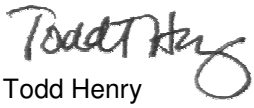
We hope you find this information useful. Please do not hesitate to call for clarifications or additional information.

Sincerely,

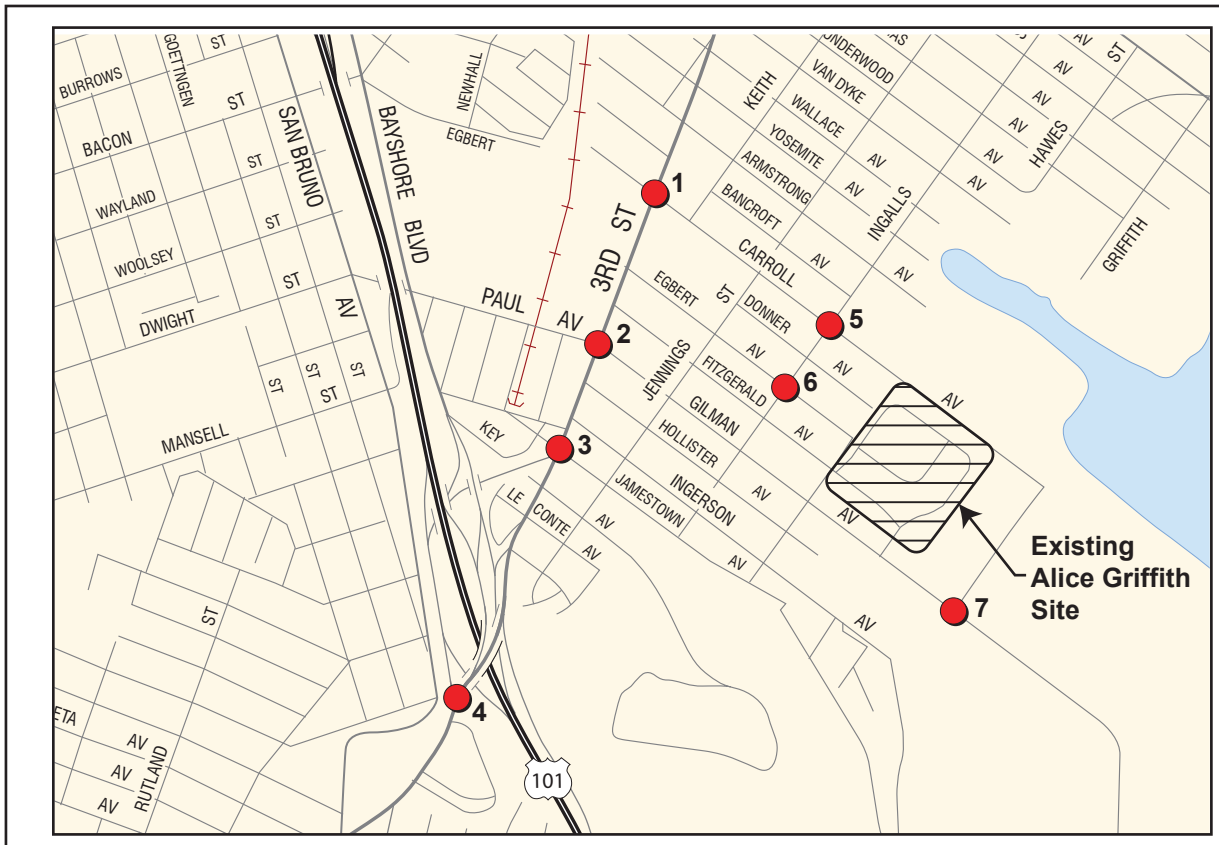
FEHR & PEERS

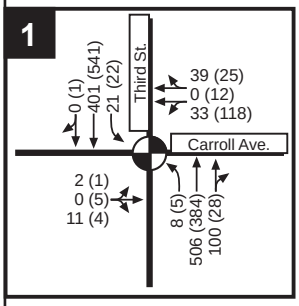
Eric Womeldorff
Senior Transportation Engineer

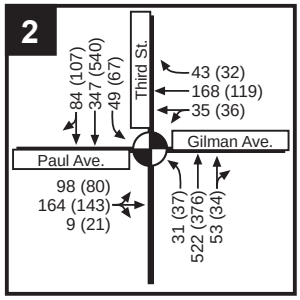


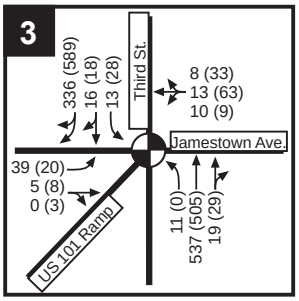
Todd Henry
Transportation Planner

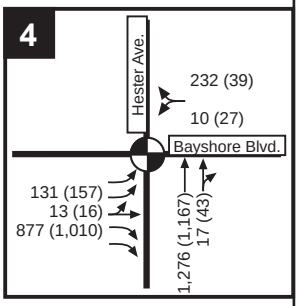
SF08-0407.02

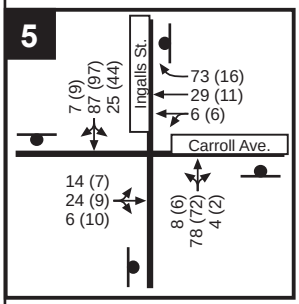


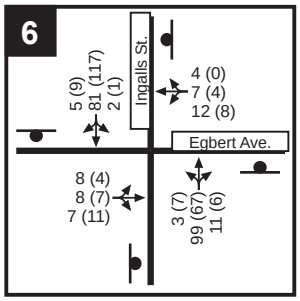


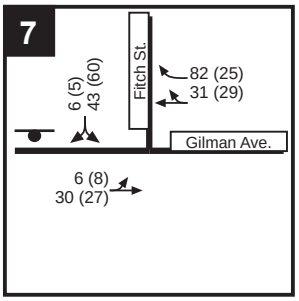












N
Not to Scale

LEGEND:

1 = Study Intersections

= Traffic Signal

= Stop Sign

XX (YY) = AM (PM)

Alice Griffith Housing TIS

EXISTING WEEKDAY PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS

April 2010
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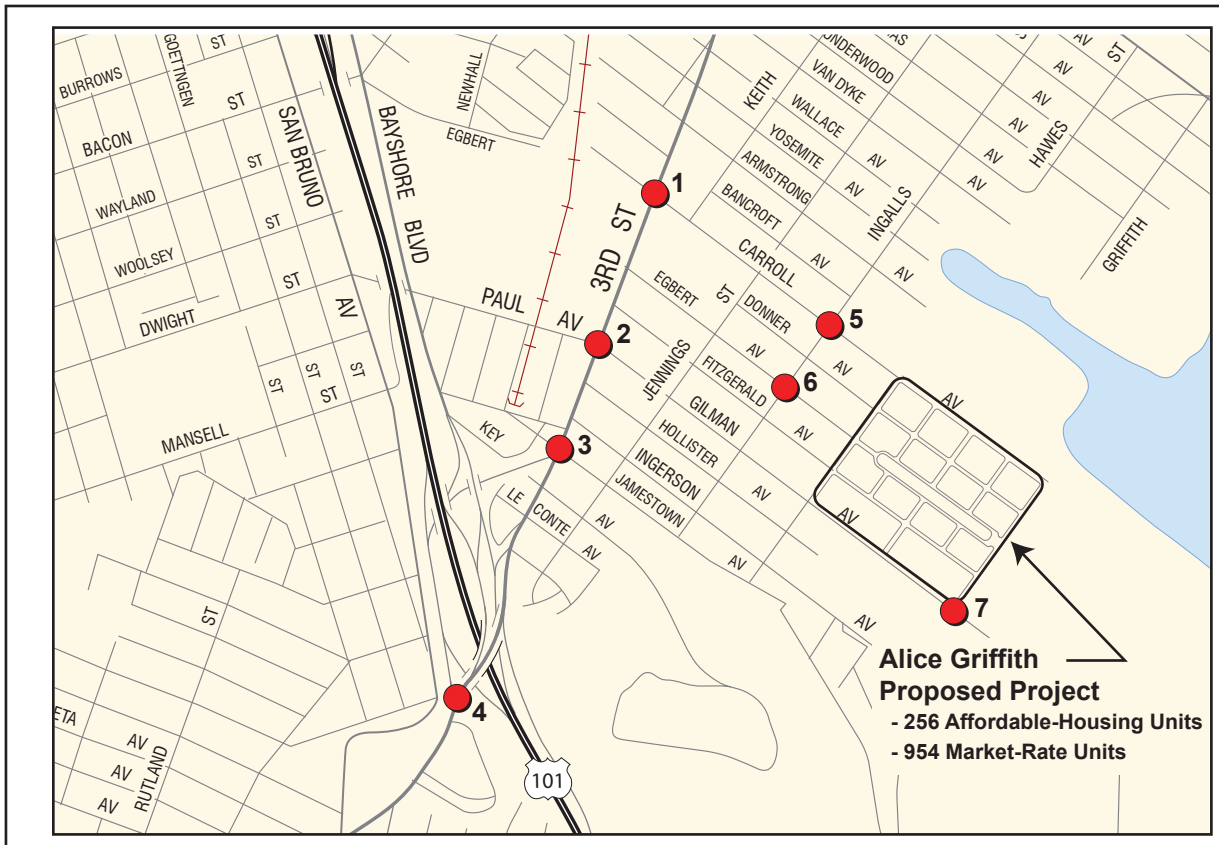
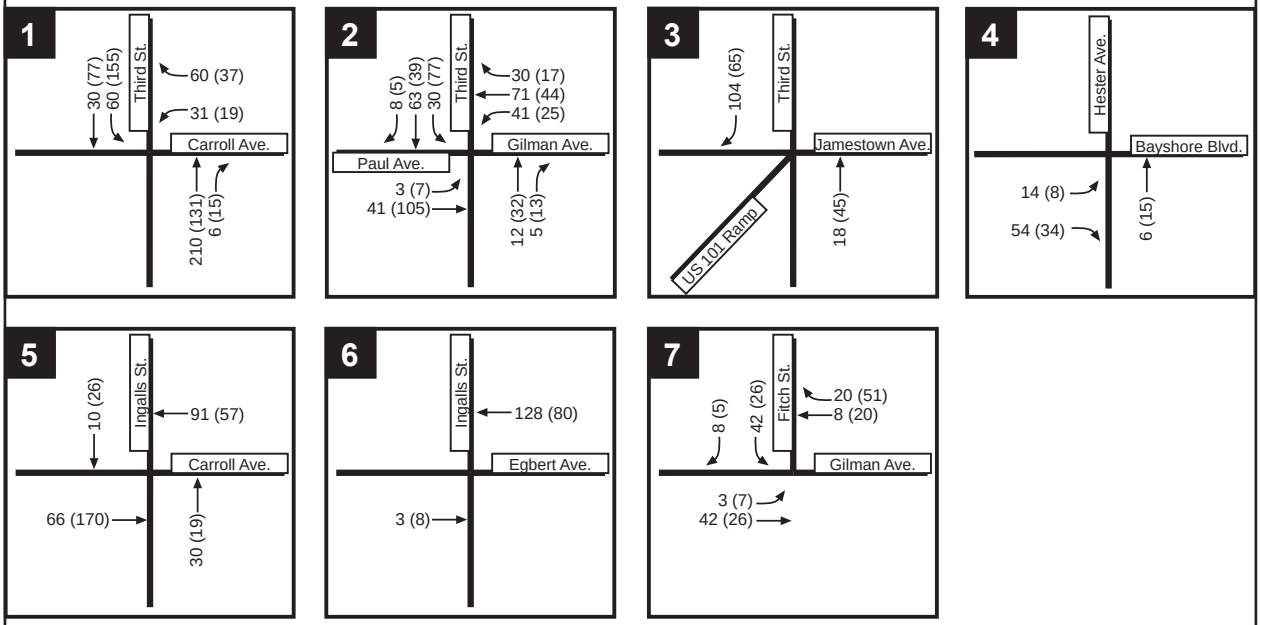
FIGURE 1





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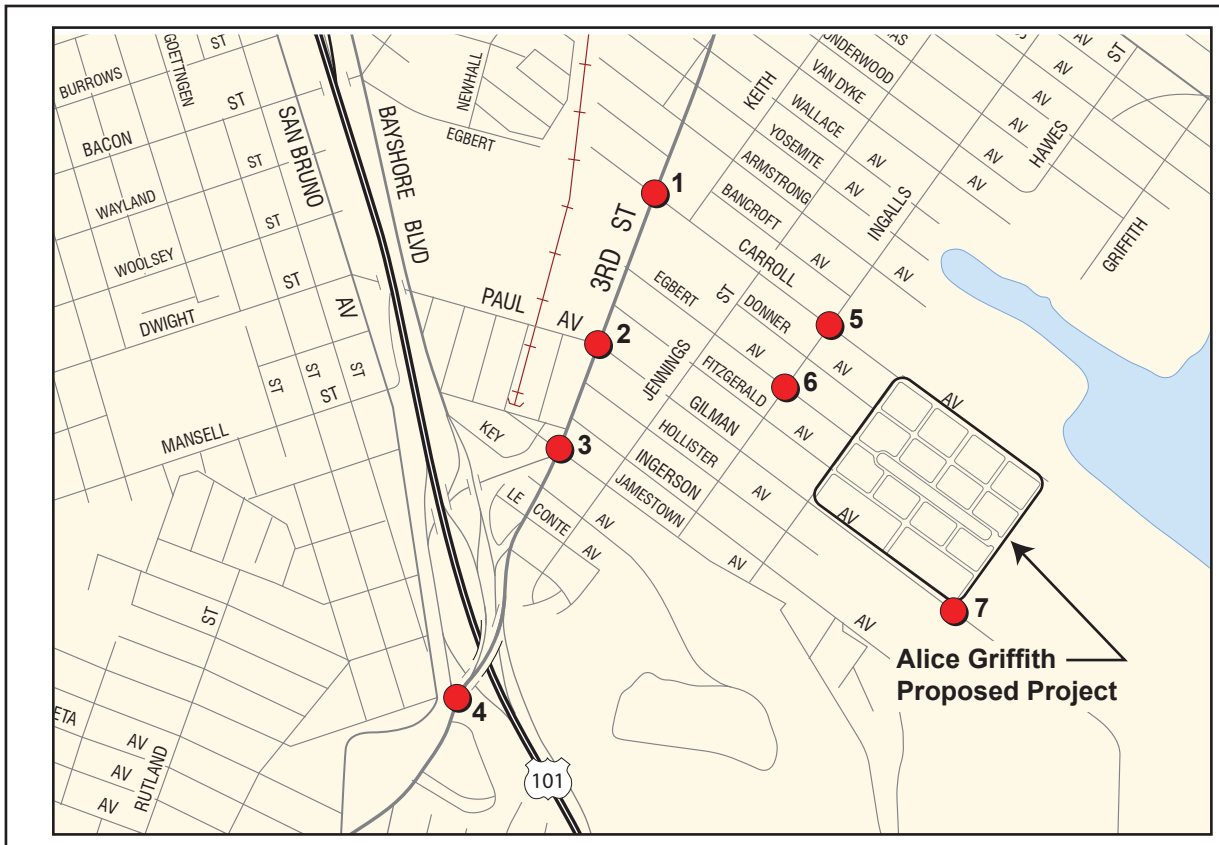
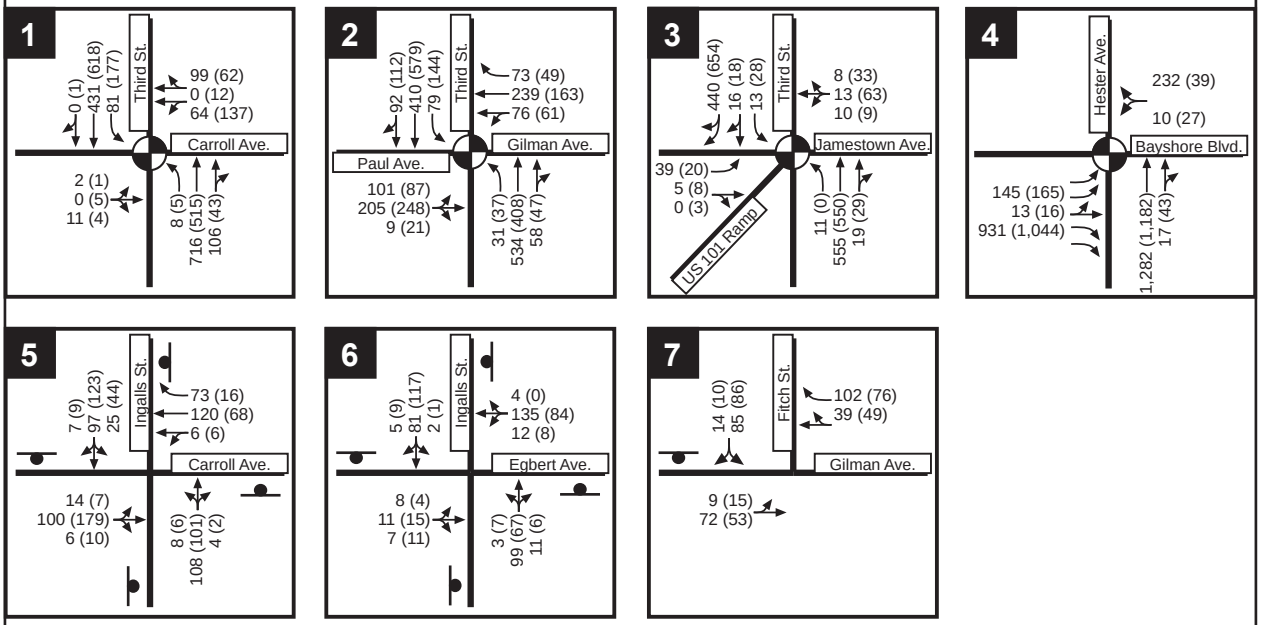
NEAR-TERM PROJECT TRIP ASSIGNMENT





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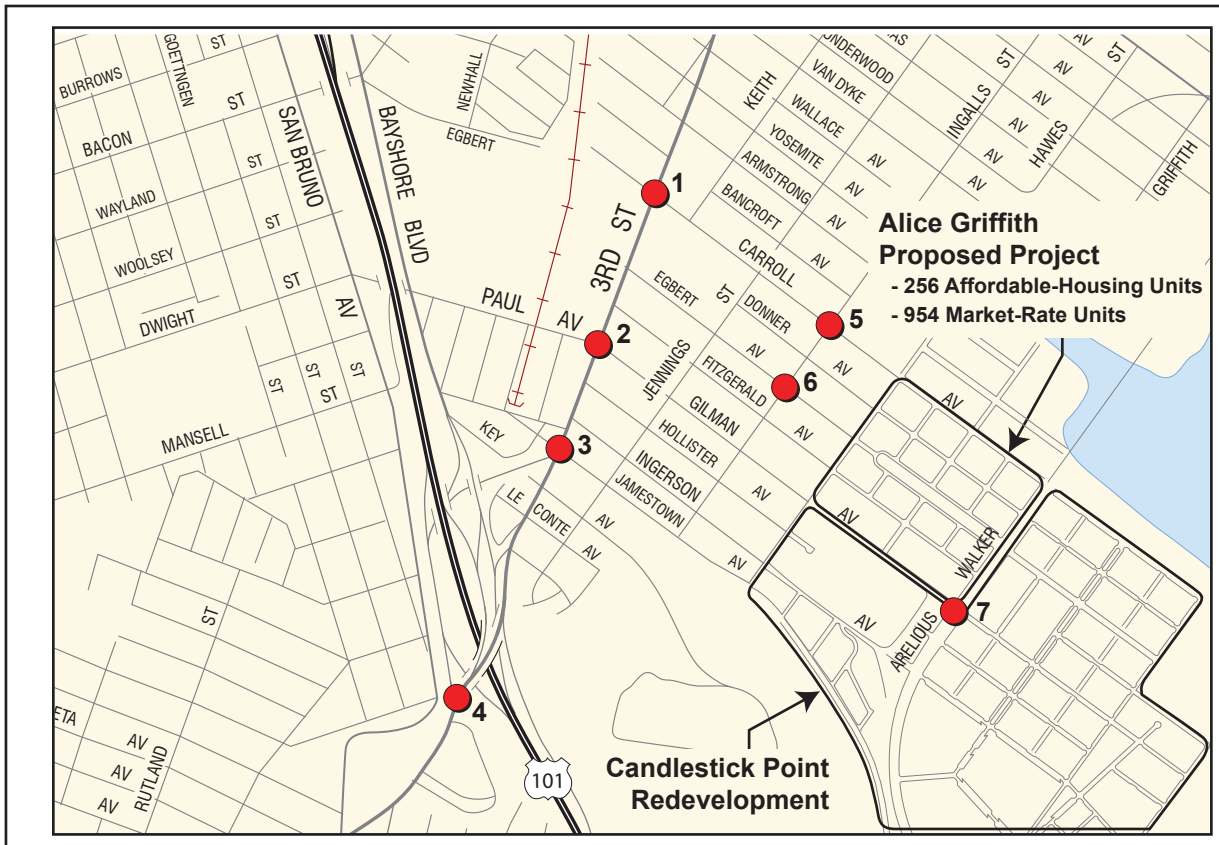
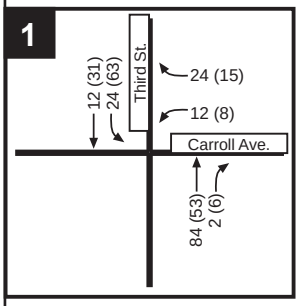
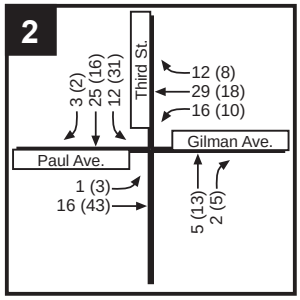
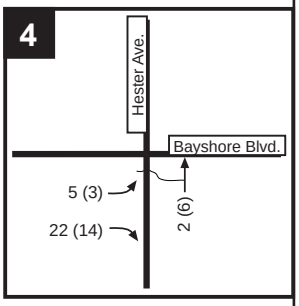
Alice Griffith Housing TIS

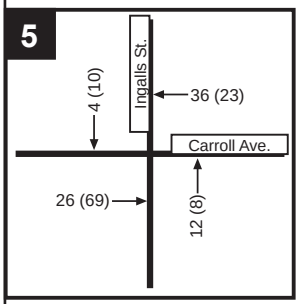
EXISTING PLUS PROJECT WEEKDAY PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS

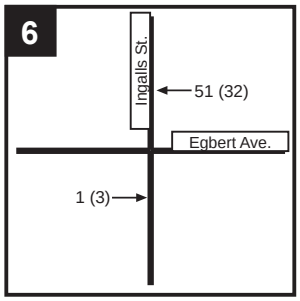


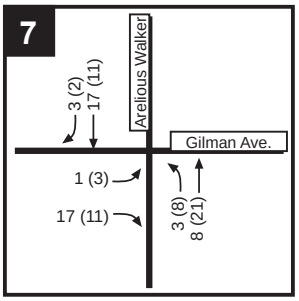












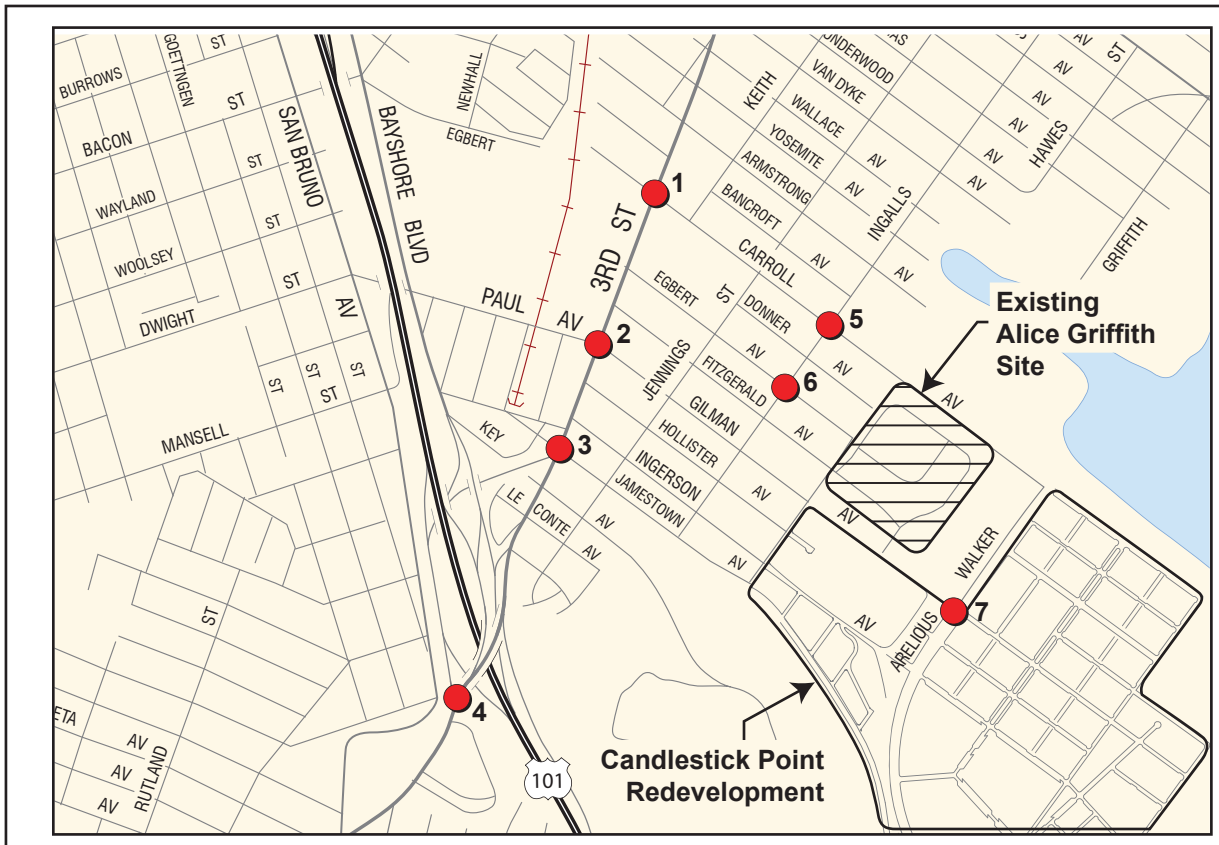
LEGEND:

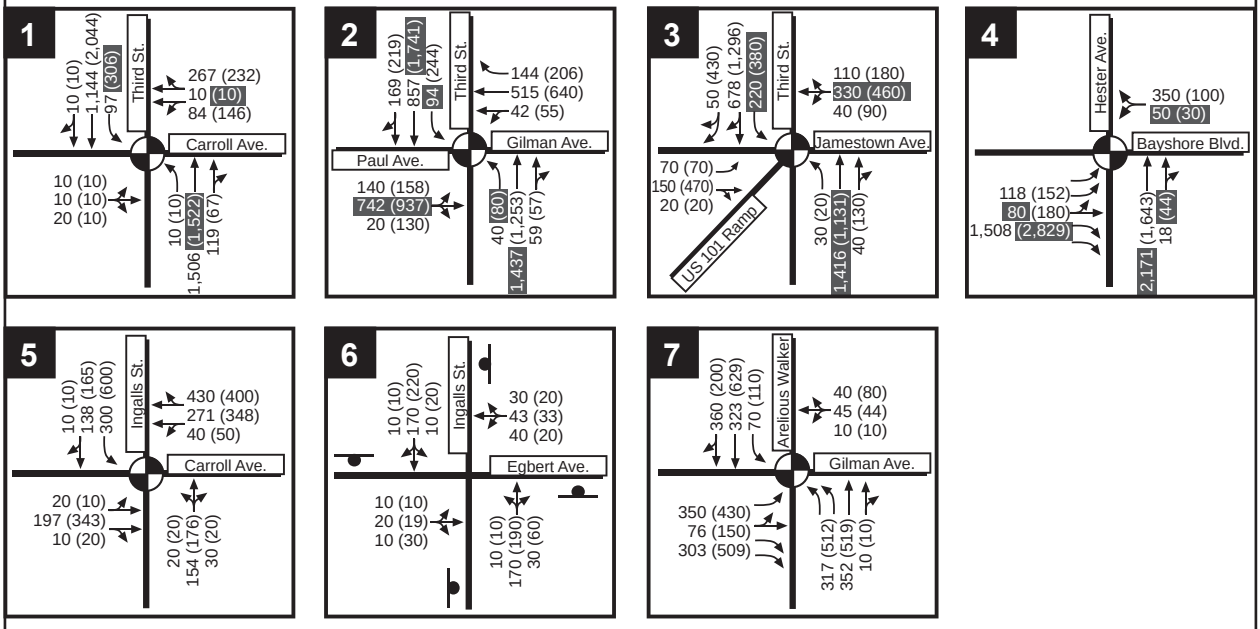
1 = Study Intersections

XX (YY) = AM (PM)

Alice Griffith Housing TIS

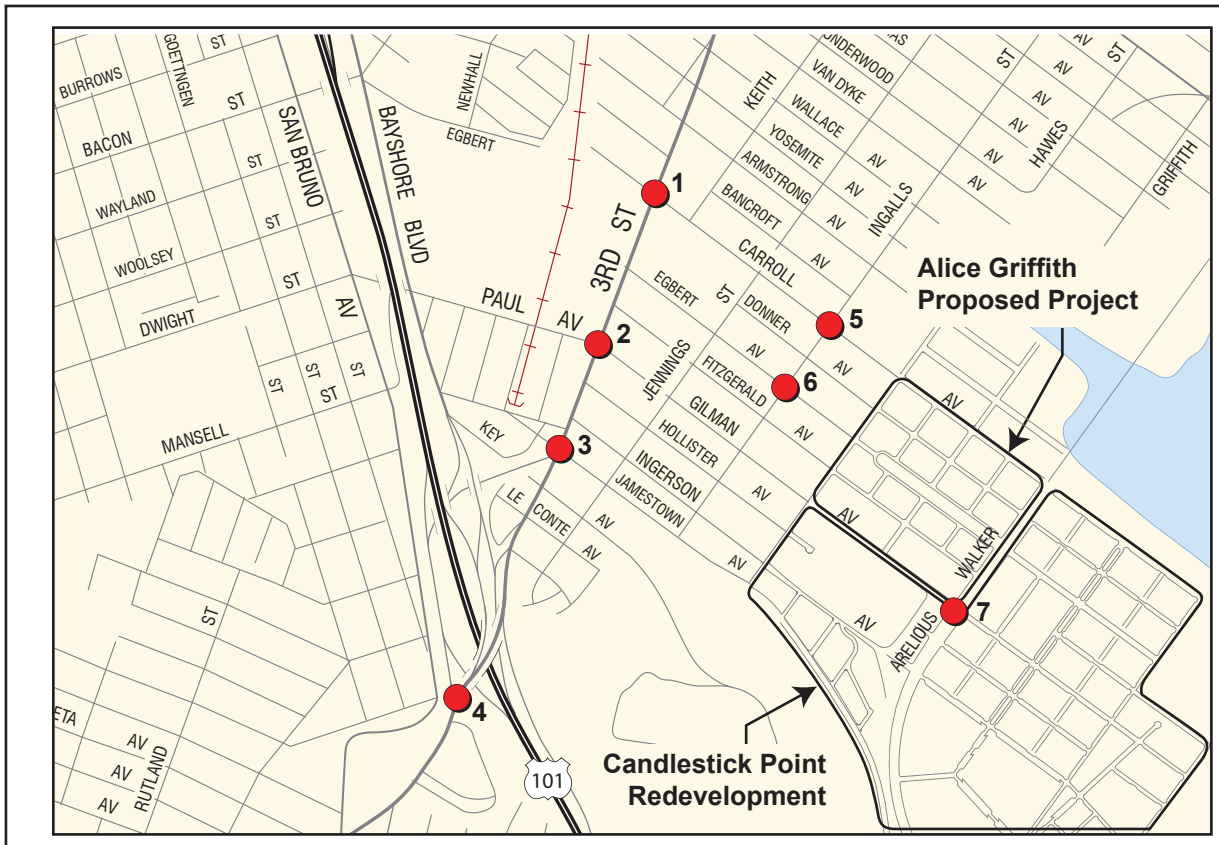
CUMULATIVE PROJECT TRIP ASSIGNMENT

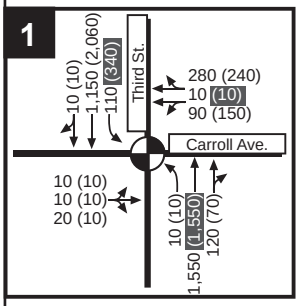


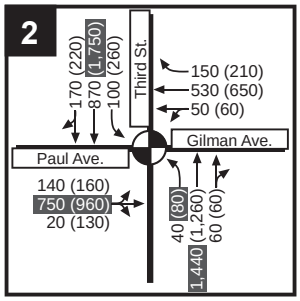


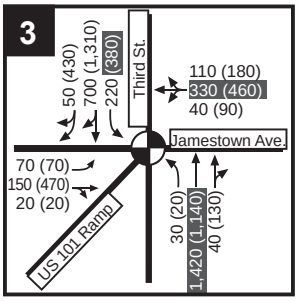
Alice Griffith Housing TIS

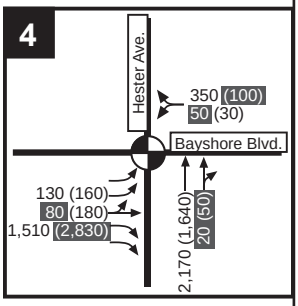
CUMULATIVE NO PROJECT CONDITIONS WEEKDAY PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS

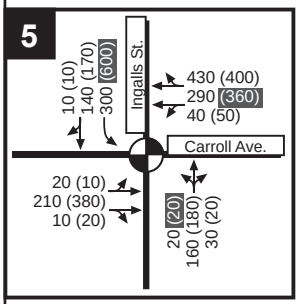


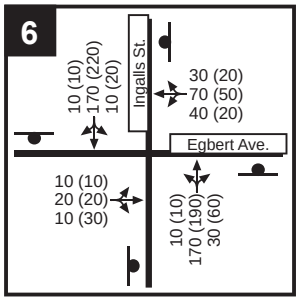


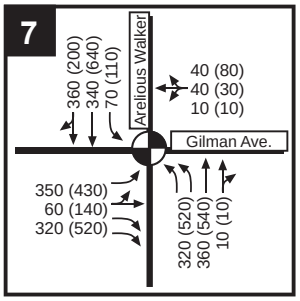












N
Not to Scale

LEGEND:

- 1 = Study Intersections
- = Traffic Signal
- = Stop Sign
- XX (YY) = AM (PM)
- X (Y) = Critical Movement; Intersection LOS E or F

Alice Griffith Housing TIS

CUMULATIVE CONDITIONS WEEKDAY PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS

April 2010
SF08-0407.02\graphics\0407.02-6

FIGURE 6

APPENDIX A:
SUPPLEMENTAL TRAFFIC ANALYSIS

FEHR & PEERS
TRANSPORTATION CONSULTANTS

October 1, 2010

Ms. Audrey Tendell
Lennar Homes of California
One California Street, Suite 2700
San Francisco, CA 94111

Re: Supplemental Traffic Analysis for the Alice Griffith Project in San Francisco, CA

Dear Audrey:

Fehr & Peers has conducted a traffic analysis to supplement our original traffic analysis, dated May 3, 2010, for the proposed redevelopment of the Alice Griffith Housing Project ("Proposed Project"). The original traffic analysis identified one cumulatively considerable project impact at Third Street/Carroll Avenue. A cumulatively considerable project impact is a cumulative traffic impact to which a proposed project contributes a considerable amount of trips to a critical movement operating at LOS E or LOS F, as determined by the San Francisco Planning Department's traffic impact analysis methodology. The critical movements are the traffic movements that experience the highest level of congestions. The purpose of this supplemental analysis is to determine how many housing units could be built without triggering significant and unavoidable impacts. This will be known as the "Reduced Development Alternative."

The original transportation analysis assumed that the Proposed Project was included in the cumulative condition intersection forecasts developed for the *Candlestick Point – Hunters Point Shipyard Phase II Development Plan Transportation Study Final Report*, ("CP/HPS Study"). These forecasts represented traffic conditions in the area around the Proposed Project in year 2030. Therefore, we developed a 'No Project' scenario by subtracting vehicle trips associated with the Proposed Project from the cumulative condition forecasts. The same method was used in this supplemental analysis to determine the contribution of a Reduced Development Alternative at the Third Street/Carroll Avenue intersection. Thus, Cumulative Conditions remain the same in both the original analysis and this supplemental analysis and any units not constructed at the Alice Griffith Project site were assumed to be constructed elsewhere in the Candlestick Point or Hunters Point Shipyard development areas.

The remainder of this letter explains how the Reduced Development Alternative was determined.

IMPACT SENSITIVITY ANALYSIS

Using the San Francisco Planning Department's methodology for calculating significant traffic impacts, the number of project-related vehicle trips at the critical movements at Third Street/Carroll Avenue was reviewed.

As shown in **Table 1**, the critical movement most affected by the Proposed Project is the critical southbound left-turn from Third Street to Carroll Avenue. The Proposed Project would add 34 vehicle trips to this movement, or about 10 percent of the forecasted volume in 2030. This would be considered a cumulatively considerable project impact.

In order for this impact to be eliminated, the number of trips added to this movement by the Proposed Project was incrementally reduced until the number of trips was not considerable. As

shown in **Table 1**, a Reduced Development Alternative can only contribute 16 vehicle trips to the forecasted movement volume before the contribution would be considered significant.

TABLE 1
THIRD STREET/CARROLL AVENUE IMPACT SUMMARY – CUMULATIVE PM CONDITIONS

Scenario	Critical Movement	Cumulative Movement Volume	Project Trips Added	% Contribution	Cumulative Impact[1]
Proposed Project	SBL	340[2]	34	10%	**SC/PI**
Reduced Development Alternative	SBL	340[2]	16	4.7%	**NSC**

Notes:

1. Significance findings: CI = Cumulative Impact; NSC = No Significant Contribution; SC/PI = Significant Contribution/Project Impact.
2. Cumulative Conditions remain the same in both the Proposed Project and the Reduced Development and any units not constructed at the Proposed Project site were assumed to be constructed somewhere else in the Candlestick Point development area

Source: Fehr & Peers, 2010.

TRIP GENERATION

Next, the size, in number of housing units, of a Reduced Development Alternative that only contributes 16 trips to the critical southbound left movement at Third Street/Carroll Avenue was determined by calculating project trip generation of the Reduced Development Alternative.

The same trip generation assumptions presented in the original May traffic impact analysis – data collected at the existing Alice Griffith Housing Project site, the San Francisco *Transportation Impact Analysis Guidelines for Environmental Review* ("SF Guidelines"), and the CP/HPS Study – were used in this analysis.

The Proposed Project includes development of 1,210 housing units. To determine the size of the Reduced Development Alternative, the number of units of the Proposed Project was incrementally reduced until the number of vehicle trips generated by the Reduced Development Alternative no longer triggered a significant and unavoidable impact by added more than 16 vehicle trips to the southbound left-turn movement at Third Street/Carroll Avenue. Since the cumulative trip generation assumes that a housing unit generates the same number of trips irrespective of the number of bedrooms or type (e.g., affordable or market-rate), the Reduced Development Alternative is only reported in total number of units.

Table 2 summarizes the number of vehicle trips expected to be generated by the Proposed Project and a Reduced Development Alternative under Cumulative Conditions. As shown, the Proposed Project is forecast to generate 302 new AM peak hour vehicle trips (76 inbound, 227 outbound) and 340 new PM peak hour vehicle trips (197 inbound, 143 outbound). Under the Reduced Development Alternative, 875 units are expected to generate 219 new AM peak hour vehicle trips (55 inbound, 164 outbound) and 245 new PM peak hour vehicle trips (142 inbound, 103 outbound).

FEHR & PEERS
TRANSPORTATION CONSULTANTS

TABLE 2
CUMULATIVE PROJECT TRIP GENERATION

	Number of Units	Rate (AM/PM)	AM Trips			PM Trips		
			Total	Enter	Exit	Total	Enter	Exit
Proposed Project	1,210	0.25/0.28	302	76	227	340	197	143
Reduced Development Alternative	**875**	**0.25/0.28**	**219**	**55**	**164**	**245**	**142**	**103**
Difference	*335*	--	*83*	*21*	*63*	*95*	*55*	*40*

Source: Fehr & Peers, 2010

CONCLUSION

Under the Proposed Project conditions with 1,210 housing units constructed, the project would contribute to a significant impact at the Thrid Street and Carroll Avenue intersection. However, if only 875 units are constructed, the project would no longer contribute a considerable amount of traffic to the cumulatively impacted intersections and would have a ***less-than-significant*** impact on the surrounding transportation system.

We hope you find this information useful. Please do not hesitate to call for clarifications or additional information.

Sincerely,

FEHR & PEERS

Eric Womeldorff
Senior Transportation Engineer

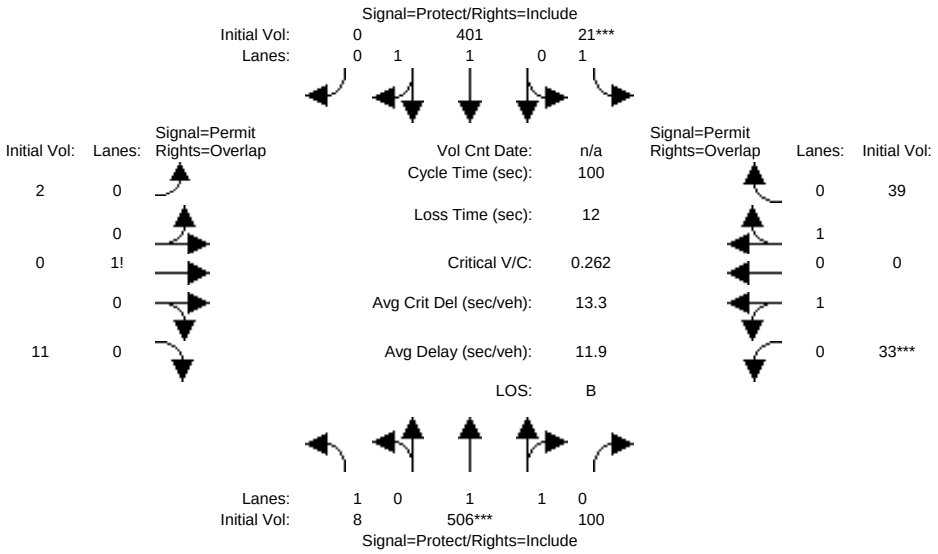
Todd Henry
Transportation Planner

SF08-0407.02

APPENDIX B:
TECHNICAL CALCULATIONS

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

Intersection #1001: 3rd St / Carroll Ave



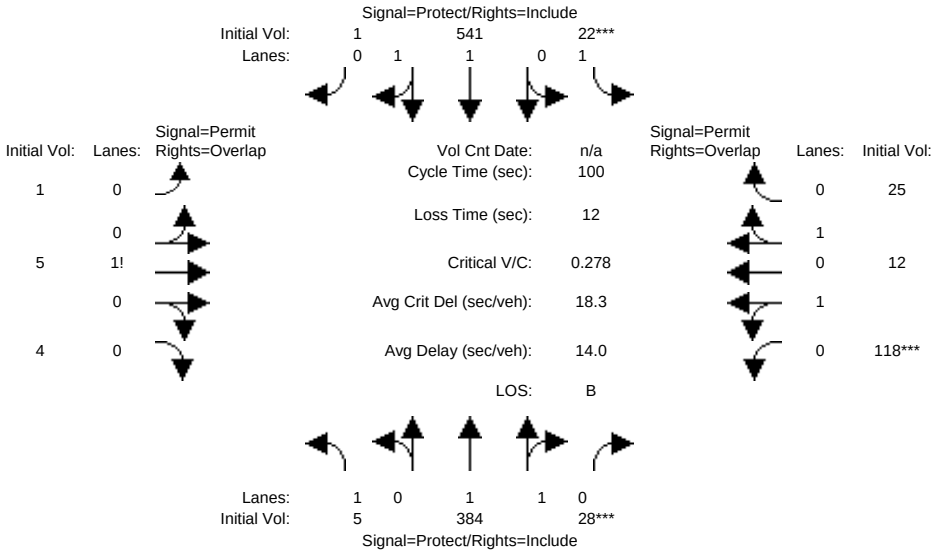
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	1	58	58	5	62	62	22	22	22	22	22	22
Volume Module:												
Base Vol:	8	506	100	21	401	0	2	0	11	33	0	39
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	506	100	21	401	0	2	0	11	33	0	39
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:	8	506	100	21	401	0	2	0	11	33	0	39
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	8	533	105	22	422	0	2	0	12	35	0	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	533	105	22	422	0	2	0	12	35	0	41
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:	8	533	105	22	422	0	2	0	12	35	0	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.88	0.88	0.90	0.90	0.95	0.85	1.00	0.85	0.67	0.95	0.67
Lanes:	1.00	1.67	0.33	1.00	2.00	0.00	0.15	0.00	0.85	1.00	0.00	1.00
Final Sat.:	1718	2798	553	1718	3437	0	247	0	1361	1271	0	1271
Capacity Analysis Module:												
Vol/Sat:	0.00	0.19	0.19	0.01	0.12	0.00	0.01	0.00	0.01	0.03	0.00	0.03
Crit Moves:		****		****						****		
Green/Cycle:	0.01	0.61	0.61	0.05	0.65	0.00	0.22	0.00	0.23	0.22	0.00	0.27
Volume/Cap:	0.47	0.31	0.31	0.26	0.19	0.00	0.04	0.00	0.04	0.12	0.00	0.12
Delay/Veh:	117.6	9.8	9.8	52.8	7.2	0.0	30.9	0.0	30.0	31.7	0.0	27.9
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:	117.6	9.8	9.8	52.8	7.2	0.0	30.9	0.0	30.0	31.7	0.0	27.9
LOS by Move:	F	A	A	D	A	A	C	A	C	C	A	C
HCM2kAvgQ:	1	5	5	1	3	0	0	0	0	1	0	1

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1001: 3rd St / Carroll Ave



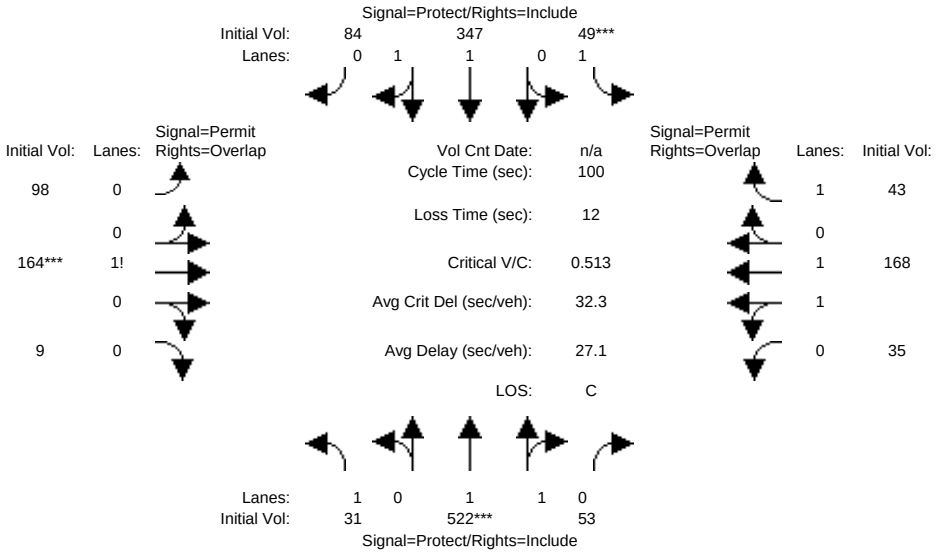
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	1	58	58	5	62	62	22	22	22	22	22	22
Volume Module:												
Base Vol:	5	384	28	22	541	1	1	5	4	118	12	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	384	28	22	541	1	1	5	4	118	12	25
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:	5	384	28	22	541	1	1	5	4	118	12	25
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	404	29	23	569	1	1	5	4	124	13	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	404	29	23	569	1	1	5	4	124	13	26
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:	5	404	29	23	569	1	1	5	4	124	13	26
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.90	0.90	0.91	0.91	0.91	0.63	0.63	0.63
Lanes:	1.00	1.86	0.14	1.00	1.99	0.01	0.10	0.50	0.40	1.00	0.32	0.68
Final Sat.:	1718	3171	231	1718	3430	6	173	866	693	1201	389	811
Capacity Analysis Module:												
Vol/Sat:	0.00	0.13	0.13	0.01	0.17	0.17	0.01	0.01	0.01	0.10	0.03	0.03
Crit Moves:			****	****						****		
Green/Cycle:	0.01	0.58	0.58	0.05	0.62	0.62	0.25	0.25	0.26	0.25	0.25	0.30
Volume/Cap:	0.31	0.22	0.22	0.27	0.27	0.27	0.02	0.02	0.02	0.41	0.13	0.11
Delay/Veh:	90.0	10.4	10.4	53.3	9.0	9.0	28.4	28.4	27.6	34.6	29.3	25.5
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:	90.0	10.4	10.4	53.3	9.0	9.0	28.4	28.4	27.6	34.6	29.3	25.5
LOS by Move:	F	B	B	D	A	A	C	C	C	C	C	C
HCM2kAvgQ:	1	3	3	1	4	4	0	0	0	4	1	1

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



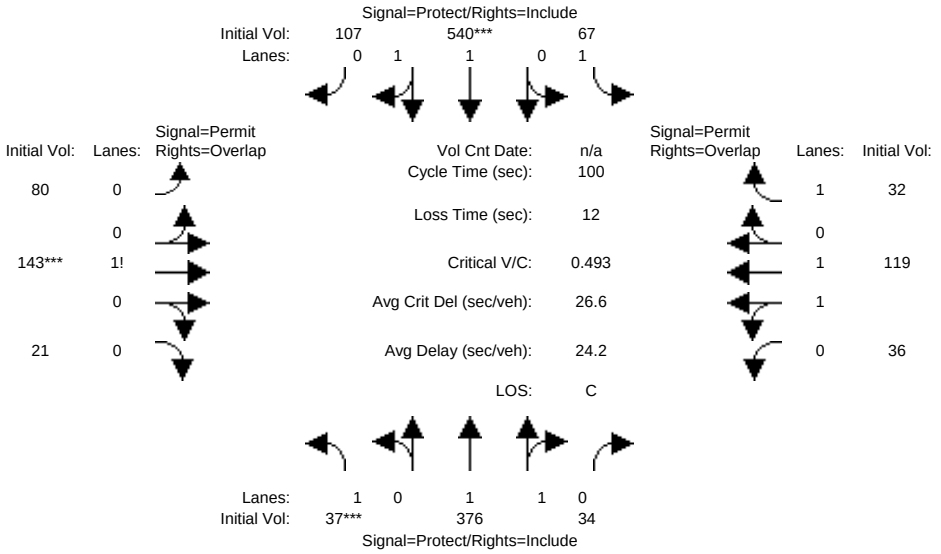
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Volume Module:												
Base Vol:	31	522	53	49	347	84	98	164	9	35	168	43
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	31	522	53	49	347	84	98	164	9	35	168	43
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:	31	522	53	49	347	84	98	164	9	35	168	43
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	33	549	56	52	365	88	103	173	9	37	177	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	549	56	52	365	88	103	173	9	37	177	45
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	549	56	52	365	88	103	173	9	37	177	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.88	0.88	0.90	0.88	0.88	0.62	0.62	0.62	0.78	0.78	0.82
Lanes:	1.00	1.82	0.18	1.00	1.61	0.39	0.36	0.61	0.03	0.34	1.66	1.00
Final Sat.:	1718	3046	309	1718	2687	650	429	717	39	513	2462	1551
Capacity Analysis Module:												
Vol/Sat:	0.02	0.18	0.18	0.03	0.14	0.14	0.24	0.24	0.24	0.07	0.07	0.03
Crit Moves:		****		****				****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.16	0.37	0.37	0.25	0.28	0.28	0.89	0.89	0.62	0.27	0.27	0.07
Delay/Veh:	41.1	16.5	16.5	42.8	15.5	15.5	64.0	64.0	30.6	29.5	29.5	19.4
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:	41.1	16.5	16.5	42.8	15.5	15.5	64.0	64.0	30.6	29.5	29.5	19.4
LOS by Move:	D	B	B	D	B	B	E	E	C	C	C	B
HCM2kAvgQ:	1	6	6	2	4	4	12	12	8	3	3	1

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



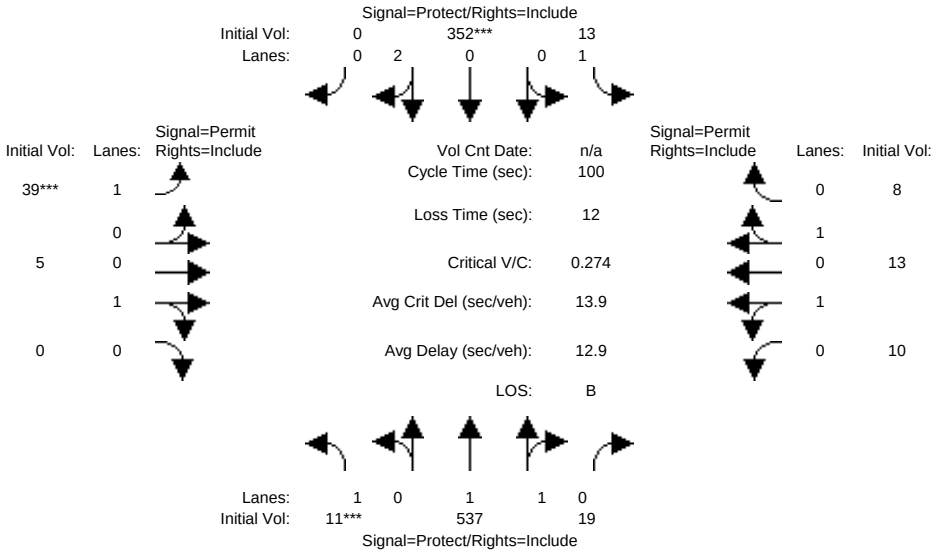
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Volume Module:												
Base Vol:	37	376	34	67	540	107	80	143	21	36	119	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	376	34	67	540	107	80	143	21	36	119	32
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:	37	376	34	67	540	107	80	143	21	36	119	32
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	39	396	36	71	568	113	84	151	22	38	125	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	396	36	71	568	113	84	151	22	38	125	34
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:	39	396	36	71	568	113	84	151	22	38	125	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.88	0.88	0.90	0.88	0.88	0.65	0.65	0.65	0.77	0.77	0.82
Lanes:	1.00	1.83	0.17	1.00	1.67	0.33	0.33	0.59	0.08	0.46	1.54	1.00
Final Sat.:	1718	3083	279	1718	2797	554	404	723	106	677	2238	1551
Capacity Analysis Module:												
Vol/Sat:	0.02	0.13	0.13	0.04	0.20	0.20	0.21	0.21	0.21	0.06	0.06	0.02
Crit Moves:	****				****			****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.19	0.26	0.26	0.34	0.41	0.41	0.77	0.77	0.53	0.21	0.21	0.06
Delay/Veh:	41.6	15.3	15.3	44.8	17.1	17.1	49.5	49.5	27.7	28.8	28.8	19.2
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:	41.6	15.3	15.3	44.8	17.1	17.1	49.5	49.5	27.7	28.8	28.8	19.2
LOS by Move:	D	B	B	D	B	B	D	D	C	C	C	B
HCM2kAvgQ:	1	4	4	2	7	7	9	9	7	2	2	1

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1003: 3rd St / Jamestown Ave



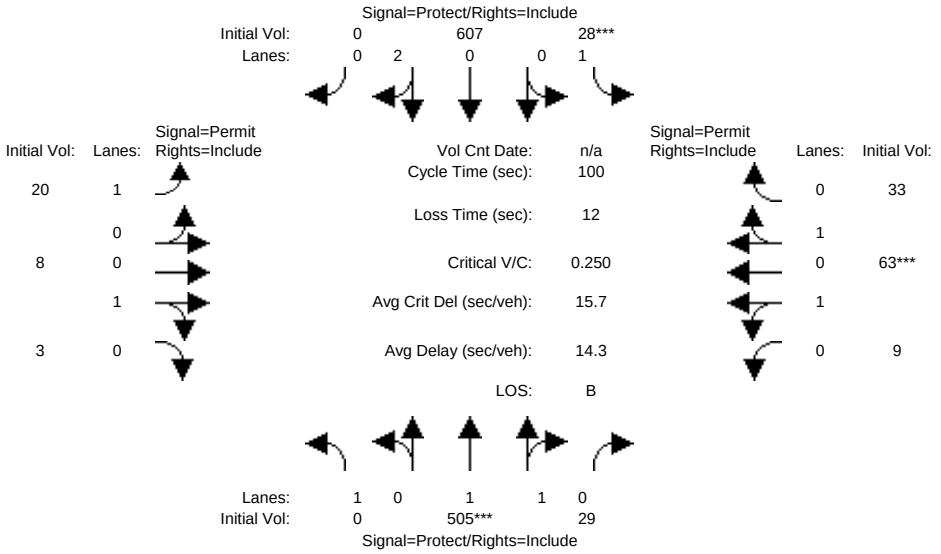
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	4	57	57	4	57	57	24	24	24	24	24	24
Volume Module:												
Base Vol:	11	537	19	13	352	0	39	5	0	10	13	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	537	19	13	352	0	39	5	0	10	13	8
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:	11	537	19	13	352	0	39	5	0	10	13	8
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	12	565	20	14	371	0	41	5	0	11	14	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	565	20	14	371	0	41	5	0	11	14	8
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:	12	565	20	14	371	0	41	5	0	11	14	8
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.95	1.00	0.73	0.98	1.00	0.75	0.75	0.75
Lanes:	1.00	1.93	0.07	1.00	1.00	0.00	1.00	1.00	0.00	0.64	0.84	0.52
Final Sat.:	1718	3303	117	1718	1809	0	1380	1862	0	916	1191	733
Capacity Analysis Module:												
Vol/Sat:	0.01	0.17	0.17	0.01	0.20	0.00	0.03	0.00	0.00	0.01	0.01	0.01
Crit Moves:	****				****		****					
Green/Cycle:	0.04	0.60	0.60	0.04	0.60	0.00	0.24	0.24	0.00	0.24	0.24	0.24
Volume/Cap:	0.17	0.29	0.29	0.19	0.34	0.00	0.12	0.01	0.00	0.05	0.05	0.05
Delay/Veh:	51.6	10.1	10.1	52.0	10.9	0.0	30.5	29.0	0.0	29.3	29.3	29.3
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:	51.6	10.1	10.1	52.0	10.9	0.0	30.5	29.0	0.0	29.3	29.3	29.3
LOS by Move:	D	B	B	D	B	A	C	C	A	C	C	C
HCM2kAvgQ:	1	5	5	1	6	0	1	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1003: 3rd St / Jamestown Ave



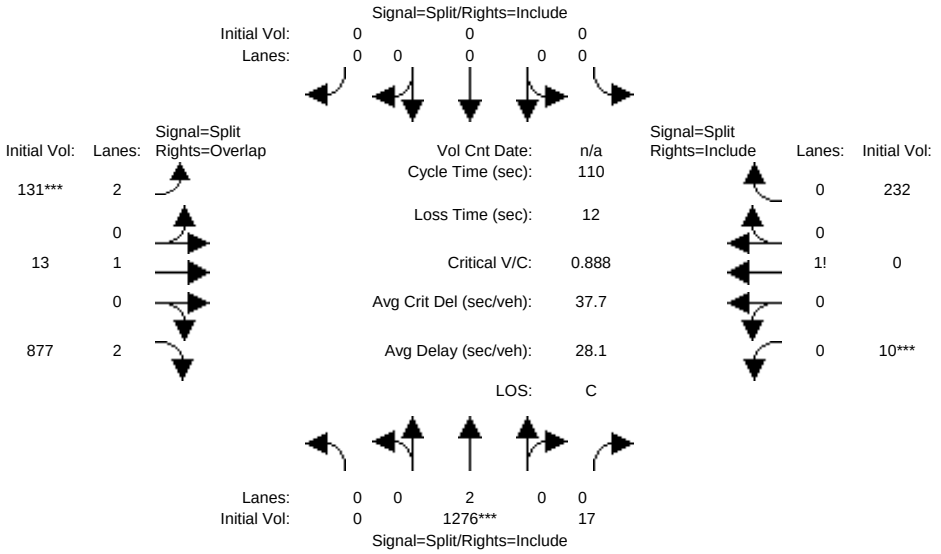
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	4	57	57	4	57	57	24	24	24	24	24	24
Volume Module:												
Base Vol:	0	505	29	28	607	0	20	8	3	9	63	33
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	505	29	28	607	0	20	8	3	9	63	33
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:	0	505	29	28	607	0	20	8	3	9	63	33
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	532	31	29	639	0	21	8	3	9	66	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	532	31	29	639	0	21	8	3	9	66	35
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	532	31	29	639	0	21	8	3	9	66	35
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.90	0.90	0.90	0.95	1.00	0.67	0.94	0.94	0.77	0.77	0.77
Lanes:	1.00	1.89	0.11	1.00	1.00	0.00	1.00	0.73	0.27	0.17	1.20	0.63
Final Sat.:	1900	3224	185	1718	1809	0	1270	1299	487	251	1757	920
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.16	0.02	0.35	0.00	0.02	0.01	0.01	0.04	0.04	0.04
Crit Moves:		****		****							****	
Green/Cycle:	0.00	0.58	0.58	0.06	0.64	0.00	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.00	0.28	0.28	0.28	0.55	0.00	0.07	0.03	0.03	0.16	0.16	0.16
Delay/Veh:	0.0	10.9	10.9	51.7	11.9	0.0	29.8	29.2	29.2	30.5	30.5	30.5
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	10.9	10.9	51.7	11.9	0.0	29.8	29.2	29.2	30.5	30.5	30.5
LOS by Move:	A	B	B	D	B	A	C	C	C	C	C	C
HCM2kAvgQ:	0	5	5	1	11	0	1	0	0	1	1	1

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1004: Bayshore Blvd / Hester Ave



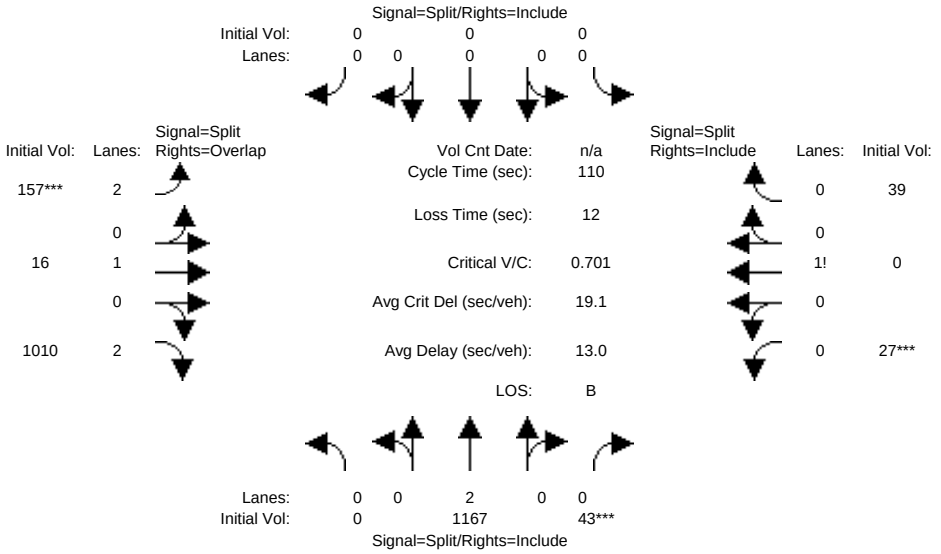
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	1276	17	0	0	0	131	13	877	10	0	232
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1276	17	0	0	0	131	13	877	10	0	232
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:	0	1276	17	0	0	0	131	13	877	10	0	232
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1343	18	0	0	0	138	14	923	11	0	244
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1343	18	0	0	0	138	14	923	11	0	244
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	1343	18	0	0	0	138	14	923	11	0	244
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.88	0.95	0.71	0.72	1.00	0.72
Lanes:	0.00	1.98	0.02	0.00	0.00	0.00	2.00	1.00	2.00	0.04	0.00	0.96
Final Sat.:	0	2379	32	0	0	0	3334	1809	2706	57	0	1319
Capacity Analysis Module:												
Vol/Sat:	0.00	0.56	0.56	0.00	0.00	0.00	0.04	0.01	0.34	0.19	0.00	0.19
Crit Moves:		****					****			****		
Green/Cycle:	0.00	0.64	0.64	0.00	0.00	0.00	0.05	0.05	0.68	0.21	0.00	0.21
Volume/Cap:	0.00	0.89	0.89	0.00	0.00	0.00	0.89	0.16	0.50	0.89	0.00	0.89
Delay/Veh:	0.0	24.8	24.8	0.0	0.0	0.0	99.5	54.5	9.4	73.2	0.0	73.2
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:	0.0	24.8	24.8	0.0	0.0	0.0	99.5	54.5	9.4	73.2	0.0	73.2
LOS by Move:	A	C	C	A	A	A	F	D	A	E	A	E
HCM2kAvgQ:	0	24	32	0	0	0	5	1	9	12	0	12

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1004: Bayshore Blvd / Hester Ave



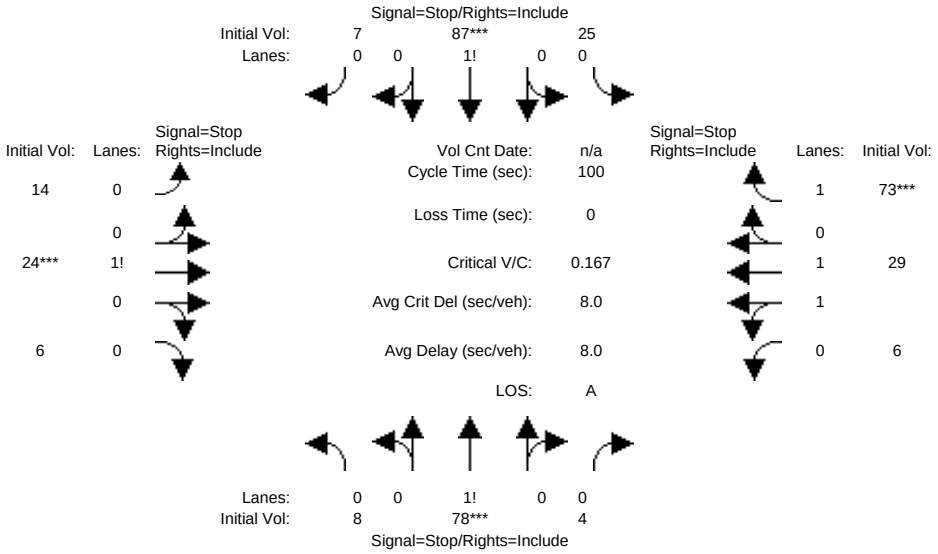
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	1167	43	0	0	0	157	16	1010	27	0	39
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1167	43	0	0	0	157	16	1010	27	0	39
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:	0	1167	43	0	0	0	157	16	1010	27	0	39
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1228	45	0	0	0	165	17	1063	28	0	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1228	45	0	0	0	165	17	1063	28	0	41
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	1228	45	0	0	0	165	17	1063	28	0	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.88	0.95	0.71	0.75	1.00	0.75
Lanes:	0.00	1.95	0.05	0.00	0.00	0.00	2.00	1.00	2.00	0.41	0.00	0.59
Final Sat.:	0	2333	86	0	0	0	3334	1809	2706	584	0	843
Capacity Analysis Module:												
Vol/Sat:	0.00	0.53	0.53	0.00	0.00	0.00	0.05	0.01	0.39	0.05	0.00	0.05
Crit Moves:			****				****			****		
Green/Cycle:	0.00	0.75	0.75	0.00	0.00	0.00	0.07	0.07	0.82	0.07	0.00	0.07
Volume/Cap:	0.00	0.70	0.70	0.00	0.00	0.00	0.70	0.13	0.48	0.70	0.00	0.70
Delay/Veh:	0.0	9.5	9.5	0.0	0.0	0.0	66.0	50.1	3.6	84.1	0.0	84.1
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:	0.0	9.5	9.5	0.0	0.0	0.0	66.0	50.1	3.6	84.1	0.0	84.1
LOS by Move:	A	A	A	A	A	A	E	D	A	F	A	F
HCM2kAvgQ:	0	13	17	0	0	0	4	1	6	4	0	4

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing AM

Intersection #1005: Ingalls St / CarrollAve



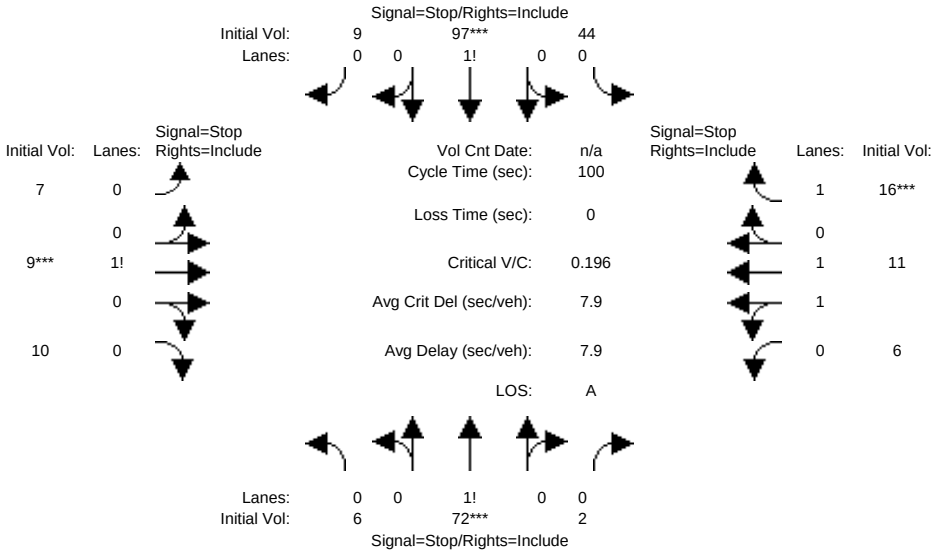
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	8	78	4	25	87	7	14	24	6	6	29	73
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	78	4	25	87	7	14	24	6	6	29	73
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:	8	78	4	25	87	7	14	24	6	6	29	73
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	9	87	4	28	97	8	16	27	7	7	32	81
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	87	4	28	97	8	16	27	7	7	32	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:	9	87	4	28	97	8	16	27	7	7	32	81
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.09	0.87	0.04	0.21	0.73	0.06	0.32	0.54	0.14	0.34	1.66	1.00
Final Sat.:	70	682	35	166	579	47	236	404	101	228	1122	791
Capacity Analysis Module:												
Vol/Sat:	0.13	0.13	0.13	0.17	0.17	0.17	0.07	0.07	0.07	0.03	0.03	0.10
Crit Moves:		****			****			****				****
Delay/Veh:	8.0	8.0	8.0	8.2	8.2	8.2	7.9	7.9	7.9	8.1	8.0	7.5
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
AdjDel/Veh:	8.0	8.0	8.0	8.2	8.2	8.2	7.9	7.9	7.9	8.1	8.0	7.5
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		8.0			8.2			7.9			7.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.0			8.2			7.9			7.7	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing PM

Intersection #1005: Ingalls St / CarrollAve



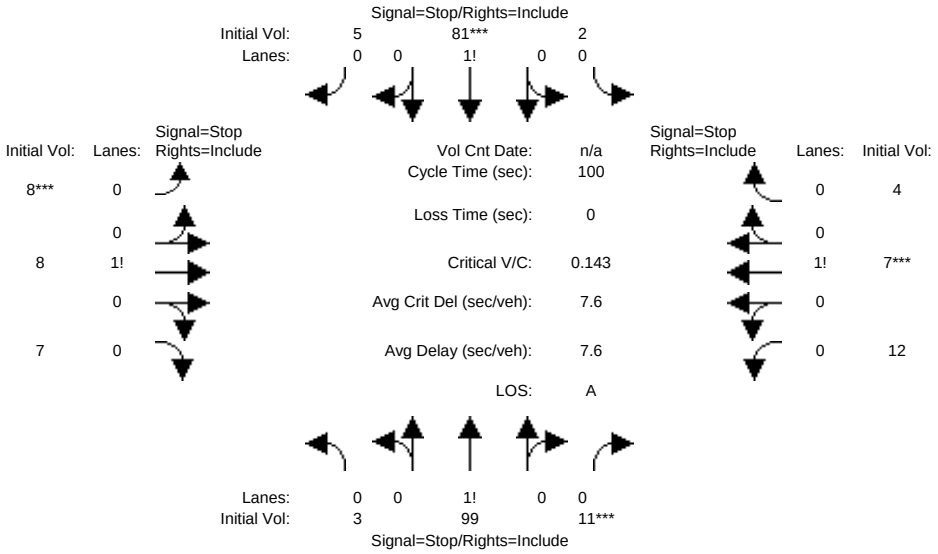
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	6	72	2	44	97	9	7	9	10	6	11	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	72	2	44	97	9	7	9	10	6	11	16
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:	6	72	2	44	97	9	7	9	10	6	11	16
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	7	80	2	49	108	10	8	10	11	7	12	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	80	2	49	108	10	8	10	11	7	12	18
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:	7	80	2	49	108	10	8	10	11	7	12	18
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.08	0.90	0.02	0.29	0.65	0.06	0.27	0.35	0.38	0.71	1.29	1.00
Final Sat.:	63	755	21	250	551	51	209	268	298	450	868	784
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.20	0.20	0.20	0.04	0.04	0.04	0.01	0.01	0.02
Crit Moves:		****			****			****				****
Delay/Veh:	7.7	7.7	7.7	8.2	8.2	8.2	7.6	7.6	7.6	8.2	7.9	7.2
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
AdjDel/Veh:	7.7	7.7	7.7	8.2	8.2	8.2	7.6	7.6	7.6	8.2	7.9	7.2
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		7.7			8.2			7.6			7.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.7			8.2			7.6			7.6	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing AM

Intersection #1006: Ingalls St / Egbert Ave



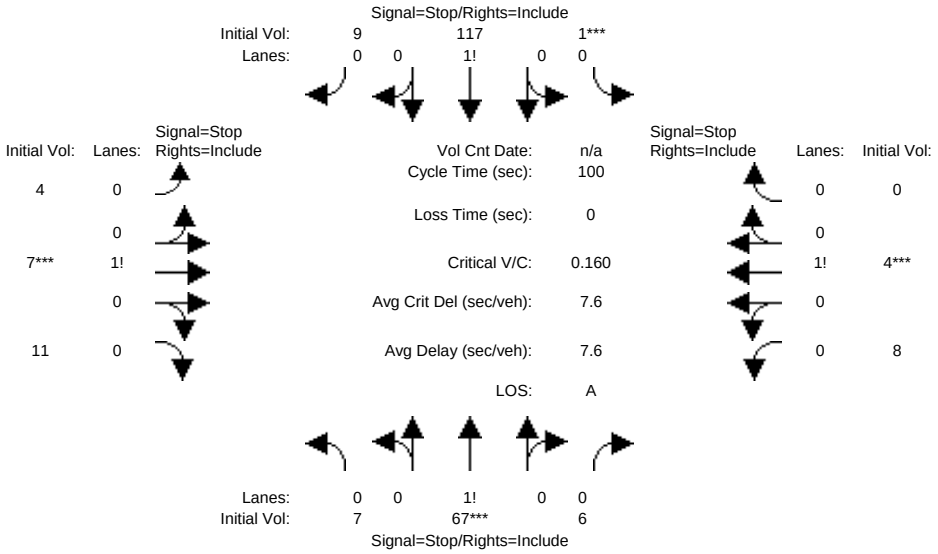
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	3	99	11	2	81	5	8	8	7	12	7	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	99	11	2	81	5	8	8	7	12	7	4
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:	3	99	11	2	81	5	8	8	7	12	7	4
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	3	110	12	2	90	6	9	9	8	13	8	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	110	12	2	90	6	9	9	8	13	8	4
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:	3	110	12	2	90	6	9	9	8	13	8	4
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.03	0.87	0.10	0.02	0.92	0.06	0.35	0.35	0.30	0.53	0.30	0.17
Final Sat.:	23	768	85	20	796	49	279	279	244	409	239	136
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.11	0.11	0.11	0.03	0.03	0.03	0.03	0.03	0.03
Crit Moves:			****		****		****				****	
Delay/Veh:	7.7	7.7	7.7	7.6	7.6	7.6	7.4	7.4	7.4	7.5	7.5	7.5
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
AdjDel/Veh:	7.7	7.7	7.7	7.6	7.6	7.6	7.4	7.4	7.4	7.5	7.5	7.5
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		7.7			7.6			7.4			7.5	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.7			7.6			7.4			7.5	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing PM

Intersection #1006: Ingalls St / Egbert Ave



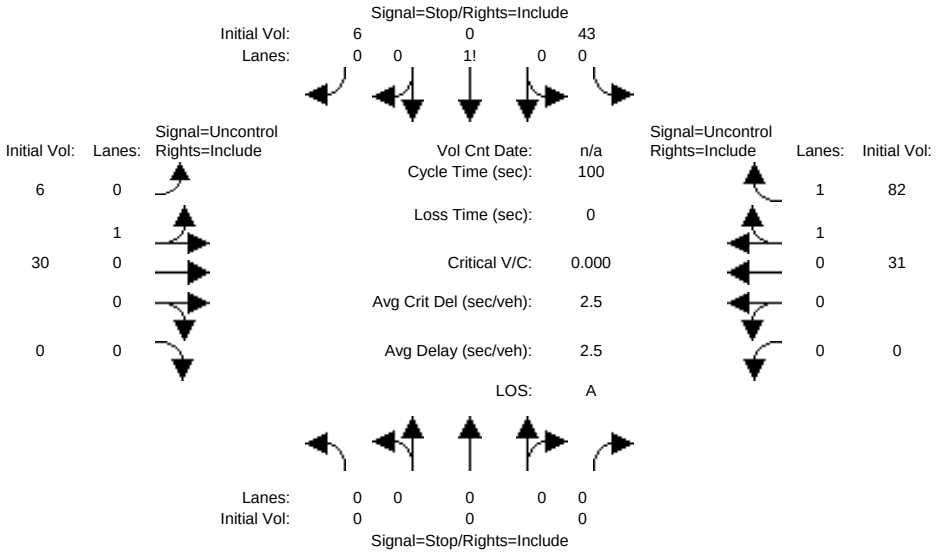
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	7	67	6	1	117	9	4	7	11	8	4	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	67	6	1	117	9	4	7	11	8	4	0
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:	7	67	6	1	117	9	4	7	11	8	4	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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	8	74	7	1	130	10	4	8	12	9	4	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	74	7	1	130	10	4	8	12	9	4	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:	8	74	7	1	130	10	4	8	12	9	4	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.09	0.84	0.07	0.01	0.92	0.07	0.18	0.32	0.50	0.67	0.33	0.00
Final Sat.:	76	728	65	7	815	63	151	264	416	506	253	0
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.10	0.16	0.16	0.16	0.03	0.03	0.03	0.02	0.02	xxxx
Crit Moves:		****		****				****			****	
Delay/Veh:	7.5	7.5	7.5	7.8	7.8	7.8	7.2	7.2	7.2	7.6	7.6	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
AdjDel/Veh:	7.5	7.5	7.5	7.8	7.8	7.8	7.2	7.2	7.2	7.6	7.6	0.0
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	*
ApproachDel:		7.5			7.8			7.2			7.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.5			7.8			7.2			7.6	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing AM

Intersection #1007: Arelious Walker Dr / Gilman Ave



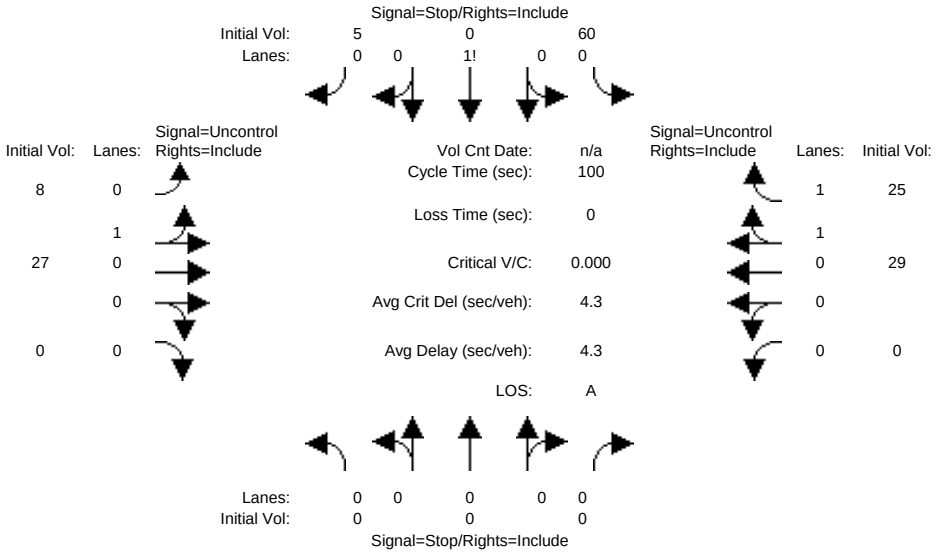
Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	0	0	0	43	0	6	6	30	0	0	31	82
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	43	0	6	6	30	0	0	31	82
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:	0	0	0	43	0	6	6	30	0	0	31	82
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	48	0	7	7	33	0	0	34	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	48	0	7	7	33	0	0	34	91
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	81	81	34	126	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	926	813	1044	1473	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	923	809	1044	1473	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.05	0.00	0.01	0.00	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	936	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.1			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing PM

Intersection #1007: Arelious Walker Dr / Gilman Ave

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Street Name:         Arelious Walker Dr                  Gilman Ave
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    60    0     5     8   27     0     0   29    25
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    0     5     8   27     0     0   29    25
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:    0    0     0    60    0     5     8   27     0     0   29    25
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:     0.90 0.90  0.90  0.90 0.90  0.90  0.90 0.90  0.90  0.90 0.90  0.90
PHF Volume:     0    0     0    67    0     6     9   30     0     0   32    28
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0    67    0     6     9   30     0     0   32    28
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx    80   80    32    60 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   927  814  1047  1556 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   923  809  1047  1556 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.07 0.00  0.01  0.01 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.3 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  932 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.3 xxxxx   0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx  9.2 xxxxx   7.3 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    A     *     A    *     *     *    *     *
ApproachDel:    xxxxxx              9.2           xxxxxx           xxxxxx
ApproachLOS:         *                A                *                *
Note: Queue reported is the number of cars per lane.
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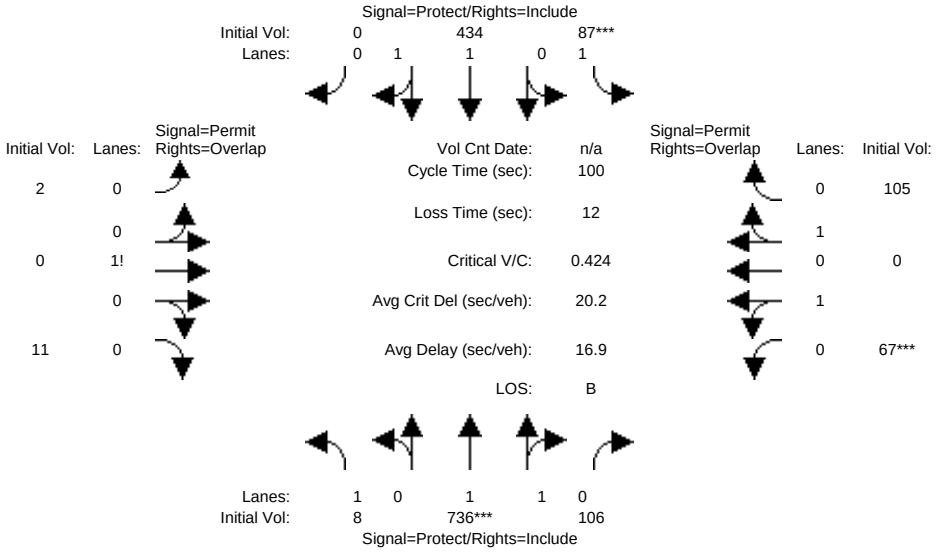
Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project AM

Intersection #1001: 3rd St / Carroll Ave



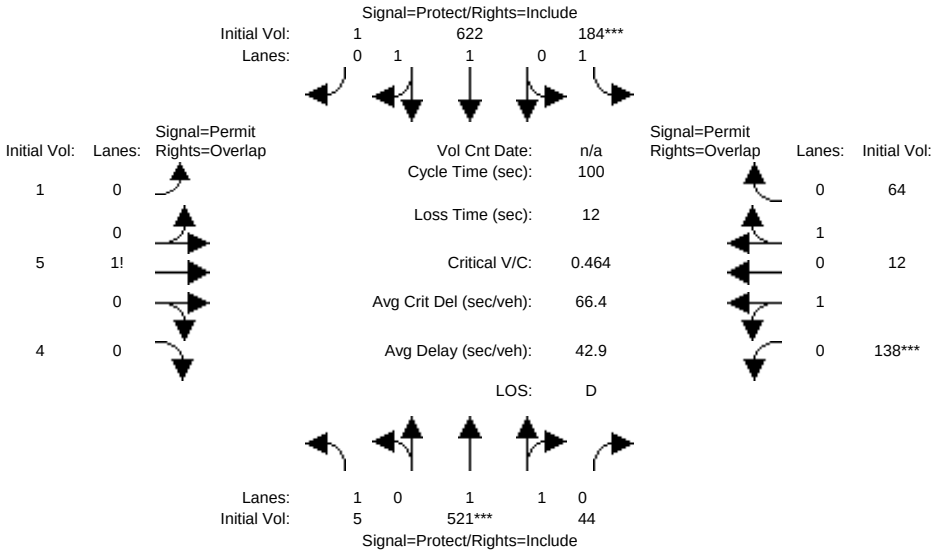
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	1	58	58	5	62	62	22	22	22	22	22	22
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	8	506	100	21	401	0	2	0	11	33	0	39
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:	8	506	100	21	401	0	2	0	11	33	0	39
Added Vol:	0	230	6	66	33	0	0	0	0	34	0	66
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	736	106	87	434	0	2	0	11	67	0	105
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	8	775	112	92	457	0	2	0	12	71	0	111
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	775	112	92	457	0	2	0	12	71	0	111
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:	8	775	112	92	457	0	2	0	12	71	0	111
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.90	0.95	0.84	1.00	0.84	0.65	0.95	0.65
Lanes:	1.00	1.75	0.25	1.00	2.00	0.00	0.15	0.00	0.85	1.00	0.00	1.00
Final Sat.:	1718	2947	424	1718	3437	0	245	0	1350	1237	0	1237
Capacity Analysis Module:												
Vol/Sat:	0.00	0.26	0.26	0.05	0.13	0.00	0.01	0.00	0.01	0.06	0.00	0.09
Crit Moves:		****		****						****		
Green/Cycle:	0.01	0.58	0.58	0.08	0.65	0.00	0.22	0.00	0.23	0.22	0.00	0.30
Volume/Cap:	0.47	0.45	0.45	0.67	0.20	0.00	0.04	0.00	0.04	0.26	0.00	0.30
Delay/Veh:	117.6	12.7	12.7	67.4	7.3	0.0	30.9	0.0	30.1	33.2	0.0	28.2
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:	117.6	12.7	12.7	67.4	7.3	0.0	30.9	0.0	30.1	33.2	0.0	28.2
LOS by Move:	F	B	B	E	A	A	C	A	C	C	A	C
HCM2kAvgQ:	1	8	8	4	3	0	0	0	0	2	0	3

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project PM

Intersection #1001: 3rd St / Carroll Ave



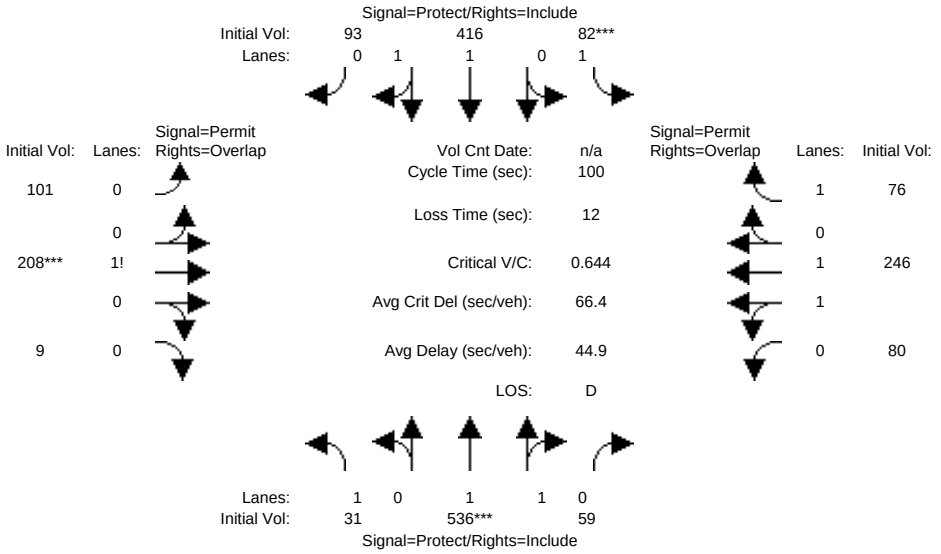
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	1	58	58	5	62	62	22	22	22	22	22	22
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	5	384	28	22	541	1	1	5	4	118	12	25
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:	5	384	28	22	541	1	1	5	4	118	12	25
Added Vol:	0	137	16	162	81	0	0	0	0	20	0	39
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	521	44	184	622	1	1	5	4	138	12	64
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	548	46	194	655	1	1	5	4	145	13	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	548	46	194	655	1	1	5	4	145	13	67
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:	5	548	46	194	655	1	1	5	4	145	13	67
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.90	0.90	0.91	0.91	0.91	0.64	0.64	0.64
Lanes:	1.00	1.84	0.16	1.00	1.99	0.01	0.10	0.50	0.40	1.00	0.16	0.84
Final Sat.:	1718	3131	264	1718	3431	6	172	861	689	1209	191	1018
Capacity Analysis Module:												
Vol/Sat:	0.00	0.18	0.18	0.11	0.19	0.19	0.01	0.01	0.01	0.12	0.07	0.07
Crit Moves:		****		****						****		
Green/Cycle:	0.01	0.58	0.58	0.08	0.65	0.65	0.22	0.22	0.23	0.22	0.22	0.30
Volume/Cap:	0.29	0.30	0.30	1.41	0.29	0.29	0.03	0.03	0.03	0.55	0.30	0.22
Delay/Veh:	86.1	11.1	11.1	267.5	7.9	7.9	30.7	30.7	29.9	39.7	33.6	26.7
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:	86.1	11.1	11.1	267.5	7.9	7.9	30.7	30.7	29.9	39.7	33.6	26.7
LOS by Move:	F	B	B	F	A	A	C	C	C	D	C	C
HCM2kAvgQ:	0	5	5	15	5	5	0	0	0	5	2	2

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project AM

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



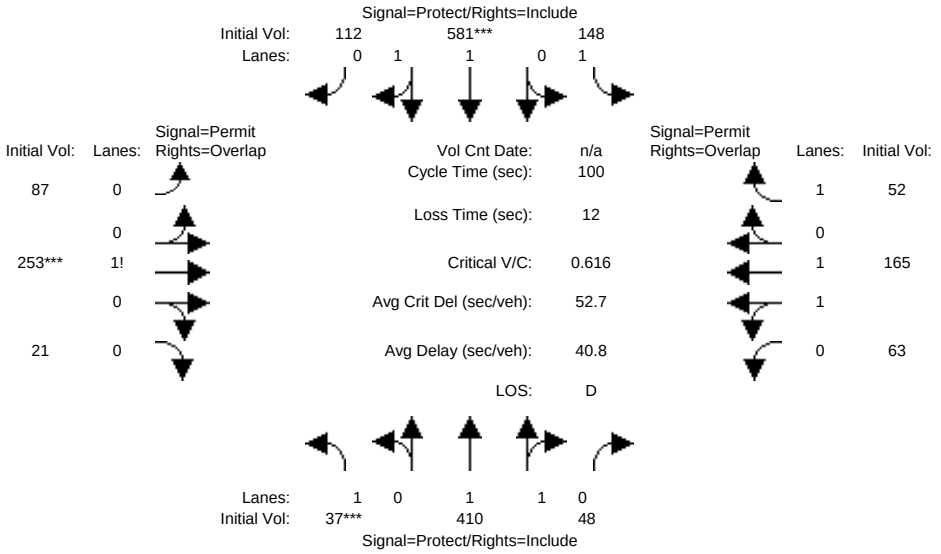
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	31	522	53	49	347	84	98	164	9	35	168	43
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:	31	522	53	49	347	84	98	164	9	35	168	43
Added Vol:	0	14	6	33	69	9	3	44	0	45	78	33
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	31	536	59	82	416	93	101	208	9	80	246	76
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	33	564	62	86	438	98	106	219	9	84	259	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	564	62	86	438	98	106	219	9	84	259	80
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	564	62	86	438	98	106	219	9	84	259	80
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.88	0.88	0.90	0.88	0.88	0.53	0.53	0.53	0.64	0.64	0.82
Lanes:	1.00	1.80	0.20	1.00	1.63	0.37	0.32	0.65	0.03	0.49	1.51	1.00
Final Sat.:	1718	3019	332	1718	2733	611	322	664	29	596	1834	1551
Capacity Analysis Module:												
Vol/Sat:	0.02	0.19	0.19	0.05	0.16	0.16	0.33	0.33	0.33	0.14	0.14	0.05
Crit Moves:		****		****				****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.16	0.38	0.38	0.42	0.33	0.33	1.22	1.22	0.85	0.52	0.52	0.13
Delay/Veh:	41.1	16.7	16.7	46.9	16.0	16.0	164.5	164	47.2	34.0	34.0	20.1
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:	41.1	16.7	16.7	46.9	16.0	16.0	164.5	164	47.2	34.0	34.0	20.1
LOS by Move:	D	B	B	D	B	B	F	F	D	C	C	C
HCM2kAvgQ:	1	6	6	3	5	5	21	21	12	5	5	2

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project PM

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



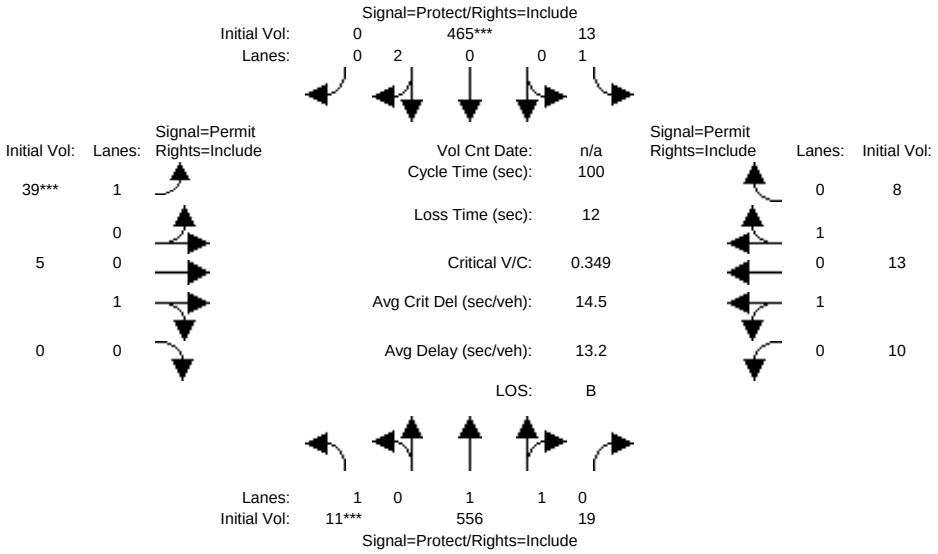
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	37	376	34	67	540	107	80	143	21	36	119	32
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:	37	376	34	67	540	107	80	143	21	36	119	32
Added Vol:	0	34	14	81	41	5	7	110	0	27	46	20
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	410	48	148	581	112	87	253	21	63	165	52
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	39	432	51	156	612	118	92	266	22	66	174	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	432	51	156	612	118	92	266	22	66	174	55
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:	39	432	51	156	612	118	92	266	22	66	174	55
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.88	0.88	0.90	0.88	0.88	0.66	0.66	0.66	0.62	0.62	0.82
Lanes:	1.00	1.79	0.21	1.00	1.68	0.32	0.24	0.70	0.06	0.55	1.45	1.00
Final Sat.:	1718	2997	351	1718	2812	542	303	881	73	650	1703	1551
Capacity Analysis Module:												
Vol/Sat:	0.02	0.14	0.14	0.09	0.22	0.22	0.30	0.30	0.30	0.10	0.10	0.04
Crit Moves:	****				****			****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.19	0.29	0.29	0.76	0.44	0.44	1.12	1.12	0.77	0.38	0.38	0.09
Delay/Veh:	41.6	15.6	15.6	65.0	17.5	17.5	121.5	122	38.0	31.4	31.4	19.6
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:	41.6	15.6	15.6	65.0	17.5	17.5	121.5	122	38.0	31.4	31.4	19.6
LOS by Move:	D	B	B	E	B	B	F	F	D	C	C	B
HCM2kAvgQ:	1	5	5	6	8	8	20	20	12	3	3	1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project AM

Intersection #1003: 3rd St / Jamestown Ave



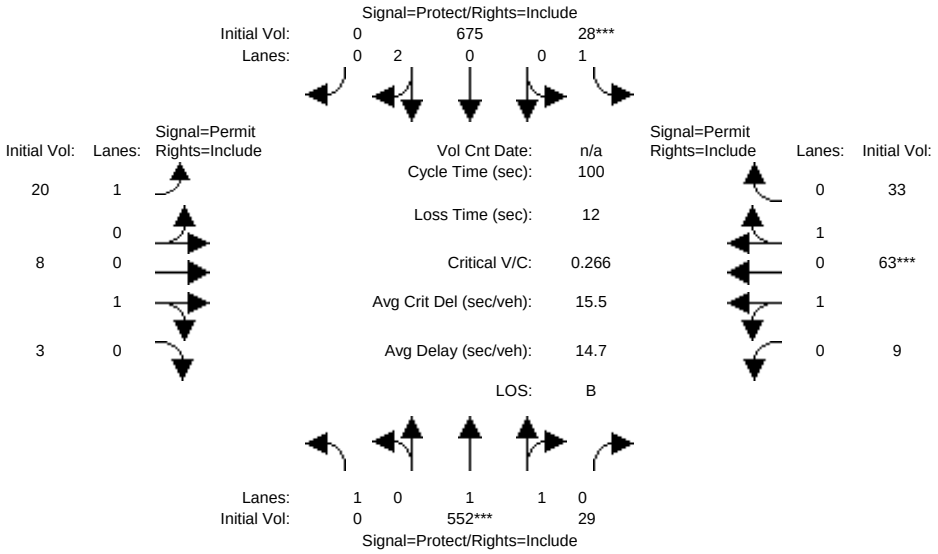
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	4	57	57	4	57	57	24	24	24	24	24	24
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	11	537	19	13	352	0	39	5	0	10	13	8
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:	11	537	19	13	352	0	39	5	0	10	13	8
Added Vol:	0	19	0	0	113	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	556	19	13	465	0	39	5	0	10	13	8
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	12	585	20	14	489	0	41	5	0	11	14	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	585	20	14	489	0	41	5	0	11	14	8
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:	12	585	20	14	489	0	41	5	0	11	14	8
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.95	1.00	0.73	0.98	1.00	0.75	0.75	0.75
Lanes:	1.00	1.93	0.07	1.00	1.00	0.00	1.00	1.00	0.00	0.64	0.84	0.52
Final Sat.:	1718	3307	113	1718	1809	0	1380	1862	0	916	1191	733
Capacity Analysis Module:												
Vol/Sat:	0.01	0.18	0.18	0.01	0.27	0.00	0.03	0.00	0.00	0.01	0.01	0.01
Crit Moves:	****				****		****					
Green/Cycle:	0.04	0.60	0.60	0.04	0.60	0.00	0.24	0.24	0.00	0.24	0.24	0.24
Volume/Cap:	0.17	0.30	0.30	0.19	0.45	0.00	0.12	0.01	0.00	0.05	0.05	0.05
Delay/Veh:	51.6	10.2	10.2	52.0	12.3	0.0	30.5	29.0	0.0	29.3	29.3	29.3
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:	51.6	10.2	10.2	52.0	12.3	0.0	30.5	29.0	0.0	29.3	29.3	29.3
LOS by Move:	D	B	B	D	B	A	C	C	A	C	C	C
HCM2kAvgQ:	1	5	5	0	9	0	1	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project PM

Intersection #1003: 3rd St / Jamestown Ave



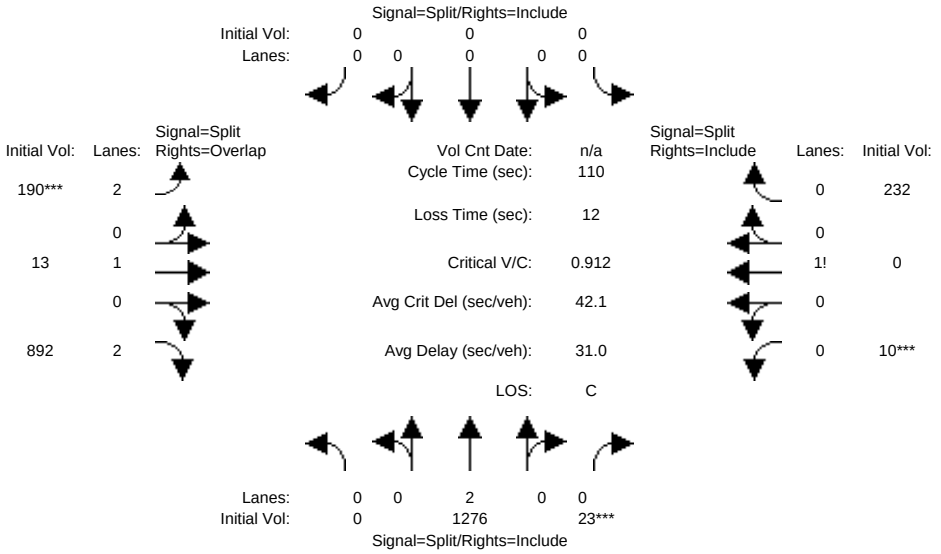
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	4	57	57	4	57	57	24	24	24	24	24	24
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	0	505	29	28	607	0	20	8	3	9	63	33
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	505	29	28	607	0	20	8	3	9	63	33
Added Vol:	0	47	0	0	68	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	552	29	28	675	0	20	8	3	9	63	33
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	581	31	29	711	0	21	8	3	9	66	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	581	31	29	711	0	21	8	3	9	66	35
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	581	31	29	711	0	21	8	3	9	66	35
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.90	0.90	0.90	0.95	1.00	0.67	0.94	0.94	0.77	0.77	0.77
Lanes:	1.00	1.90	0.10	1.00	1.00	0.00	1.00	0.73	0.27	0.17	1.20	0.63
Final Sat.:	1900	3242	170	1718	1809	0	1270	1299	487	251	1757	920
Capacity Analysis Module:												
Vol/Sat:	0.00	0.18	0.18	0.02	0.39	0.00	0.02	0.01	0.01	0.04	0.04	0.04
Crit Moves:		****		****							****	
Green/Cycle:	0.00	0.58	0.58	0.06	0.64	0.00	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.00	0.31	0.31	0.31	0.61	0.00	0.07	0.03	0.03	0.16	0.16	0.16
Delay/Veh:	0.0	10.9	10.9	53.4	13.1	0.0	29.8	29.2	29.2	30.5	30.5	30.5
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	10.9	10.9	53.4	13.1	0.0	29.8	29.2	29.2	30.5	30.5	30.5
LOS by Move:	A	B	B	D	B	A	C	C	C	C	C	C
HCM2kAvgQ:	0	5	5	1	14	0	1	0	0	1	1	1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project AM

Intersection #1004: Bayshore Blvd / Hester Ave



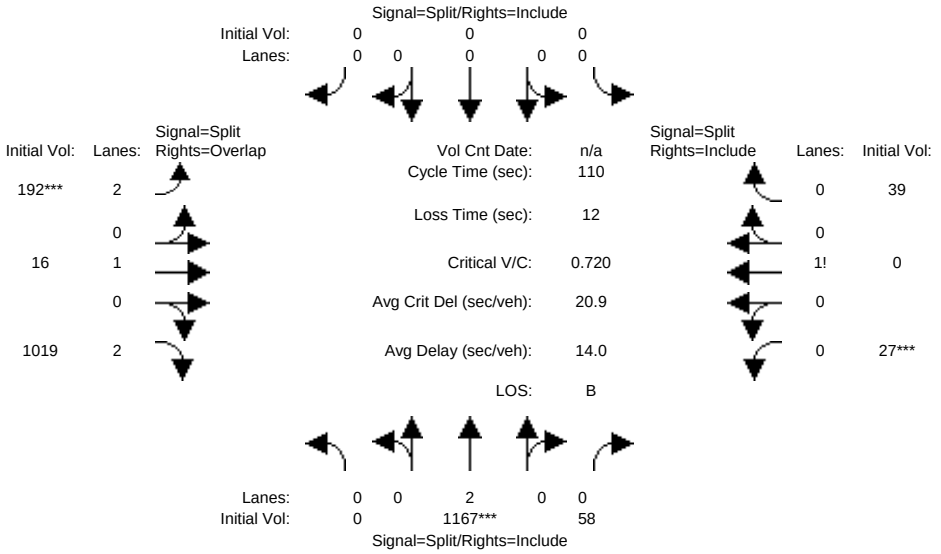
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	0	1276	17	0	0	0	131	13	877	10	0	232
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	1276	17	0	0	0	131	13	877	10	0	232
Added Vol:	0	0	6	0	0	0	59	0	15	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1276	23	0	0	0	190	13	892	10	0	232
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1343	24	0	0	0	200	14	939	11	0	244
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1343	24	0	0	0	200	14	939	11	0	244
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	1343	24	0	0	0	200	14	939	11	0	244
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.88	0.95	0.71	0.72	1.00	0.72
Lanes:	0.00	1.98	0.02	0.00	0.00	0.00	2.00	1.00	2.00	0.04	0.00	0.96
Final Sat.:	0	2369	43	0	0	0	3334	1809	2706	57	0	1319
Capacity Analysis Module:												
Vol/Sat:	0.00	0.57	0.57	0.00	0.00	0.00	0.06	0.01	0.35	0.19	0.00	0.19
Crit Moves:			****				****			****		
Green/Cycle:	0.00	0.62	0.62	0.00	0.00	0.00	0.07	0.07	0.69	0.20	0.00	0.20
Volume/Cap:	0.00	0.91	0.91	0.00	0.00	0.00	0.91	0.11	0.50	0.91	0.00	0.91
Delay/Veh:	0.0	28.1	28.1	0.0	0.0	0.0	92.5	50.3	9.2	78.1	0.0	78.1
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:	0.0	28.1	28.1	0.0	0.0	0.0	92.5	50.3	9.2	78.1	0.0	78.1
LOS by Move:	A	C	C	A	A	A	F	D	A	E	A	E
HCM2kAvgQ:	0	25	34	0	0	0	6	1	9	12	0	12

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project PM

Intersection #1004: Bayshore Blvd / Hester Ave



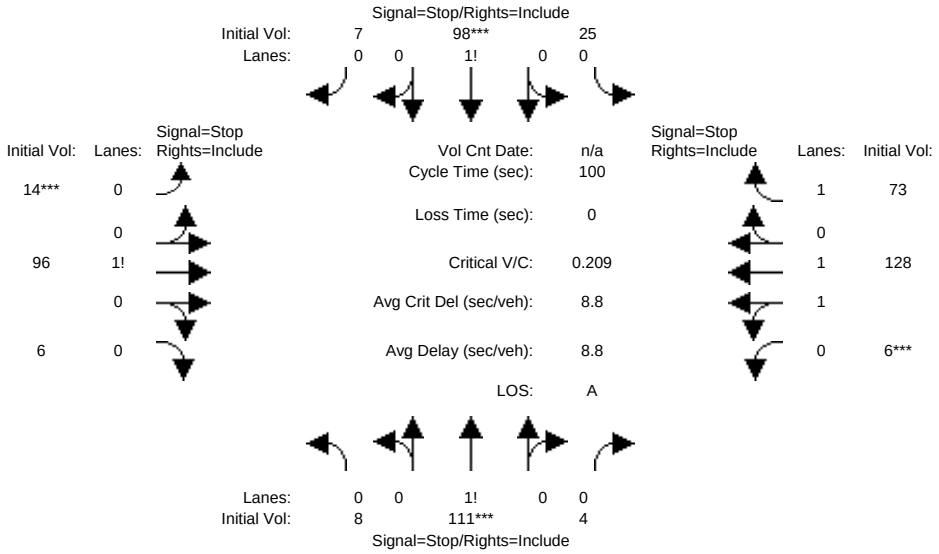
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	0	1167	43	0	0	0	157	16	1010	27	0	39
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	1167	43	0	0	0	157	16	1010	27	0	39
Added Vol:	0	0	15	0	0	0	35	0	9	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1167	58	0	0	0	192	16	1019	27	0	39
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1228	61	0	0	0	202	17	1073	28	0	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1228	61	0	0	0	202	17	1073	28	0	41
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	1228	61	0	0	0	202	17	1073	28	0	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.88	0.95	0.71	0.75	1.00	0.75
Lanes:	0.00	1.93	0.07	0.00	0.00	0.00	2.00	1.00	2.00	0.41	0.00	0.59
Final Sat.:	0	2309	115	0	0	0	3334	1809	2706	584	0	843
Capacity Analysis Module:												
Vol/Sat:	0.00	0.53	0.53	0.00	0.00	0.00	0.06	0.01	0.40	0.05	0.00	0.05
Crit Moves:		****					****			****		
Green/Cycle:	0.00	0.74	0.74	0.00	0.00	0.00	0.08	0.08	0.82	0.07	0.00	0.07
Volume/Cap:	0.00	0.72	0.72	0.00	0.00	0.00	0.72	0.11	0.48	0.72	0.00	0.72
Delay/Veh:	0.0	10.5	10.5	0.0	0.0	0.0	63.9	48.0	3.6	87.3	0.0	87.3
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:	0.0	10.5	10.5	0.0	0.0	0.0	63.9	48.0	3.6	87.3	0.0	87.3
LOS by Move:	A	B	B	A	A	A	E	D	A	F	A	F
HCM2kAvgQ:	0	14	19	0	0	0	5	1	6	4	0	4

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing+Project AM

Intersection #1005: Ingalls St / CarrollAve



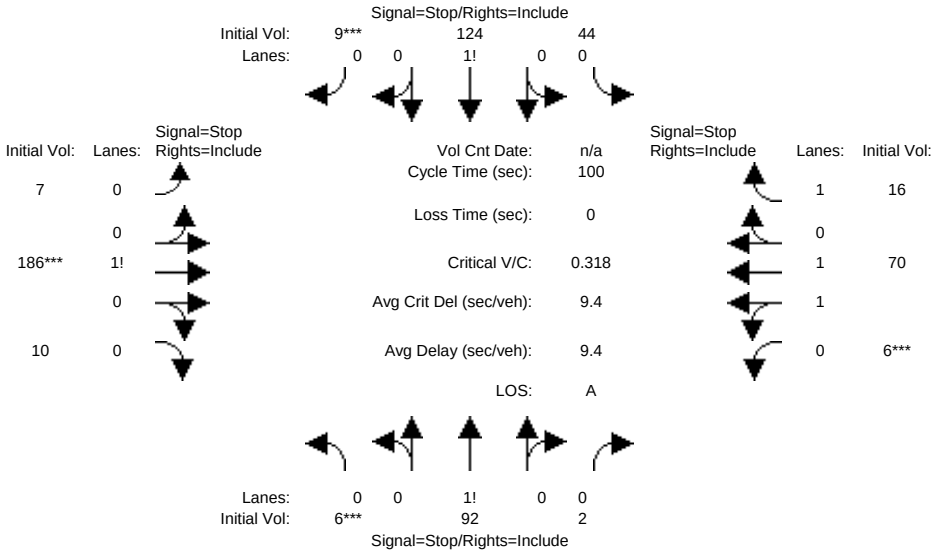
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	8	78	4	25	87	7	14	24	6	6	29	73
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	78	4	25	87	7	14	24	6	6	29	73
Added Vol:	0	33	0	0	11	0	0	72	0	0	99	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	111	4	25	98	7	14	96	6	6	128	73
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	9	123	4	28	109	8	16	107	7	7	142	81
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	123	4	28	109	8	16	107	7	7	142	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:	9	123	4	28	109	8	16	107	7	7	142	81
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.07	0.90	0.03	0.19	0.76	0.05	0.12	0.83	0.05	0.09	1.91	1.00
Final Sat.:	45	625	23	133	522	37	83	571	36	58	1239	746
Capacity Analysis Module:												
Vol/Sat:	0.20	0.20	0.20	0.21	0.21	0.21	0.19	0.19	0.19	0.12	0.11	0.11
Crit Moves:		****			****			****			****	
Delay/Veh:	9.0	9.0	9.0	9.1	9.1	9.1	9.0	9.0	9.0	8.7	8.7	7.8
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
AdjDel/Veh:	9.0	9.0	9.0	9.1	9.1	9.1	9.0	9.0	9.0	8.7	8.7	7.8
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		9.0			9.1			9.0			8.4	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.0			9.1			9.0			8.4	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing+Project PM

Intersection #1005: Ingalls St / CarrollAve



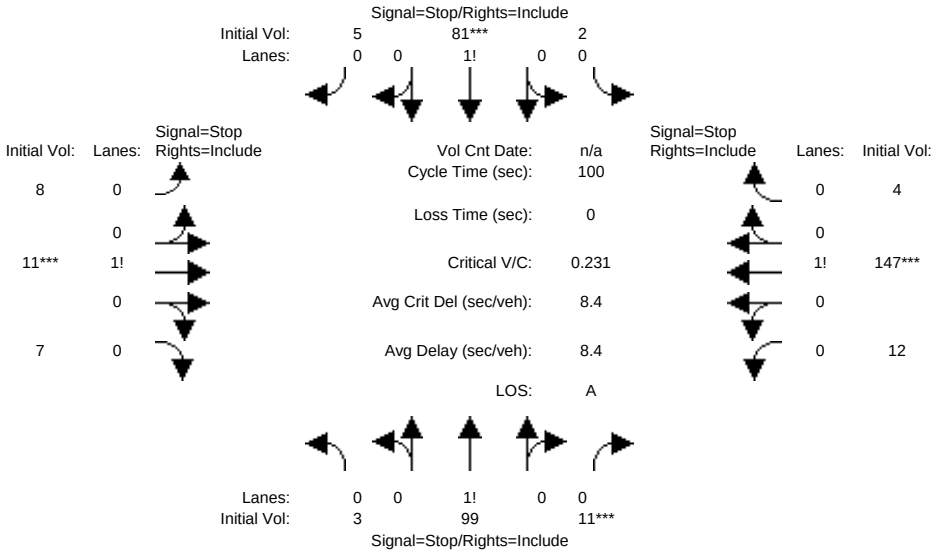
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	6	72	2	44	97	9	7	9	10	6	11	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	72	2	44	97	9	7	9	10	6	11	16
Added Vol:	0	20	0	0	27	0	0	177	0	0	59	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	92	2	44	124	9	7	186	10	6	70	16
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	7	102	2	49	138	10	8	207	11	7	78	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	102	2	49	138	10	8	207	11	7	78	18
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:	7	102	2	49	138	10	8	207	11	7	78	18
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.06	0.92	0.02	0.25	0.70	0.05	0.03	0.92	0.05	0.16	1.84	1.00
Final Sat.:	41	626	14	175	492	36	24	649	35	97	1137	706
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.28	0.28	0.28	0.32	0.32	0.32	0.07	0.07	0.03
Crit Moves:	****					****		****		****		
Delay/Veh:	8.9	8.9	8.9	9.6	9.6	9.6	10.0	10.0	10.0	8.6	8.6	7.6
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
AdjDel/Veh:	8.9	8.9	8.9	9.6	9.6	9.6	10.0	10.0	10.0	8.6	8.6	7.6
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	8.9			9.6			10.0			8.4		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	8.9			9.6			10.0			8.4		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.1	0.1	0.0

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing+Project AM

Intersection #1006: Ingalls St / Egbert Ave



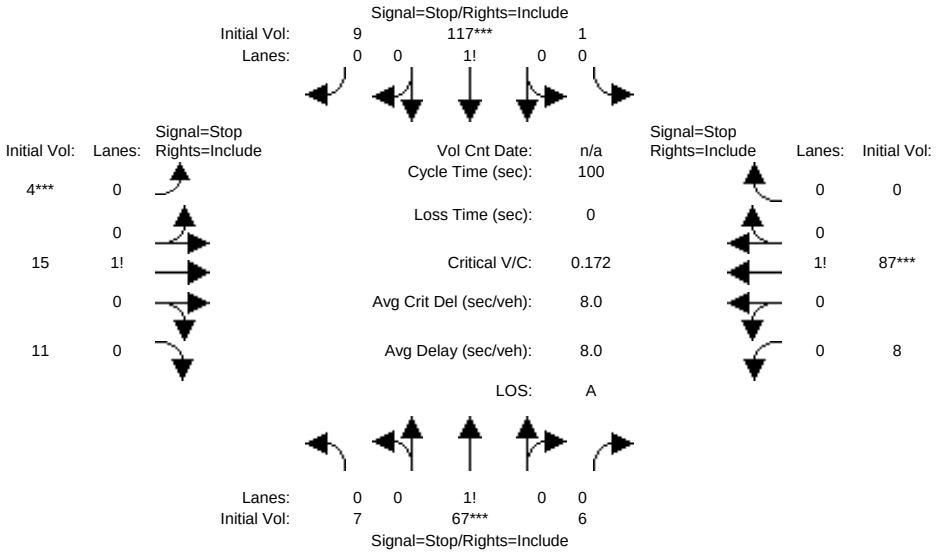
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	3	99	11	2	81	5	8	8	7	12	7	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	99	11	2	81	5	8	8	7	12	7	4
Added Vol:	0	0	0	0	0	0	0	3	0	0	140	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	99	11	2	81	5	8	11	7	12	147	4
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	3	110	12	2	90	6	9	12	8	13	163	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	110	12	2	90	6	9	12	8	13	163	4
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:	3	110	12	2	90	6	9	12	8	13	163	4
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.03	0.87	0.10	0.02	0.92	0.06	0.31	0.42	0.27	0.07	0.91	0.02
Final Sat.:	21	683	76	17	707	44	233	320	204	58	706	19
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.13	0.13	0.13	0.04	0.04	0.04	0.23	0.23	0.23
Crit Moves:			****		****			****			****	
Delay/Veh:	8.2	8.2	8.2	8.1	8.1	8.1	7.7	7.7	7.7	8.7	8.7	8.7
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
AdjDel/Veh:	8.2	8.2	8.2	8.1	8.1	8.1	7.7	7.7	7.7	8.7	8.7	8.7
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		8.2			8.1			7.7			8.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.2			8.1			7.7			8.7	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.3	0.3

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing+Project PM

Intersection #1006: Ingalls St / Egbert Ave



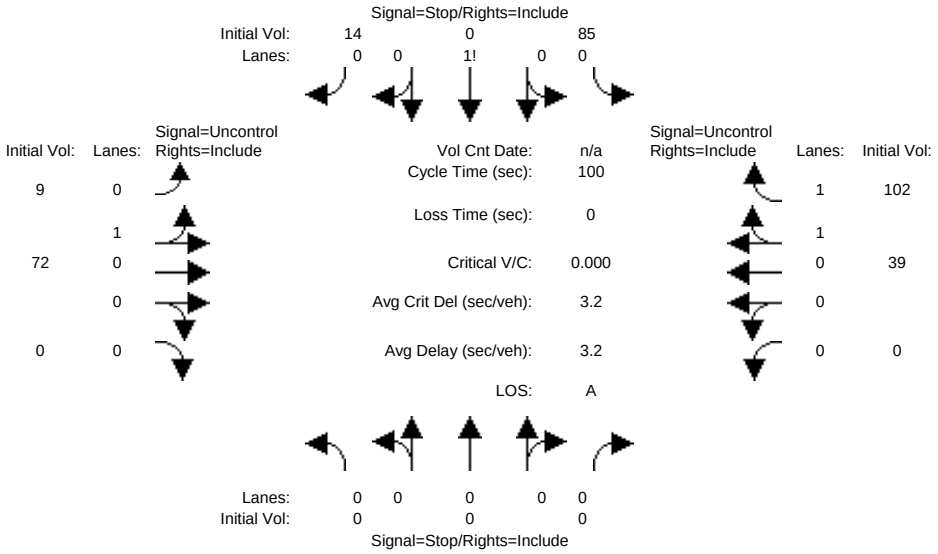
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	7	67	6	1	117	9	4	7	11	8	4	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	67	6	1	117	9	4	7	11	8	4	0
Added Vol:	0	0	0	0	0	0	0	8	0	0	83	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	67	6	1	117	9	4	15	11	8	87	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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	8	74	7	1	130	10	4	17	12	9	97	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	74	7	1	130	10	4	17	12	9	97	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:	8	74	7	1	130	10	4	17	12	9	97	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.09	0.84	0.07	0.01	0.92	0.07	0.13	0.50	0.37	0.08	0.92	0.00
Final Sat.:	70	674	60	6	756	58	105	395	290	65	710	0
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.17	0.17	0.17	0.04	0.04	0.04	0.14	0.14	xxxx
Crit Moves:		****			****		****				****	
Delay/Veh:	7.8	7.8	7.8	8.1	8.1	8.1	7.5	7.5	7.5	8.1	8.1	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
AdjDel/Veh:	7.8	7.8	7.8	8.1	8.1	8.1	7.5	7.5	7.5	8.1	8.1	0.0
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	*
ApproachDel:		7.8			8.1			7.5			8.1	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.8			8.1			7.5			8.1	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing+Project AM

Intersection #1007: Arelious Walker Dr / Gilman Ave



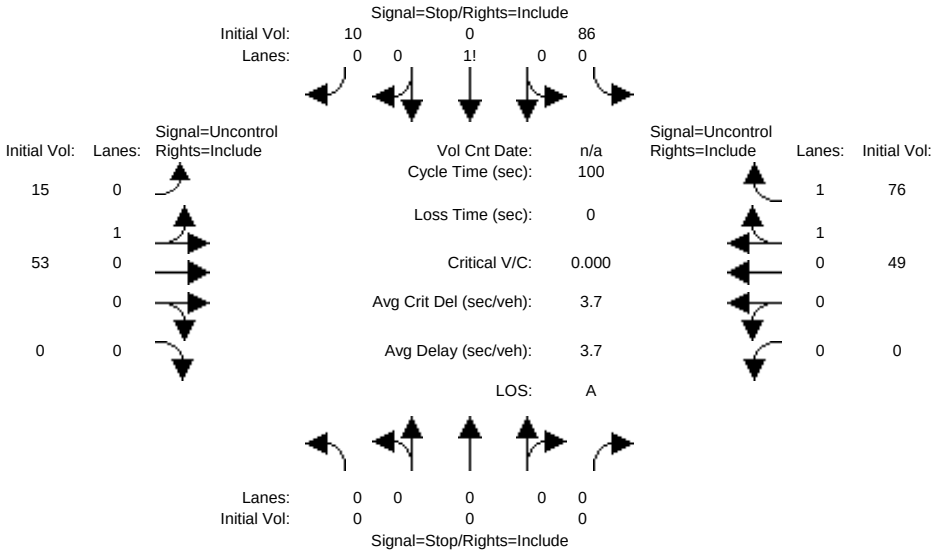
Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	0	0	0	43	0	6	6	30	0	0	31	82
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	43	0	6	6	30	0	0	31	82
Added Vol:	0	0	0	42	0	8	3	42	0	0	8	20
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	85	0	14	9	72	0	0	39	102
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	94	0	16	10	80	0	0	43	113
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	94	0	16	10	80	0	0	43	113
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	143	143	43	157	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	849	748	1027	1423	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	845	743	1027	1423	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.11	0.00	0.02	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	866	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.8	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.8			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing+Project PM

Intersection #1007: Arelious Walker Dr / Gilman Ave

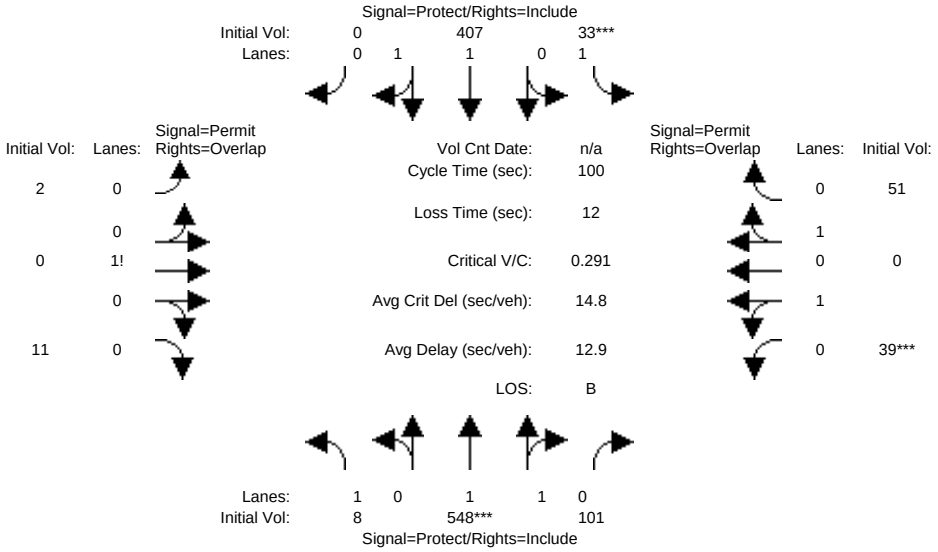


Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	0	0	0	60	0	5	8	27	0	0	29	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	60	0	5	8	27	0	0	29	25
Added Vol:	0	0	0	26	0	5	7	26	0	0	20	51
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	86	0	10	15	53	0	0	49	76
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	96	0	11	17	59	0	0	54	84
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	96	0	11	17	59	0	0	54	84
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	147	147	54	139	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	846	745	1013	1445	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	838	736	1013	1445	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.11	0.00	0.01	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	853	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.8	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.8			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project AM

Intersection #1001: 3rd St / Carroll Ave



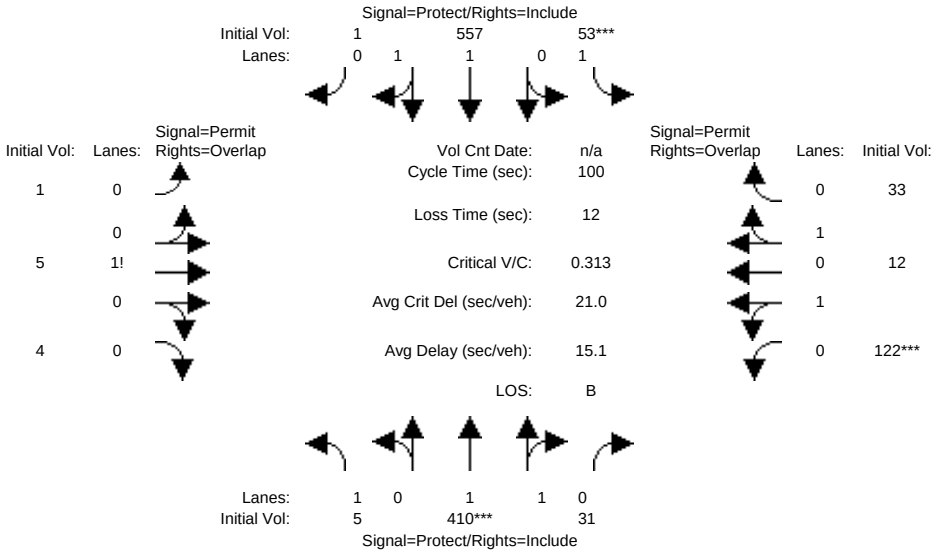
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	1	58	58	5	62	62	22	22	22	22	22	22
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	8	506	100	21	401	0	2	0	11	33	0	39
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:	8	506	100	21	401	0	2	0	11	33	0	39
Added Vol:	0	42	1	12	6	0	0	0	0	6	0	12
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	548	101	33	407	0	2	0	11	39	0	51
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	8	577	106	35	428	0	2	0	12	41	0	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	577	106	35	428	0	2	0	12	41	0	54
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:	8	577	106	35	428	0	2	0	12	41	0	54
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.88	0.88	0.90	0.90	0.95	0.84	1.00	0.84	0.66	0.95	0.66
Lanes:	1.00	1.69	0.31	1.00	2.00	0.00	0.15	0.00	0.85	1.00	0.00	1.00
Final Sat.:	1718	2835	523	1718	3437	0	247	0	1358	1262	0	1262
Capacity Analysis Module:												
Vol/Sat:	0.00	0.20	0.20	0.02	0.12	0.00	0.01	0.00	0.01	0.03	0.00	0.04
Crit Moves:		****		****						****		
Green/Cycle:	0.01	0.60	0.60	0.06	0.65	0.00	0.22	0.00	0.23	0.22	0.00	0.28
Volume/Cap:	0.47	0.34	0.34	0.34	0.19	0.00	0.04	0.00	0.04	0.15	0.00	0.15
Delay/Veh:	117.6	10.5	10.5	53.9	7.2	0.0	30.9	0.0	30.0	31.9	0.0	27.6
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:	117.6	10.5	10.5	53.9	7.2	0.0	30.9	0.0	30.0	31.9	0.0	27.6
LOS by Move:	F	B	B	D	A	A	C	A	C	C	A	C
HCM2kAvgQ:	1	6	6	1	3	0	0	0	0	1	0	1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project PM

Intersection #1001: 3rd St / Carroll Ave



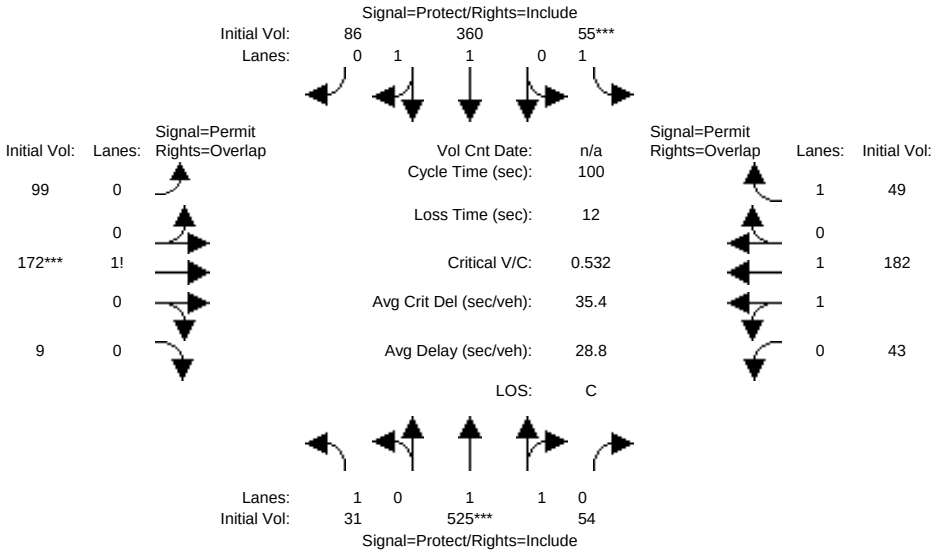
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	1	58	58	5	62	62	22	22	22	22	22	22
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	5	384	28	22	541	1	1	5	4	118	12	25
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:	5	384	28	22	541	1	1	5	4	118	12	25
Added Vol:	0	26	3	31	16	0	0	0	0	4	0	8
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	410	31	53	557	1	1	5	4	122	12	33
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	432	33	56	586	1	1	5	4	128	13	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	432	33	56	586	1	1	5	4	128	13	35
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:	5	432	33	56	586	1	1	5	4	128	13	35
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.90	0.90	0.91	0.91	0.91	0.63	0.63	0.63
Lanes:	1.00	1.86	0.14	1.00	1.99	0.01	0.10	0.50	0.40	1.00	0.27	0.73
Final Sat.:	1718	3163	239	1718	3431	6	173	864	691	1203	321	882
Capacity Analysis Module:												
Vol/Sat:	0.00	0.14	0.14	0.03	0.17	0.17	0.01	0.01	0.01	0.11	0.04	0.04
Crit Moves:		****		****						****		
Green/Cycle:	0.01	0.58	0.58	0.07	0.64	0.64	0.23	0.23	0.24	0.23	0.23	0.30
Volume/Cap:	0.30	0.24	0.24	0.46	0.27	0.27	0.03	0.03	0.03	0.46	0.17	0.13
Delay/Veh:	87.4	10.5	10.5	57.0	8.1	8.1	29.9	29.9	29.1	37.2	31.2	25.7
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:	87.4	10.5	10.5	57.0	8.1	8.1	29.9	29.9	29.1	37.2	31.2	25.7
LOS by Move:	F	B	B	E	A	A	C	C	C	D	C	C
HCM2kAvgQ:	0	4	4	2	4	4	0	0	0	4	1	1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project AM

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



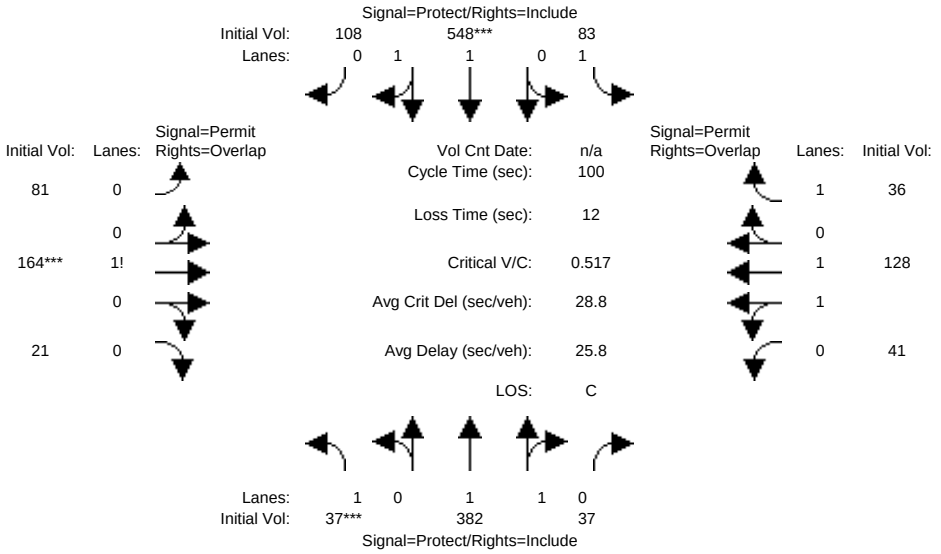
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	31	522	53	49	347	84	98	164	9	35	168	43
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:	31	522	53	49	347	84	98	164	9	35	168	43
Added Vol:	0	3	1	6	13	2	1	8	0	8	14	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	31	525	54	55	360	86	99	172	9	43	182	49
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	33	553	57	58	379	91	104	181	9	45	192	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	553	57	58	379	91	104	181	9	45	192	52
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	553	57	58	379	91	104	181	9	45	192	52
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.88	0.88	0.90	0.88	0.88	0.61	0.61	0.61	0.75	0.75	0.82
Lanes:	1.00	1.81	0.19	1.00	1.61	0.39	0.35	0.62	0.03	0.38	1.62	1.00
Final Sat.:	1718	3042	313	1718	2694	643	412	715	37	547	2315	1551
Capacity Analysis Module:												
Vol/Sat:	0.02	0.18	0.18	0.03	0.14	0.14	0.25	0.25	0.25	0.08	0.08	0.03
Crit Moves:		****		****				****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.16	0.37	0.37	0.28	0.29	0.29	0.94	0.94	0.65	0.31	0.31	0.09
Delay/Veh:	41.1	16.5	16.5	43.4	15.6	15.6	72.7	72.7	31.9	30.1	30.1	19.5
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:	41.1	16.5	16.5	43.4	15.6	15.6	72.7	72.7	31.9	30.1	30.1	19.5
LOS by Move:	D	B	B	D	B	B	E	E	C	C	C	B
HCM2kAvgQ:	1	6	6	2	4	4	13	13	8	3	3	1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project PM

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



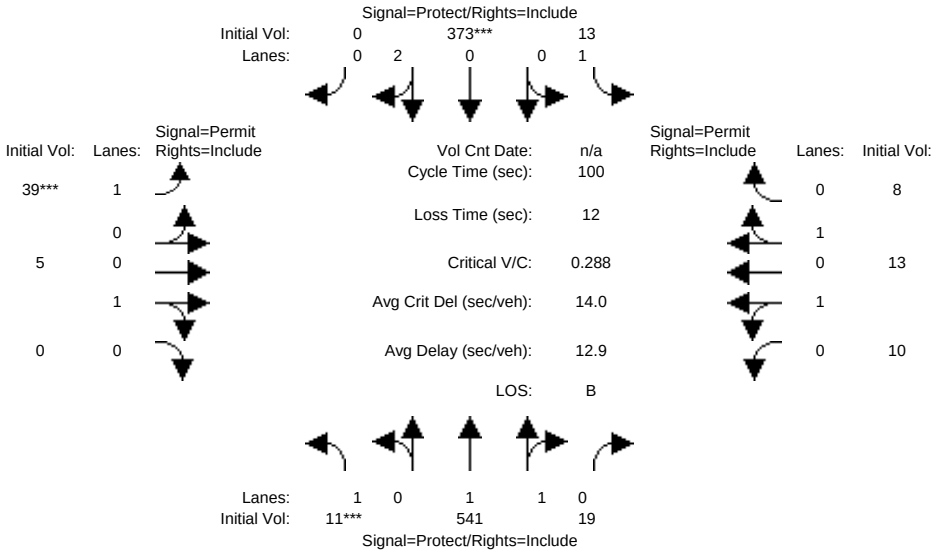
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	37	376	34	67	540	107	80	143	21	36	119	32
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:	37	376	34	67	540	107	80	143	21	36	119	32
Added Vol:	0	6	3	16	8	1	1	21	0	5	9	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	382	37	83	548	108	81	164	21	41	128	36
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	39	402	39	87	577	114	85	173	22	43	135	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	402	39	87	577	114	85	173	22	43	135	38
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:	39	402	39	87	577	114	85	173	22	43	135	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.88	0.88	0.90	0.88	0.88	0.65	0.65	0.65	0.74	0.74	0.82
Lanes:	1.00	1.82	0.18	1.00	1.67	0.33	0.30	0.62	0.08	0.49	1.51	1.00
Final Sat.:	1718	3062	297	1718	2799	552	377	764	98	681	2125	1551
Capacity Analysis Module:												
Vol/Sat:	0.02	0.13	0.13	0.05	0.21	0.21	0.23	0.23	0.23	0.06	0.06	0.02
Crit Moves:	****				****			****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.19	0.27	0.27	0.42	0.42	0.42	0.84	0.84	0.58	0.23	0.23	0.06
Delay/Veh:	41.6	15.4	15.4	47.1	17.2	17.2	55.8	55.8	29.0	29.2	29.2	19.3
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:	41.6	15.4	15.4	47.1	17.2	17.2	55.8	55.8	29.0	29.2	29.2	19.3
LOS by Move:	D	B	B	D	B	B	E	E	C	C	C	B
HCM2kAvgQ:	1	4	4	3	7	7	11	11	7	2	2	1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project AM

Intersection #1003: 3rd St / Jamestown Ave



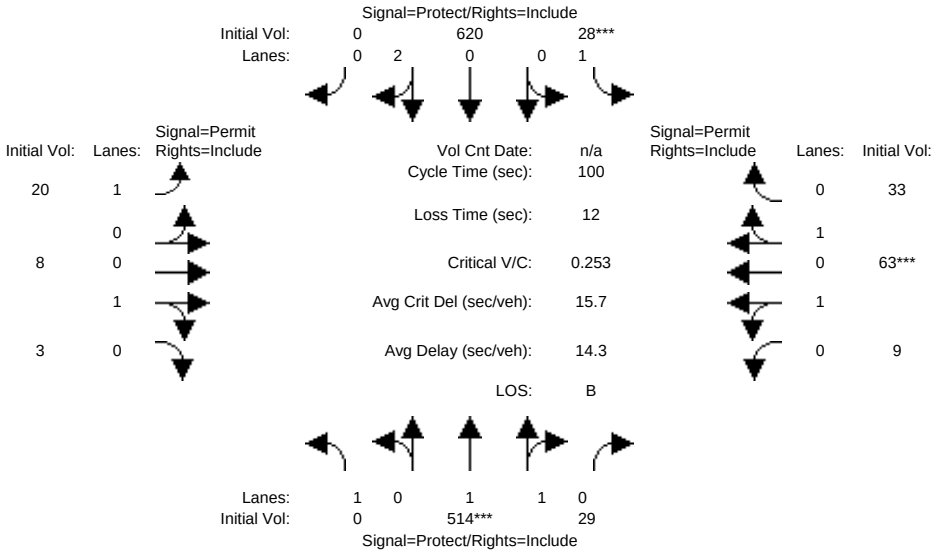
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	4	57	57	4	57	57	24	24	24	24	24	24
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	11	537	19	13	352	0	39	5	0	10	13	8
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:	11	537	19	13	352	0	39	5	0	10	13	8
Added Vol:	0	4	0	0	21	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	541	19	13	373	0	39	5	0	10	13	8
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	12	569	20	14	393	0	41	5	0	11	14	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	569	20	14	393	0	41	5	0	11	14	8
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:	12	569	20	14	393	0	41	5	0	11	14	8
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.95	1.00	0.73	0.98	1.00	0.75	0.75	0.75
Lanes:	1.00	1.93	0.07	1.00	1.00	0.00	1.00	1.00	0.00	0.64	0.84	0.52
Final Sat.:	1718	3304	116	1718	1809	0	1380	1862	0	916	1191	733
Capacity Analysis Module:												
Vol/Sat:	0.01	0.17	0.17	0.01	0.22	0.00	0.03	0.00	0.00	0.01	0.01	0.01
Crit Moves:	****				****		****					
Green/Cycle:	0.04	0.60	0.60	0.04	0.60	0.00	0.24	0.24	0.00	0.24	0.24	0.24
Volume/Cap:	0.17	0.29	0.29	0.19	0.36	0.00	0.12	0.01	0.00	0.05	0.05	0.05
Delay/Veh:	51.6	10.1	10.1	52.0	11.2	0.0	30.5	29.0	0.0	29.3	29.3	29.3
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:	51.6	10.1	10.1	52.0	11.2	0.0	30.5	29.0	0.0	29.3	29.3	29.3
LOS by Move:	D	B	B	D	B	A	C	C	A	C	C	C
HCM2kAvgQ:	1	5	5	0	6	0	1	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project PM

Intersection #1003: 3rd St / Jamestown Ave



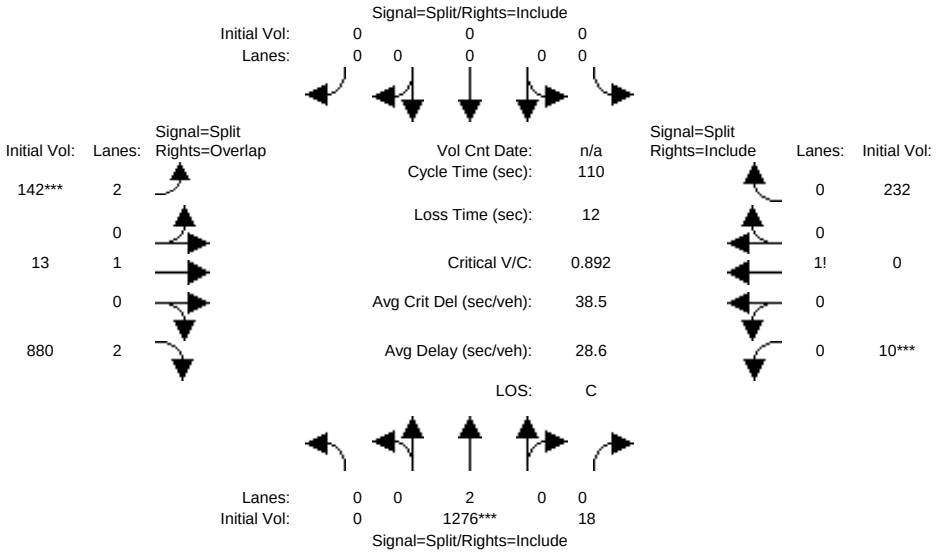
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	4	57	57	4	57	57	24	24	24	24	24	24
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	0	505	29	28	607	0	20	8	3	9	63	33
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	505	29	28	607	0	20	8	3	9	63	33
Added Vol:	0	9	0	0	13	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	514	29	28	620	0	20	8	3	9	63	33
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	541	31	29	653	0	21	8	3	9	66	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	541	31	29	653	0	21	8	3	9	66	35
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	541	31	29	653	0	21	8	3	9	66	35
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.90	0.90	0.90	0.95	1.00	0.67	0.94	0.94	0.77	0.77	0.77
Lanes:	1.00	1.89	0.11	1.00	1.00	0.00	1.00	0.73	0.27	0.17	1.20	0.63
Final Sat.:	1900	3227	182	1718	1809	0	1270	1299	487	251	1757	920
Capacity Analysis Module:												
Vol/Sat:	0.00	0.17	0.17	0.02	0.36	0.00	0.02	0.01	0.01	0.04	0.04	0.04
Crit Moves:		****		****							****	
Green/Cycle:	0.00	0.58	0.58	0.06	0.64	0.00	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.00	0.29	0.29	0.29	0.56	0.00	0.07	0.03	0.03	0.16	0.16	0.16
Delay/Veh:	0.0	10.9	10.9	52.0	12.1	0.0	29.8	29.2	29.2	30.5	30.5	30.5
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	10.9	10.9	52.0	12.1	0.0	29.8	29.2	29.2	30.5	30.5	30.5
LOS by Move:	A	B	B	D	B	A	C	C	C	C	C	C
HCM2kAvgQ:	0	5	5	1	12	0	1	0	0	1	1	1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project AM

Intersection #1004: Bayshore Blvd / Hester Ave



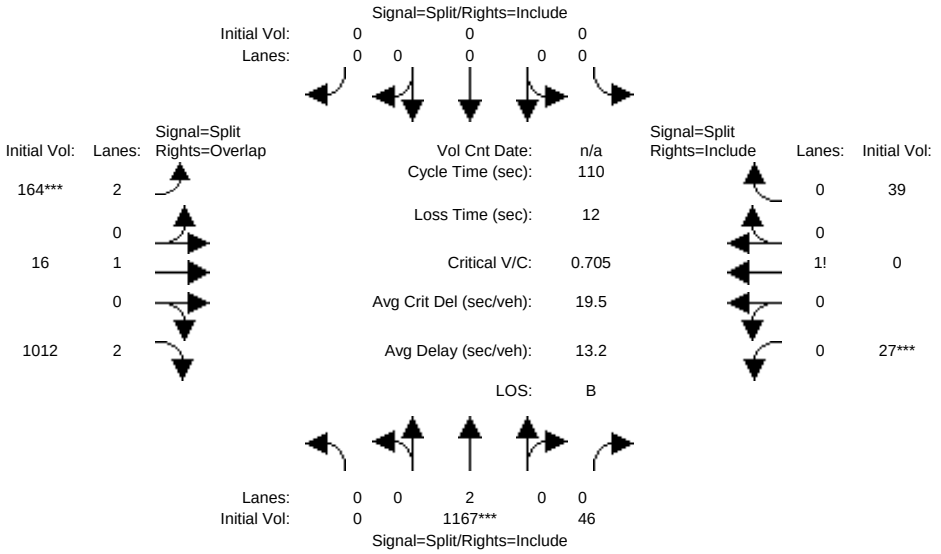
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	0	1276	17	0	0	0	131	13	877	10	0	232
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	1276	17	0	0	0	131	13	877	10	0	232
Added Vol:	0	0	1	0	0	0	11	0	3	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1276	18	0	0	0	142	13	880	10	0	232
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1343	19	0	0	0	149	14	926	11	0	244
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1343	19	0	0	0	149	14	926	11	0	244
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	1343	19	0	0	0	149	14	926	11	0	244
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.88	0.95	0.71	0.72	1.00	0.72
Lanes:	0.00	1.98	0.02	0.00	0.00	0.00	2.00	1.00	2.00	0.04	0.00	0.96
Final Sat.:	0	2377	34	0	0	0	3334	1809	2706	57	0	1319
Capacity Analysis Module:												
Vol/Sat:	0.00	0.56	0.56	0.00	0.00	0.00	0.04	0.01	0.34	0.19	0.00	0.19
Crit Moves:		****					****			****		
Green/Cycle:	0.00	0.63	0.63	0.00	0.00	0.00	0.05	0.05	0.68	0.21	0.00	0.21
Volume/Cap:	0.00	0.89	0.89	0.00	0.00	0.00	0.89	0.15	0.50	0.89	0.00	0.89
Delay/Veh:	0.0	25.4	25.4	0.0	0.0	0.0	97.7	53.5	9.4	74.0	0.0	74.0
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	25.4	25.4	0.0	0.0	0.0	97.7	53.5	9.4	74.0	0.0	74.0
LOS by Move:	A	C	C	A	A	A	F	D	A	E	A	E
HCM2kAvgQ:	0	24	32	0	0	0	5	1	9	12	0	12

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project PM

Intersection #1004: Bayshore Blvd / Hester Ave



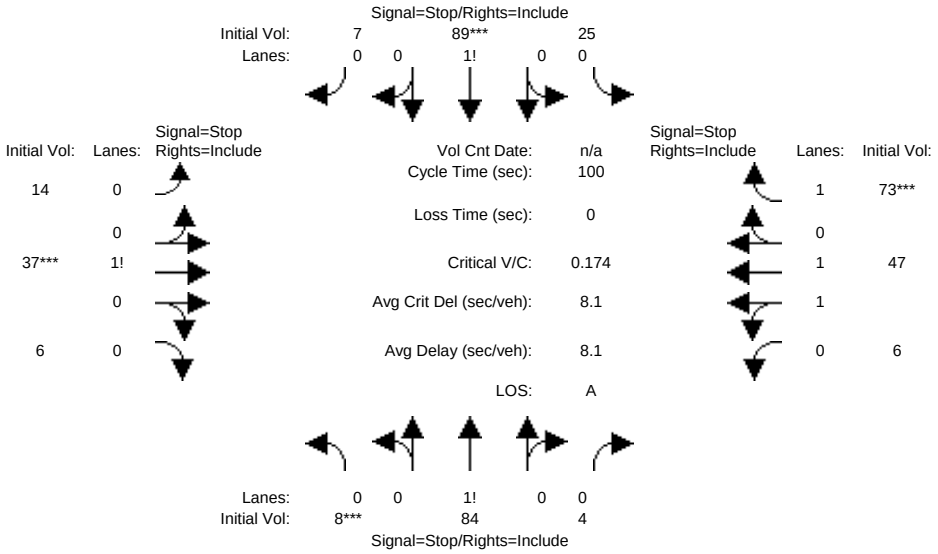
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	0	1167	43	0	0	0	157	16	1010	27	0	39
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	1167	43	0	0	0	157	16	1010	27	0	39
Added Vol:	0	0	3	0	0	0	7	0	2	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1167	46	0	0	0	164	16	1012	27	0	39
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1228	48	0	0	0	173	17	1065	28	0	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1228	48	0	0	0	173	17	1065	28	0	41
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	1228	48	0	0	0	173	17	1065	28	0	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.88	0.95	0.71	0.75	1.00	0.75
Lanes:	0.00	1.95	0.05	0.00	0.00	0.00	2.00	1.00	2.00	0.41	0.00	0.59
Final Sat.:	0	2327	92	0	0	0	3334	1809	2706	584	0	843
Capacity Analysis Module:												
Vol/Sat:	0.00	0.53	0.53	0.00	0.00	0.00	0.05	0.01	0.39	0.05	0.00	0.05
Crit Moves:		****					****			****		
Green/Cycle:	0.00	0.75	0.75	0.00	0.00	0.00	0.07	0.07	0.82	0.07	0.00	0.07
Volume/Cap:	0.00	0.71	0.71	0.00	0.00	0.00	0.71	0.13	0.48	0.71	0.00	0.71
Delay/Veh:	0.0	9.7	9.7	0.0	0.0	0.0	65.5	49.6	3.6	84.8	0.0	84.8
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:	0.0	9.7	9.7	0.0	0.0	0.0	65.5	49.6	3.6	84.8	0.0	84.8
LOS by Move:	A	A	A	A	A	A	E	D	A	F	A	F
HCM2kAvgQ:	0	13	18	0	0	0	4	1	6	4	0	4

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing+Project AM

Intersection #1005: Ingalls St / CarrollAve



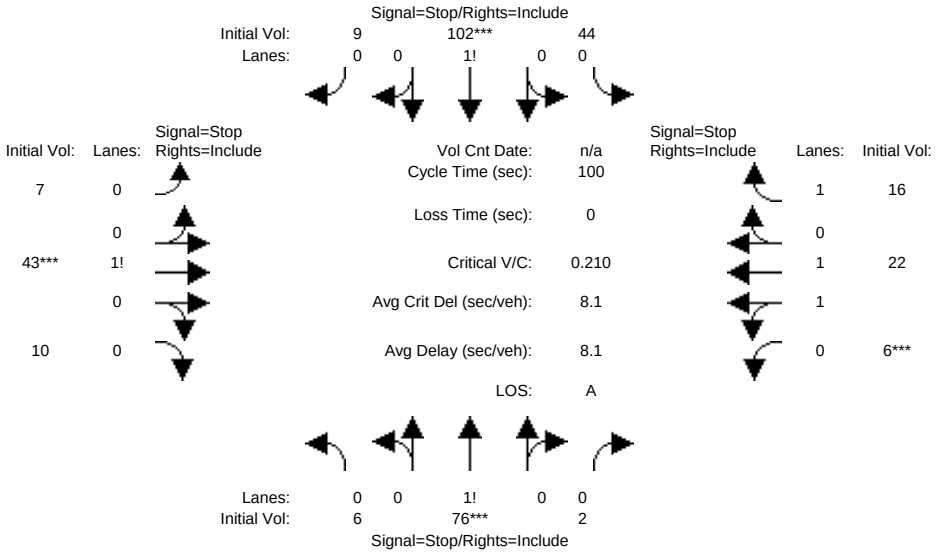
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	8	78	4	25	87	7	14	24	6	6	29	73
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	78	4	25	87	7	14	24	6	6	29	73
Added Vol:	0	6	0	0	2	0	0	13	0	0	18	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	84	4	25	89	7	14	37	6	6	47	73
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	9	93	4	28	99	8	16	41	7	7	52	81
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	93	4	28	99	8	16	41	7	7	52	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:	9	93	4	28	99	8	16	41	7	7	52	81
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.08	0.88	0.04	0.21	0.73	0.06	0.25	0.65	0.10	0.23	1.77	1.00
Final Sat.:	64	672	32	160	568	45	180	475	77	151	1195	783
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.17	0.17	0.17	0.09	0.09	0.09	0.04	0.04	0.10
Crit Moves:	****				****			****				****
Delay/Veh:	8.2	8.2	8.2	8.4	8.4	8.4	8.1	8.1	8.1	8.1	8.1	7.6
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
AdjDel/Veh:	8.2	8.2	8.2	8.4	8.4	8.4	8.1	8.1	8.1	8.1	8.1	7.6
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		8.2			8.4			8.1			7.8	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.2			8.4			8.1			7.8	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing+Project PM

Intersection #1005: Ingalls St / CarrollAve



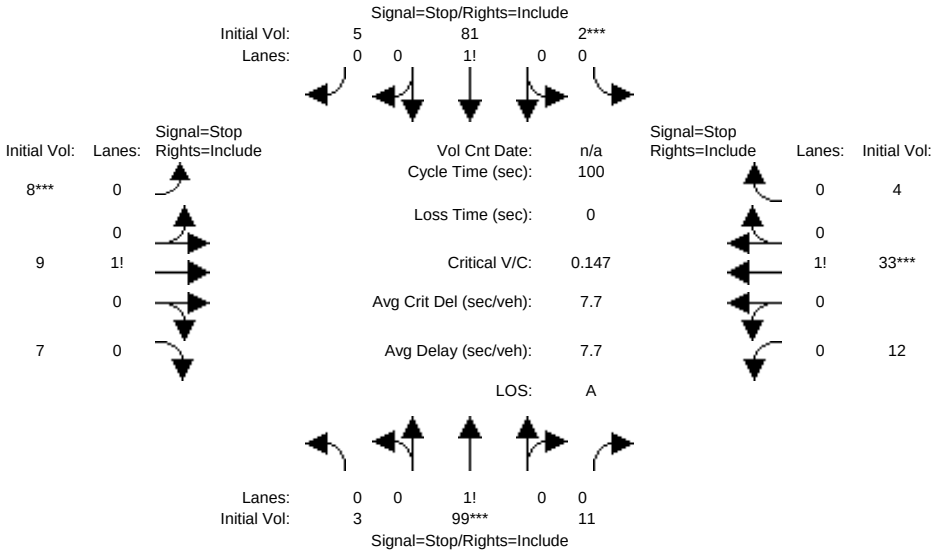
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	6	72	2	44	97	9	7	9	10	6	11	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	72	2	44	97	9	7	9	10	6	11	16
Added Vol:	0	4	0	0	5	0	0	34	0	0	11	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	76	2	44	102	9	7	43	10	6	22	16
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	7	84	2	49	113	10	8	48	11	7	24	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	84	2	49	113	10	8	48	11	7	24	18
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:	7	84	2	49	113	10	8	48	11	7	24	18
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.07	0.91	0.02	0.28	0.66	0.06	0.11	0.72	0.17	0.43	1.57	1.00
Final Sat.:	57	727	19	233	539	48	88	538	125	276	1036	770
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.21	0.21	0.21	0.09	0.09	0.09	0.02	0.02	0.02
Crit Moves:		****			****			****			****	
Delay/Veh:	7.9	7.9	7.9	8.4	8.4	8.4	8.0	8.0	8.0	8.2	8.0	7.2
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
AdjDel/Veh:	7.9	7.9	7.9	8.4	8.4	8.4	8.0	8.0	8.0	8.2	8.0	7.2
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		7.9			8.4			8.0			7.8	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.9			8.4			8.0			7.8	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.1	0.1	0.1	0.3	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing+Project AM

Intersection #1006: Ingalls St / Egbert Ave



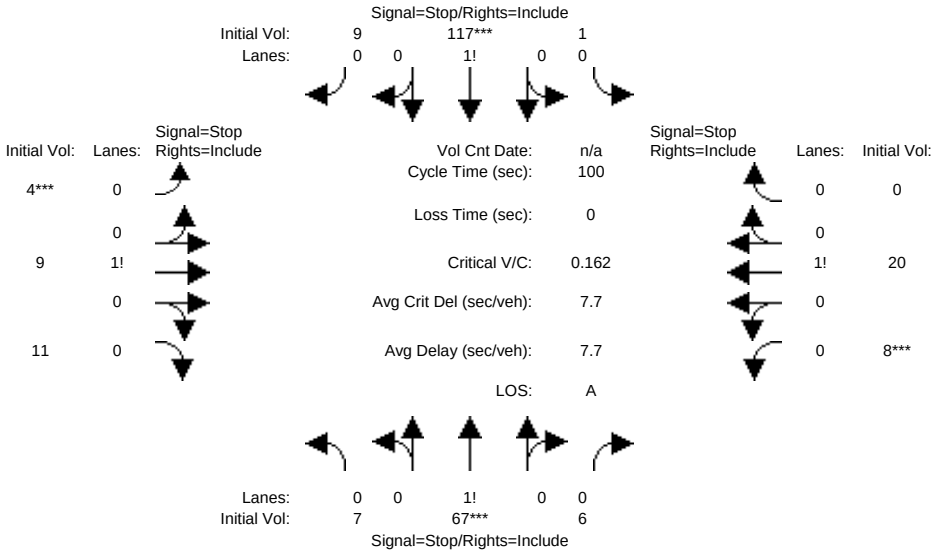
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	3	99	11	2	81	5	8	8	7	12	7	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	99	11	2	81	5	8	8	7	12	7	4
Added Vol:	0	0	0	0	0	0	0	1	0	0	26	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	99	11	2	81	5	8	9	7	12	33	4
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	3	110	12	2	90	6	9	10	8	13	37	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	110	12	2	90	6	9	10	8	13	37	4
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:	3	110	12	2	90	6	9	10	8	13	37	4
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.03	0.87	0.10	0.02	0.92	0.06	0.33	0.38	0.29	0.24	0.68	0.08
Final Sat.:	23	750	83	19	778	48	265	298	231	192	528	64
Capacity Analysis Module:												
Vol/Sat:	0.15	0.15	0.15	0.12	0.12	0.12	0.03	0.03	0.03	0.07	0.07	0.07
Crit Moves:		****			****			****			****	
Delay/Veh:	7.8	7.8	7.8	7.7	7.7	7.7	7.5	7.5	7.5	7.7	7.7	7.7
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
AdjDel/Veh:	7.8	7.8	7.8	7.7	7.7	7.7	7.5	7.5	7.5	7.7	7.7	7.7
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		7.8			7.7			7.5			7.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.8			7.7			7.5			7.7	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing+Project PM

Intersection #1006: Ingalls St / Egbert Ave



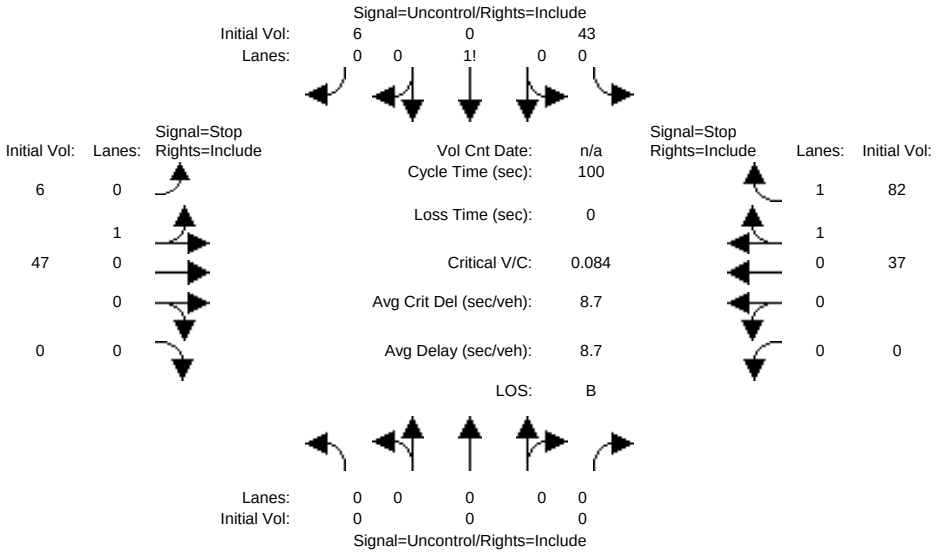
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	7	67	6	1	117	9	4	7	11	8	4	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	67	6	1	117	9	4	7	11	8	4	0
Added Vol:	0	0	0	0	0	0	0	2	0	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	67	6	1	117	9	4	9	11	8	20	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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	8	74	7	1	130	10	4	10	12	9	22	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	74	7	1	130	10	4	10	12	9	22	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:	8	74	7	1	130	10	4	10	12	9	22	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.09	0.84	0.07	0.01	0.92	0.07	0.17	0.37	0.46	0.29	0.71	0.00
Final Sat.:	75	717	64	7	803	62	137	308	377	220	550	0
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.10	0.16	0.16	0.16	0.03	0.03	0.03	0.04	0.04	xxxx
Crit Moves:		****			****			****			****	
Delay/Veh:	7.6	7.6	7.6	7.8	7.8	7.8	7.3	7.3	7.3	7.6	7.6	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
AdjDel/Veh:	7.6	7.6	7.6	7.8	7.8	7.8	7.3	7.3	7.3	7.6	7.6	0.0
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	*
ApproachDel:		7.6			7.8			7.3			7.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.6			7.8			7.3			7.6	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing+Project AM

Intersection #1007: Arelious Walker Dr / Gilman Ave



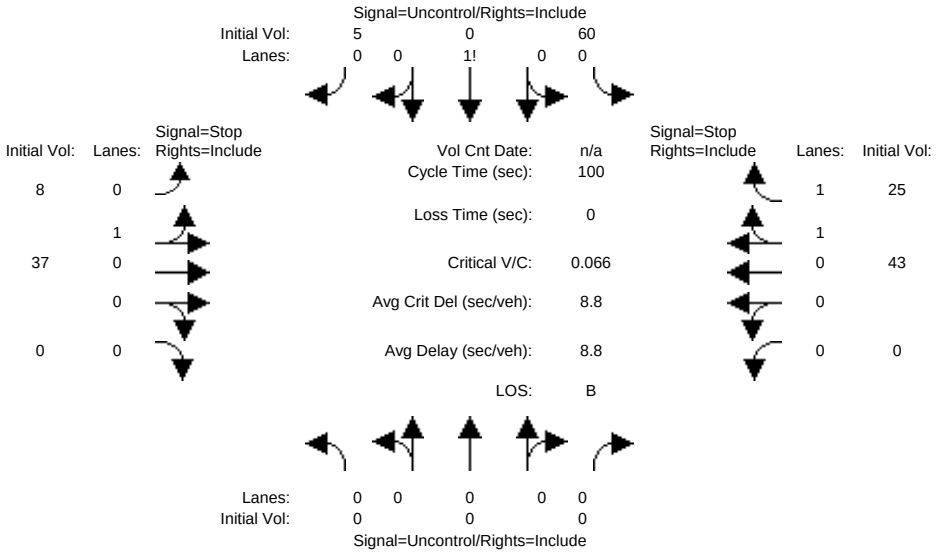
Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	0	0	0	43	0	6	6	30	0	0	31	82
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	43	0	6	6	30	0	0	31	82
Added Vol:	0	0	0	0	0	0	0	17	0	0	6	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	43	0	6	6	47	0	0	37	82
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	48	0	7	7	52	0	0	41	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	48	0	7	7	52	0	0	41	91
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	119	99	xxxxx	xxxx	102	0
Potent Cap.:	xxxx	xxxx	xxxxx	1623	xxxx	xxxxx	856	791	xxxxx	xxxx	788	1085
Move Cap.:	xxxx	xxxx	xxxxx	1623	xxxx	xxxxx	735	767	xxxxx	xxxx	764	1085
Volume/Cap:	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	0.01	0.07	xxxx	xxxx	0.05	0.08
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.1
Control Del:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.5
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	A
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	763	xxxx	xxxxx	xxxx	xxxx	905
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxxx	xxxx	0.3
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.1	xxxx	xxxxx	xxxxx	xxxx	9.4
Shared LOS:	*	*	*	*	*	*	B	*	*	*	*	A
ApproachDel:	xxxxxx			xxxxxx			10.1			9.1		
ApproachLOS:	*			*			B			A		

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing+Project PM

Intersection #1007: Arelious Walker Dr / Gilman Ave

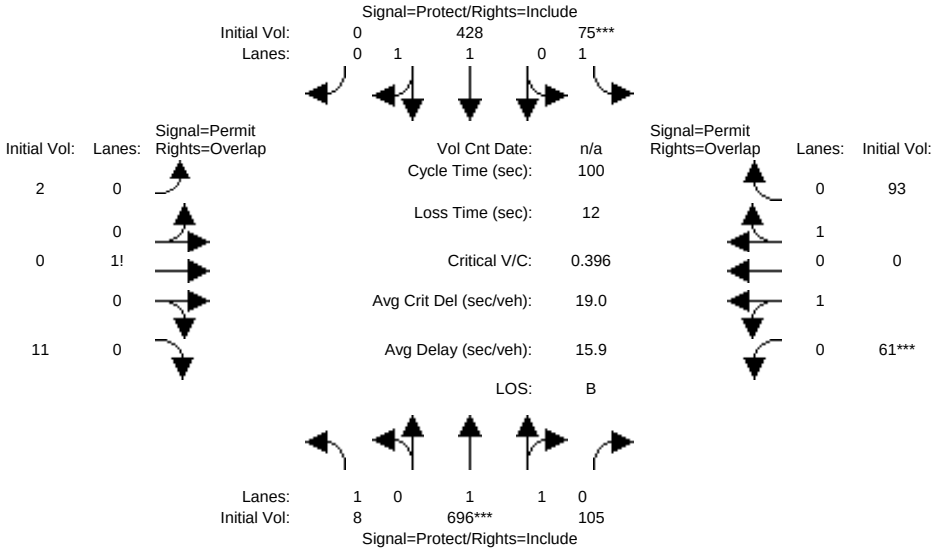


Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	0	0	0	60	0	5	8	27	0	0	29	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	60	0	5	8	27	0	0	29	25
Added Vol:	0	0	0	0	0	0	0	10	0	0	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	60	0	5	8	37	0	0	43	25
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	67	0	6	9	41	0	0	48	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	67	0	6	9	41	0	0	48	28
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	160	136	xxxxx	xxxx	139	0
Potent Cap.:	xxxx	xxxx	xxxxx	1623	xxxx	xxxxx	806	755	xxxxx	xxxx	752	1085
Move Cap.:	xxxx	xxxx	xxxxx	1623	xxxx	xxxxx	721	723	xxxxx	xxxx	720	1085
Volume/Cap:	xxxx	xxxx	xxxx	0.04	xxxx	xxxx	0.01	0.06	xxxx	xxxx	0.07	0.03
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0
Control Del:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.4
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	A
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	722	xxxx	xxxxx	xxxx	xxxx	779
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	0.3
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.4	xxxx	xxxxx	xxxxx	xxxx	10.0
Shared LOS:	*	*	*	*	*	*	B	*	*	*	*	B
ApproachDel:	xxxxxx			xxxxxx			10.4			9.7		
ApproachLOS:	*			*			B			A		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project AM

Intersection #1001: 3rd St / Carroll Ave



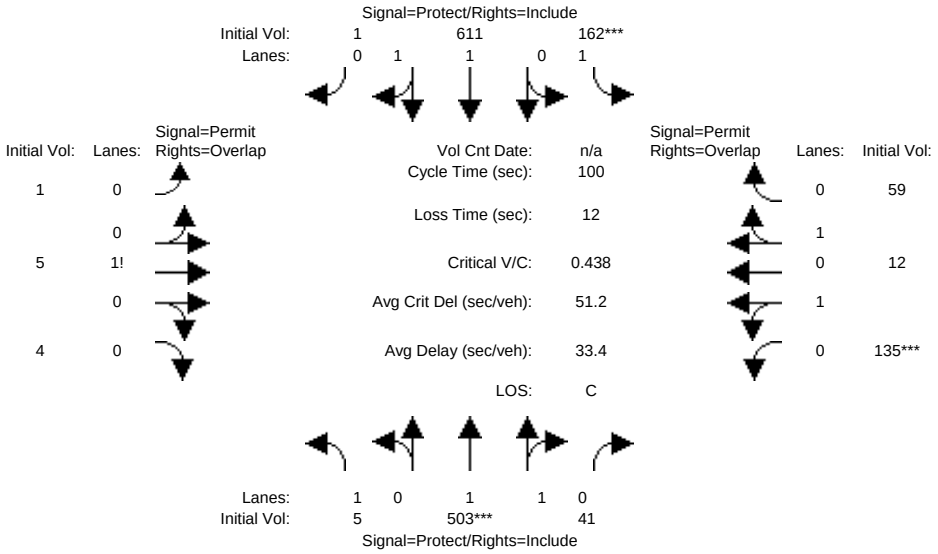
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	1	58	58	5	62	62	22	22	22	22	22	22
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	8	506	100	21	401	0	2	0	11	33	0	39
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:	8	506	100	21	401	0	2	0	11	33	0	39
Added Vol:	0	190	5	54	27	0	0	0	0	28	0	54
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	696	105	75	428	0	2	0	11	61	0	93
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	8	733	111	79	451	0	2	0	12	64	0	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	733	111	79	451	0	2	0	12	64	0	98
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:	8	733	111	79	451	0	2	0	12	64	0	98
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.90	0.95	0.84	1.00	0.84	0.65	0.95	0.65
Lanes:	1.00	1.74	0.26	1.00	2.00	0.00	0.15	0.00	0.85	1.00	0.00	1.00
Final Sat.:	1718	2926	441	1718	3437	0	246	0	1353	1240	0	1240
Capacity Analysis Module:												
Vol/Sat:	0.00	0.25	0.25	0.05	0.13	0.00	0.01	0.00	0.01	0.05	0.00	0.08
Crit Moves:		****		****						****		
Green/Cycle:	0.01	0.58	0.58	0.08	0.65	0.00	0.22	0.00	0.23	0.22	0.00	0.30
Volume/Cap:	0.47	0.43	0.43	0.57	0.20	0.00	0.04	0.00	0.04	0.24	0.00	0.26
Delay/Veh:	117.6	12.5	12.5	60.6	7.3	0.0	30.9	0.0	30.1	32.9	0.0	27.6
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:	117.6	12.5	12.5	60.6	7.3	0.0	30.9	0.0	30.1	32.9	0.0	27.6
LOS by Move:	F	B	B	E	A	A	C	A	C	C	A	C
HCM2kAvgQ:	1	8	8	3	3	0	0	0	0	2	0	3

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project PM

Intersection #1001: 3rd St / Carroll Ave



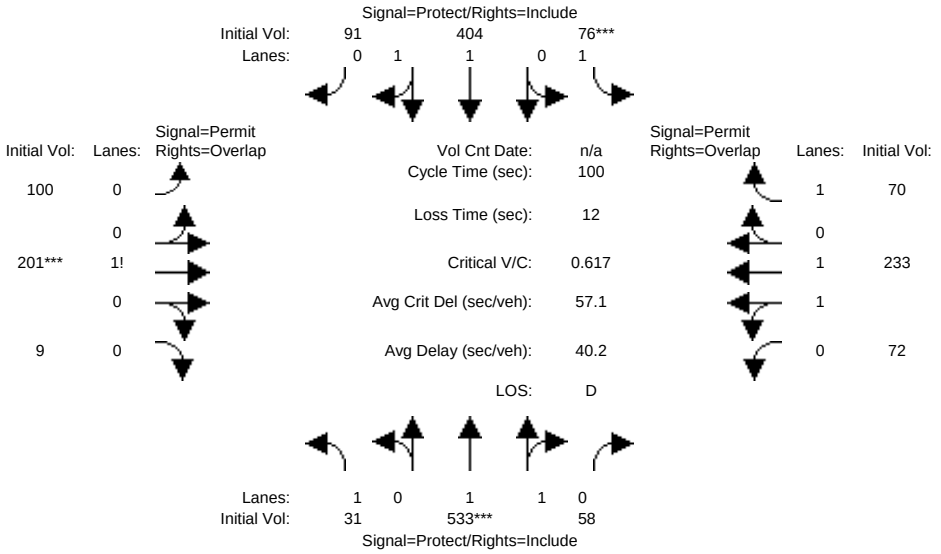
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	1	58	58	5	62	62	22	22	22	22	22	22
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	5	384	28	22	541	1	1	5	4	118	12	25
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:	5	384	28	22	541	1	1	5	4	118	12	25
Added Vol:	0	119	13	140	70	0	0	0	0	17	0	34
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	503	41	162	611	1	1	5	4	135	12	59
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	529	43	171	643	1	1	5	4	142	13	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	529	43	171	643	1	1	5	4	142	13	62
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:	5	529	43	171	643	1	1	5	4	142	13	62
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.90	0.90	0.91	0.91	0.91	0.64	0.64	0.64
Lanes:	1.00	1.85	0.15	1.00	1.99	0.01	0.10	0.50	0.40	1.00	0.17	0.83
Final Sat.:	1718	3143	256	1718	3431	6	172	862	690	1209	204	1005
Capacity Analysis Module:												
Vol/Sat:	0.00	0.17	0.17	0.10	0.19	0.19	0.01	0.01	0.01	0.12	0.06	0.06
Crit Moves:		****		****						****		
Green/Cycle:	0.01	0.58	0.58	0.08	0.65	0.65	0.22	0.22	0.23	0.22	0.22	0.30
Volume/Cap:	0.29	0.29	0.29	1.24	0.29	0.29	0.03	0.03	0.03	0.53	0.28	0.21
Delay/Veh:	86.1	11.0	11.0	201.3	7.9	7.9	30.7	30.7	29.9	39.4	33.3	26.6
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:	86.1	11.0	11.0	201.3	7.9	7.9	30.7	30.7	29.9	39.4	33.3	26.6
LOS by Move:	F	B	B	F	A	A	C	C	C	D	C	C
HCM2kAvgQ:	0	5	5	12	4	4	0	0	0	5	2	2

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project AM

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



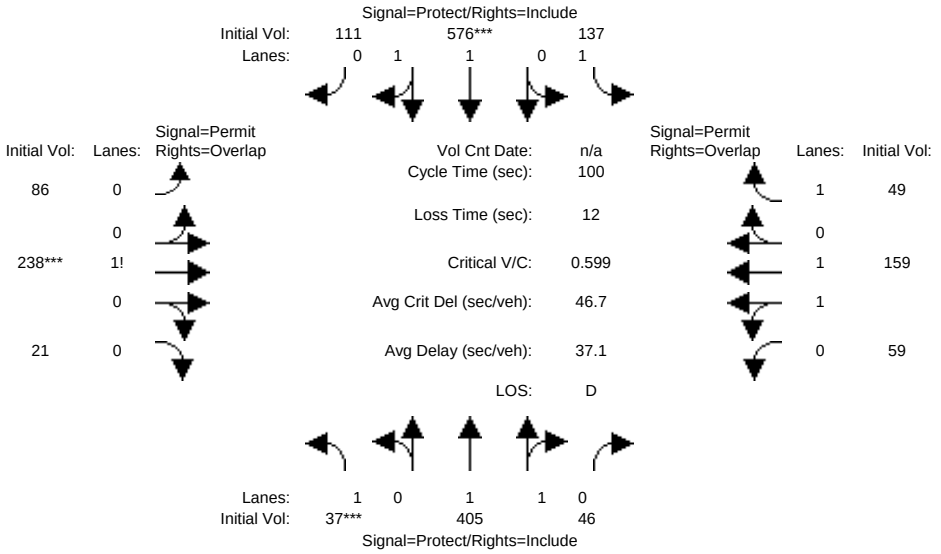
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	31	522	53	49	347	84	98	164	9	35	168	43
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:	31	522	53	49	347	84	98	164	9	35	168	43
Added Vol:	0	11	5	27	57	7	2	37	0	37	65	27
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	31	533	58	76	404	91	100	201	9	72	233	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	33	561	61	80	425	96	105	212	9	76	245	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	561	61	80	425	96	105	212	9	76	245	74
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	561	61	80	425	96	105	212	9	76	245	74
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.88	0.88	0.90	0.88	0.88	0.55	0.55	0.55	0.66	0.66	0.82
Lanes:	1.00	1.80	0.20	1.00	1.63	0.37	0.32	0.65	0.03	0.47	1.53	1.00
Final Sat.:	1718	3022	329	1718	2726	614	339	681	30	593	1919	1551
Capacity Analysis Module:												
Vol/Sat:	0.02	0.19	0.19	0.05	0.16	0.16	0.31	0.31	0.31	0.13	0.13	0.05
Crit Moves:		****		****				****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.16	0.38	0.38	0.39	0.32	0.32	1.15	1.15	0.80	0.47	0.47	0.12
Delay/Veh:	41.1	16.6	16.6	46.0	15.9	15.9	137.0	137	41.8	32.9	32.9	19.9
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:	41.1	16.6	16.6	46.0	15.9	15.9	137.0	137	41.8	32.9	32.9	19.9
LOS by Move:	D	B	B	D	B	B	F	F	D	C	C	B
HCM2kAvgQ:	1	6	6	3	5	5	19	19	11	5	5	1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project PM

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



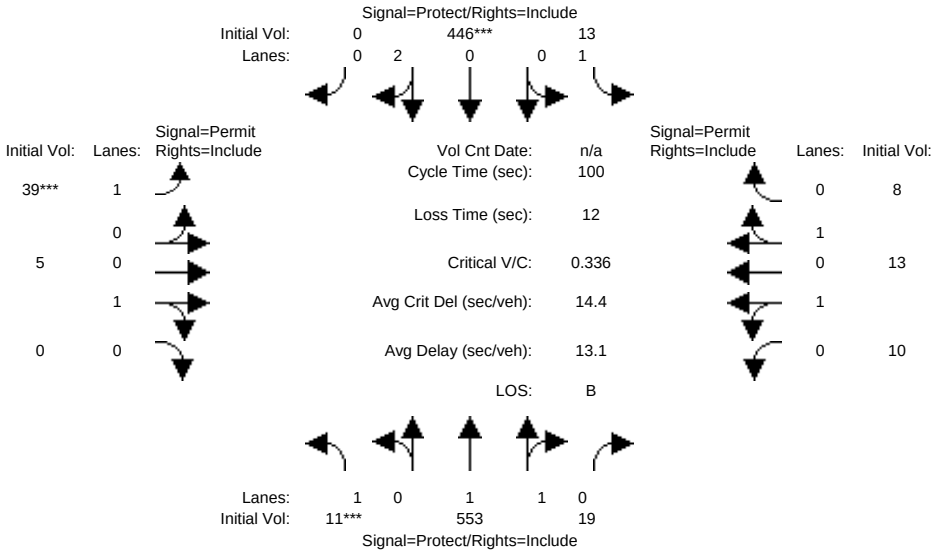
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	37	376	34	67	540	107	80	143	21	36	119	32
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:	37	376	34	67	540	107	80	143	21	36	119	32
Added Vol:	0	29	12	70	36	4	6	95	0	23	40	17
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	405	46	137	576	111	86	238	21	59	159	49
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	39	426	48	144	606	117	91	251	22	62	167	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	426	48	144	606	117	91	251	22	62	167	52
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:	39	426	48	144	606	117	91	251	22	62	167	52
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.88	0.88	0.90	0.88	0.88	0.66	0.66	0.66	0.64	0.64	0.82
Lanes:	1.00	1.80	0.20	1.00	1.68	0.32	0.25	0.69	0.06	0.54	1.46	1.00
Final Sat.:	1718	3009	342	1718	2812	542	313	866	76	657	1770	1551
Capacity Analysis Module:												
Vol/Sat:	0.02	0.14	0.14	0.08	0.22	0.22	0.29	0.29	0.29	0.09	0.09	0.03
Crit Moves:	****				****			****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.19	0.29	0.29	0.70	0.44	0.44	1.07	1.07	0.74	0.35	0.35	0.09
Delay/Veh:	41.6	15.6	15.6	60.2	17.4	17.4	105.5	105	35.9	30.9	30.9	19.5
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:	41.6	15.6	15.6	60.2	17.4	17.4	105.5	105	35.9	30.9	30.9	19.5
LOS by Move:	D	B	B	E	B	B	F	F	D	C	C	B
HCM2kAvgQ:	1	5	5	6	8	8	18	18	11	3	3	1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project AM

Intersection #1003: 3rd St / Jamestown Ave



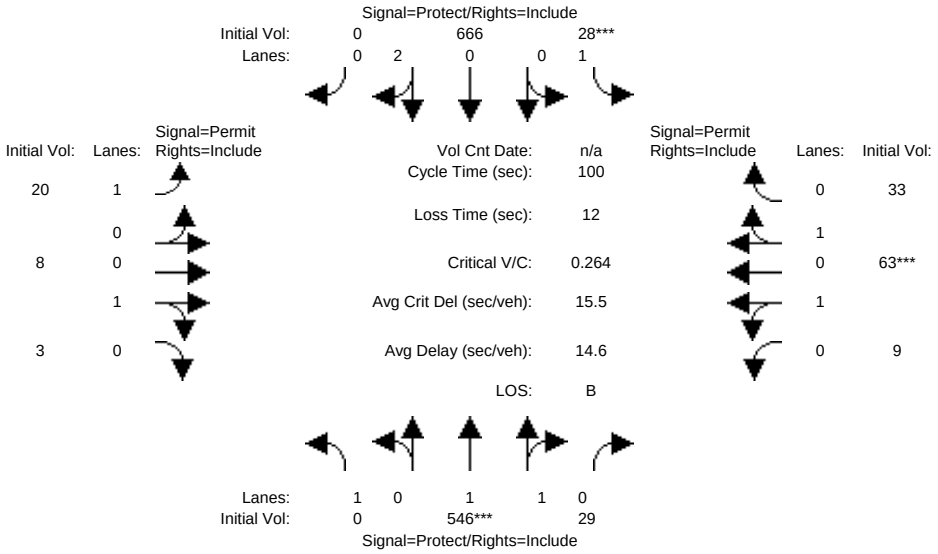
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	4	57	57	4	57	57	24	24	24	24	24	24
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	11	537	19	13	352	0	39	5	0	10	13	8
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:	11	537	19	13	352	0	39	5	0	10	13	8
Added Vol:	0	16	0	0	94	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	553	19	13	446	0	39	5	0	10	13	8
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	12	582	20	14	469	0	41	5	0	11	14	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	582	20	14	469	0	41	5	0	11	14	8
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:	12	582	20	14	469	0	41	5	0	11	14	8
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.95	1.00	0.73	0.98	1.00	0.75	0.75	0.75
Lanes:	1.00	1.93	0.07	1.00	1.00	0.00	1.00	1.00	0.00	0.64	0.84	0.52
Final Sat.:	1718	3306	114	1718	1809	0	1380	1862	0	916	1191	733
Capacity Analysis Module:												
Vol/Sat:	0.01	0.18	0.18	0.01	0.26	0.00	0.03	0.00	0.00	0.01	0.01	0.01
Crit Moves:	****				****		****					
Green/Cycle:	0.04	0.60	0.60	0.04	0.60	0.00	0.24	0.24	0.00	0.24	0.24	0.24
Volume/Cap:	0.17	0.29	0.29	0.19	0.43	0.00	0.12	0.01	0.00	0.05	0.05	0.05
Delay/Veh:	51.6	10.2	10.2	52.0	12.1	0.0	30.5	29.0	0.0	29.3	29.3	29.3
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:	51.6	10.2	10.2	52.0	12.1	0.0	30.5	29.0	0.0	29.3	29.3	29.3
LOS by Move:	D	B	B	D	B	A	C	C	A	C	C	C
HCM2kAvgQ:	1	5	5	0	8	0	1	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project PM

Intersection #1003: 3rd St / Jamestown Ave



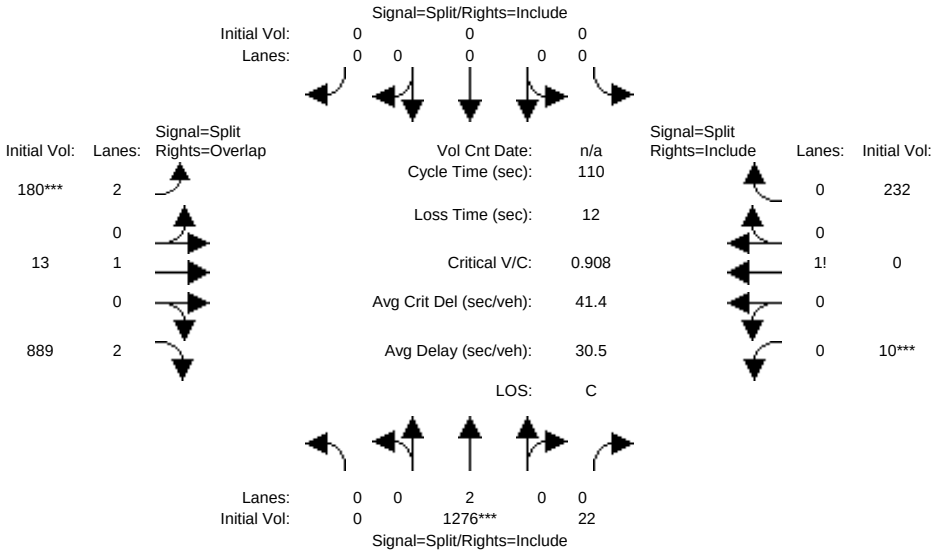
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	4	57	57	4	57	57	24	24	24	24	24	24
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	0	505	29	28	607	0	20	8	3	9	63	33
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	505	29	28	607	0	20	8	3	9	63	33
Added Vol:	0	41	0	0	59	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	546	29	28	666	0	20	8	3	9	63	33
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	575	31	29	701	0	21	8	3	9	66	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	575	31	29	701	0	21	8	3	9	66	35
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	575	31	29	701	0	21	8	3	9	66	35
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.90	0.90	0.90	0.95	1.00	0.67	0.94	0.94	0.77	0.77	0.77
Lanes:	1.00	1.90	0.10	1.00	1.00	0.00	1.00	0.73	0.27	0.17	1.20	0.63
Final Sat.:	1900	3241	172	1718	1809	0	1270	1299	487	251	1757	920
Capacity Analysis Module:												
Vol/Sat:	0.00	0.18	0.18	0.02	0.39	0.00	0.02	0.01	0.01	0.04	0.04	0.04
Crit Moves:		****		****							****	
Green/Cycle:	0.00	0.58	0.58	0.06	0.64	0.00	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.00	0.30	0.30	0.30	0.61	0.00	0.07	0.03	0.03	0.16	0.16	0.16
Delay/Veh:	0.0	10.9	10.9	53.2	12.9	0.0	29.8	29.2	29.2	30.5	30.5	30.5
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	10.9	10.9	53.2	12.9	0.0	29.8	29.2	29.2	30.5	30.5	30.5
LOS by Move:	A	B	B	D	B	A	C	C	C	C	C	C
HCM2kAvgQ:	0	5	5	1	13	0	1	0	0	1	1	1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project AM

Intersection #1004: Bayshore Blvd / Hester Ave



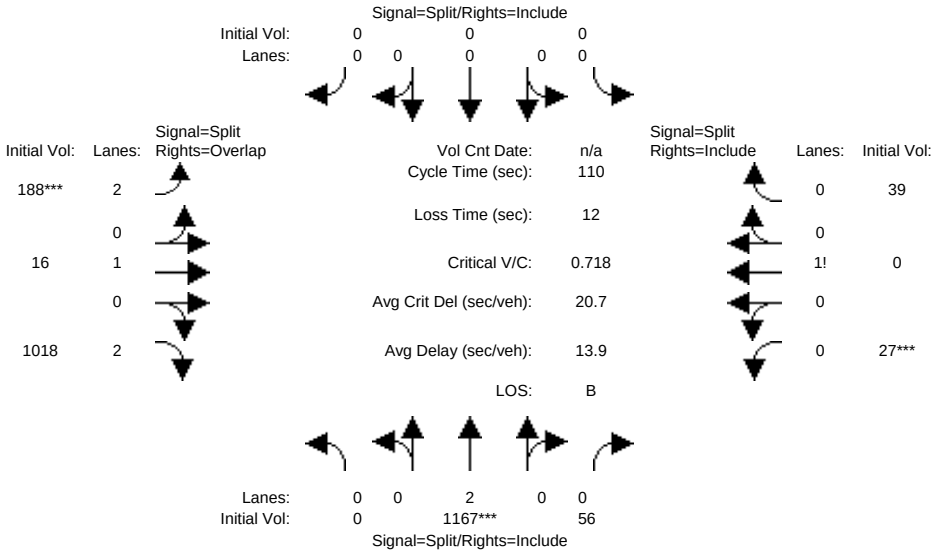
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	0	1276	17	0	0	0	131	13	877	10	0	232
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	1276	17	0	0	0	131	13	877	10	0	232
Added Vol:	0	0	5	0	0	0	49	0	12	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1276	22	0	0	0	180	13	889	10	0	232
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1343	23	0	0	0	189	14	936	11	0	244
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1343	23	0	0	0	189	14	936	11	0	244
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	1343	23	0	0	0	189	14	936	11	0	244
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.88	0.95	0.71	0.72	1.00	0.72
Lanes:	0.00	1.98	0.02	0.00	0.00	0.00	2.00	1.00	2.00	0.04	0.00	0.96
Final Sat.:	0	2370	41	0	0	0	3334	1809	2706	57	0	1319
Capacity Analysis Module:												
Vol/Sat:	0.00	0.57	0.57	0.00	0.00	0.00	0.06	0.01	0.35	0.19	0.00	0.19
Crit Moves:		****					****			****		
Green/Cycle:	0.00	0.62	0.62	0.00	0.00	0.00	0.06	0.06	0.69	0.20	0.00	0.20
Volume/Cap:	0.00	0.91	0.91	0.00	0.00	0.00	0.91	0.12	0.50	0.91	0.00	0.91
Delay/Veh:	0.0	27.5	27.5	0.0	0.0	0.0	93.4	50.9	9.2	77.3	0.0	77.3
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:	0.0	27.5	27.5	0.0	0.0	0.0	93.4	50.9	9.2	77.3	0.0	77.3
LOS by Move:	A	C	C	A	A	A	F	D	A	E	A	E
HCM2kAvgQ:	0	25	34	0	0	0	6	1	9	12	0	12

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing+Project PM

Intersection #1004: Bayshore Blvd / Hester Ave



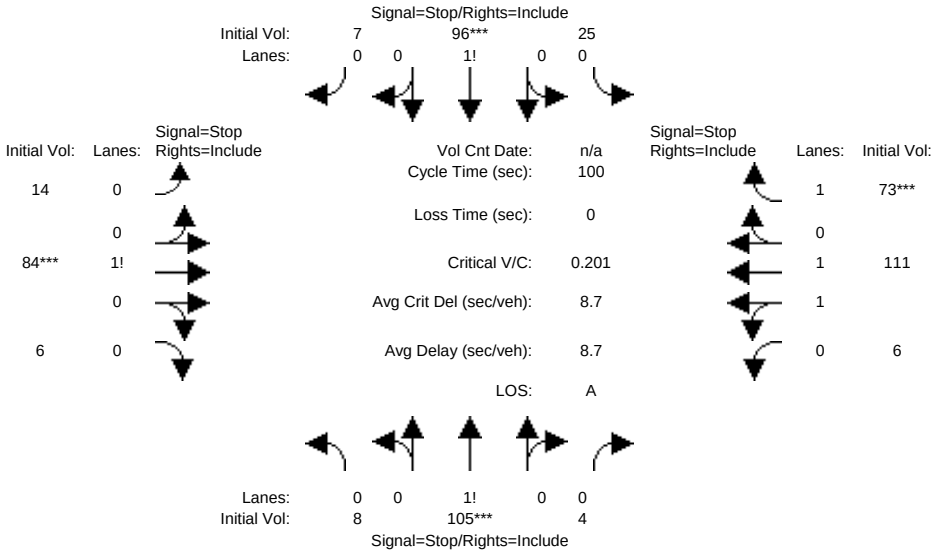
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	0	1167	43	0	0	0	157	16	1010	27	0	39
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	1167	43	0	0	0	157	16	1010	27	0	39
Added Vol:	0	0	13	0	0	0	31	0	8	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1167	56	0	0	0	188	16	1018	27	0	39
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1228	59	0	0	0	198	17	1072	28	0	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1228	59	0	0	0	198	17	1072	28	0	41
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	1228	59	0	0	0	198	17	1072	28	0	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.88	0.95	0.71	0.75	1.00	0.75
Lanes:	0.00	1.94	0.06	0.00	0.00	0.00	2.00	1.00	2.00	0.41	0.00	0.59
Final Sat.:	0	2311	111	0	0	0	3334	1809	2706	584	0	843
Capacity Analysis Module:												
Vol/Sat:	0.00	0.53	0.53	0.00	0.00	0.00	0.06	0.01	0.40	0.05	0.00	0.05
Crit Moves:		****					****			****		
Green/Cycle:	0.00	0.74	0.74	0.00	0.00	0.00	0.08	0.08	0.82	0.07	0.00	0.07
Volume/Cap:	0.00	0.72	0.72	0.00	0.00	0.00	0.72	0.11	0.48	0.72	0.00	0.72
Delay/Veh:	0.0	10.4	10.4	0.0	0.0	0.0	64.1	48.2	3.6	86.9	0.0	86.9
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	10.4	10.4	0.0	0.0	0.0	64.1	48.2	3.6	86.9	0.0	86.9
LOS by Move:	A	B	B	A	A	A	E	D	A	F	A	F
HCM2kAvgQ:	0	14	19	0	0	0	5	1	6	4	0	4

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing+Project AM

Intersection #1005: Ingalls St / CarrollAve



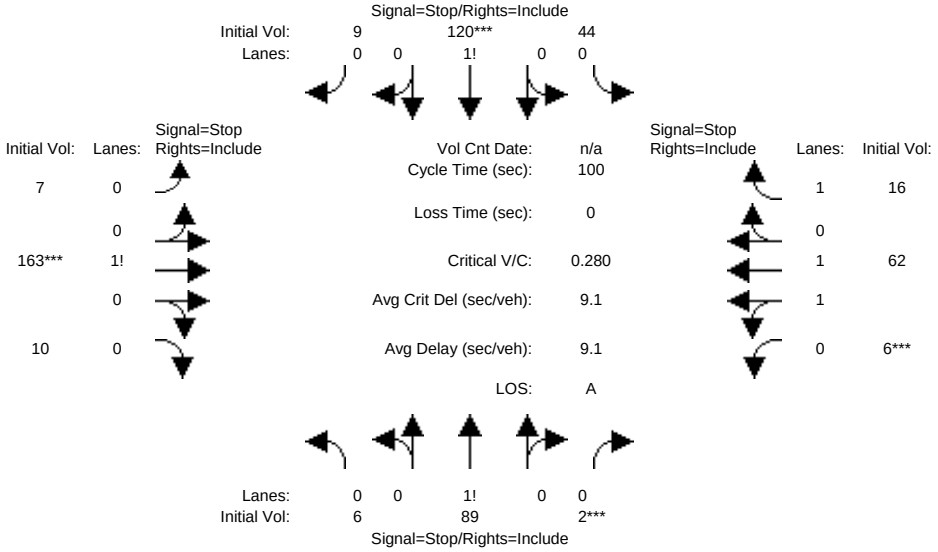
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	8	78	4	25	87	7	14	24	6	6	29	73
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	78	4	25	87	7	14	24	6	6	29	73
Added Vol:	0	27	0	0	9	0	0	60	0	0	82	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	105	4	25	96	7	14	84	6	6	111	73
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	9	117	4	28	107	8	16	93	7	7	123	81
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	117	4	28	107	8	16	93	7	7	123	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:	9	117	4	28	107	8	16	93	7	7	123	81
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.07	0.90	0.03	0.20	0.75	0.05	0.13	0.81	0.06	0.10	1.90	1.00
Final Sat.:	48	634	24	138	531	39	94	564	40	67	1241	753
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.20	0.20	0.20	0.17	0.17	0.17	0.10	0.10	0.11
Crit Moves:		****			****			****				****
Delay/Veh:	8.8	8.8	8.8	9.0	9.0	9.0	8.8	8.8	8.8	8.6	8.5	7.8
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
AdjDel/Veh:	8.8	8.8	8.8	9.0	9.0	9.0	8.8	8.8	8.8	8.6	8.5	7.8
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		8.8			9.0			8.8			8.3	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.8			9.0			8.8			8.3	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing+Project PM

Intersection #1005: Ingalls St / CarrollAve



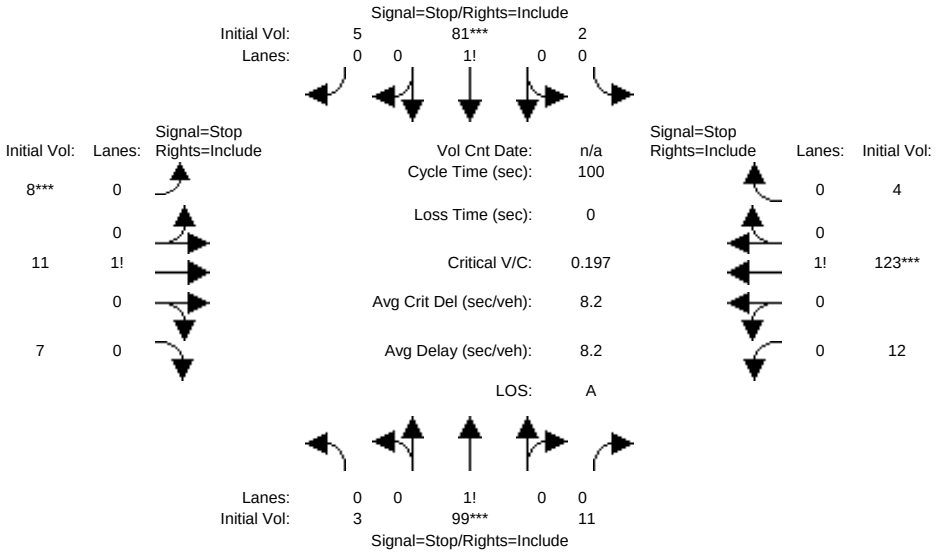
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	6	72	2	44	97	9	7	9	10	6	11	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	72	2	44	97	9	7	9	10	6	11	16
Added Vol:	0	17	0	0	23	0	0	154	0	0	51	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	89	2	44	120	9	7	163	10	6	62	16
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	7	99	2	49	133	10	8	181	11	7	69	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	99	2	49	133	10	8	181	11	7	69	18
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:	7	99	2	49	133	10	8	181	11	7	69	18
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.06	0.92	0.02	0.25	0.70	0.05	0.04	0.90	0.06	0.18	1.82	1.00
Final Sat.:	43	642	14	183	499	37	28	647	40	109	1140	717
Capacity Analysis Module:												
Vol/Sat:	0.15	0.15	0.15	0.27	0.27	0.27	0.28	0.28	0.28	0.06	0.06	0.02
Crit Moves:			****			****			****			****
Delay/Veh:	8.7	8.7	8.7	9.4	9.4	9.4	9.6	9.6	9.6	8.5	8.5	7.5
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
AdjDel/Veh:	8.7	8.7	8.7	9.4	9.4	9.4	9.6	9.6	9.6	8.5	8.5	7.5
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		8.7			9.4			9.6			8.3	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.7			9.4			9.6			8.3	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.0

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing+Project AM

Intersection #1006: Ingalls St / Egbert Ave



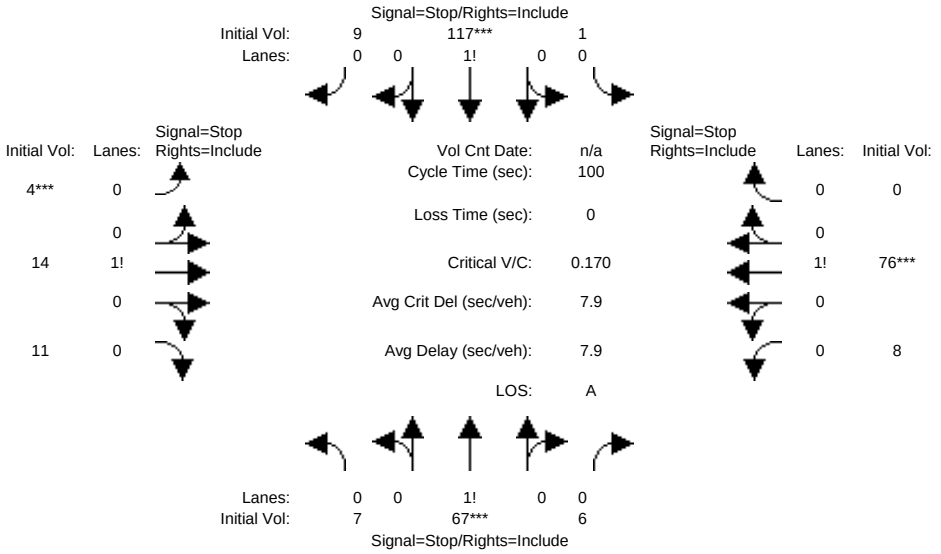
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	3	99	11	2	81	5	8	8	7	12	7	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	99	11	2	81	5	8	8	7	12	7	4
Added Vol:	0	0	0	0	0	0	0	3	0	0	116	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	99	11	2	81	5	8	11	7	12	123	4
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	3	110	12	2	90	6	9	12	8	13	137	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	110	12	2	90	6	9	12	8	13	137	4
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:	3	110	12	2	90	6	9	12	8	13	137	4
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.03	0.87	0.10	0.02	0.92	0.06	0.31	0.42	0.27	0.09	0.88	0.03
Final Sat.:	21	697	77	18	721	45	235	324	206	68	693	23
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.12	0.12	0.12	0.04	0.04	0.04	0.20	0.20	0.20
Crit Moves:		****			****		****				****	
Delay/Veh:	8.1	8.1	8.1	8.0	8.0	8.0	7.6	7.6	7.6	8.5	8.5	8.5
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
AdjDel/Veh:	8.1	8.1	8.1	8.0	8.0	8.0	7.6	7.6	7.6	8.5	8.5	8.5
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		8.1			8.0			7.6			8.5	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.1			8.0			7.6			8.5	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.2

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Existing+Project PM

Intersection #1006: Ingalls St / Egbert Ave



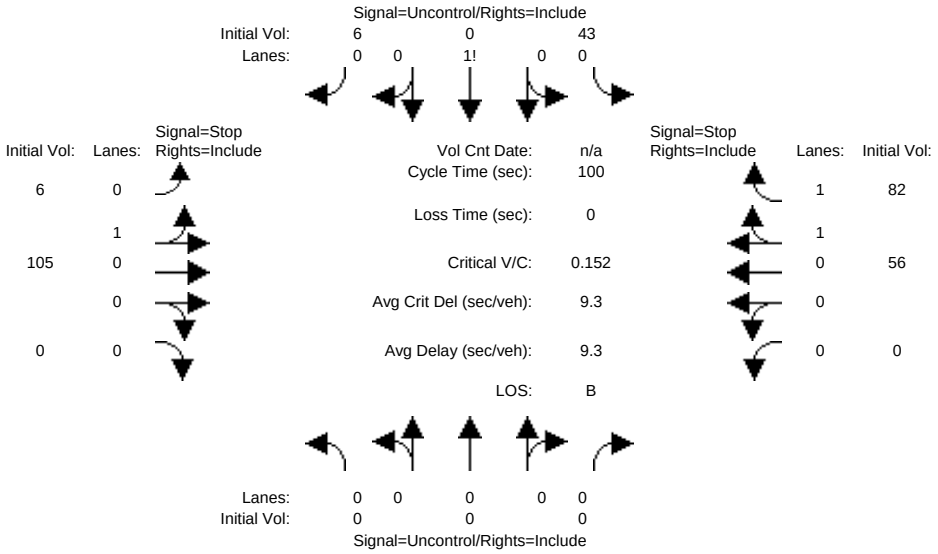
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	7	67	6	1	117	9	4	7	11	8	4	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	67	6	1	117	9	4	7	11	8	4	0
Added Vol:	0	0	0	0	0	0	0	7	0	0	72	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	67	6	1	117	9	4	14	11	8	76	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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	8	74	7	1	130	10	4	16	12	9	84	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	74	7	1	130	10	4	16	12	9	84	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:	8	74	7	1	130	10	4	16	12	9	84	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.09	0.84	0.07	0.01	0.92	0.07	0.14	0.48	0.38	0.10	0.90	0.00
Final Sat.:	71	680	61	7	764	59	110	384	301	74	701	0
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.17	0.17	0.17	0.04	0.04	0.04	0.12	0.12	xxxx
Crit Moves:		****			****			****			****	
Delay/Veh:	7.8	7.8	7.8	8.1	8.1	8.1	7.5	7.5	7.5	8.0	8.0	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
AdjDel/Veh:	7.8	7.8	7.8	8.1	8.1	8.1	7.5	7.5	7.5	8.0	8.0	0.0
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	*
ApproachDel:		7.8			8.1			7.5			8.0	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.8			8.1			7.5			8.0	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing+Project AM

Intersection #1007: Arelious Walker Dr / Gilman Ave



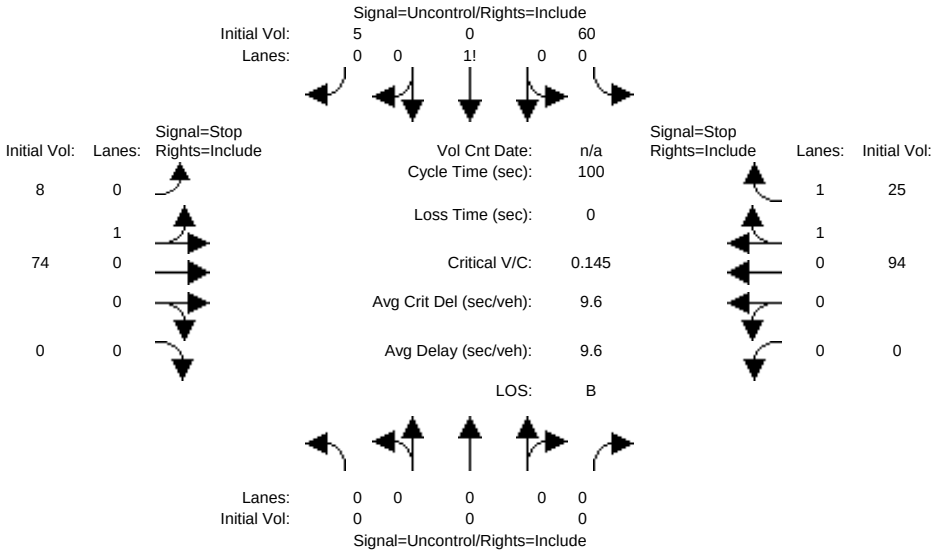
Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	0	0	0	43	0	6	6	30	0	0	31	82
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	43	0	6	6	30	0	0	31	82
Added Vol:	0	0	0	0	0	0	0	75	0	0	25	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	43	0	6	6	105	0	0	56	82
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	48	0	7	7	117	0	0	62	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	48	0	7	7	117	0	0	62	91
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	130	99	xxxxx	xxxx	102	0
Potent Cap.:	xxxx	xxxx	xxxxx	1623	xxxx	xxxxx	843	791	xxxxx	xxxx	788	1085
Move Cap.:	xxxx	xxxx	xxxxx	1623	xxxx	xxxxx	707	767	xxxxx	xxxx	764	1085
Volume/Cap:	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	0.01	0.15	xxxx	xxxx	0.08	0.08
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.1
Control Del:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.5
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	A
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	764	xxxx	xxxxx	xxxx	xxxx	873
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.6	xxxx	xxxxx	xxxxx	xxxx	0.4
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.6	xxxx	xxxxx	xxxxx	xxxx	9.7
Shared LOS:	*	*	*	*	*	*	B	*	*	*	*	A
ApproachDel:	xxxxxx			xxxxxx			10.6			9.3		
ApproachLOS:	*			*			B			A		

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing+Project PM

Intersection #1007: Arelious Walker Dr / Gilman Ave



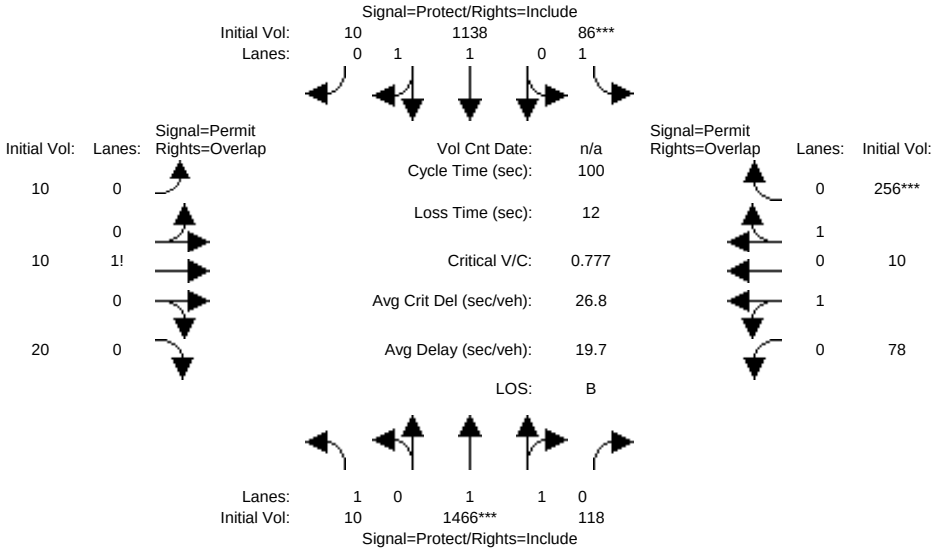
Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	0	0	0	60	0	5	8	27	0	0	29	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	60	0	5	8	27	0	0	29	25
Added Vol:	0	0	0	0	0	0	0	47	0	0	65	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	60	0	5	8	74	0	0	94	25
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	67	0	6	9	82	0	0	104	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	67	0	6	9	82	0	0	104	28
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	188	136	xxxxx	xxxx	139	0
Potent Cap.:	xxxx	xxxx	xxxxx	1623	xxxx	xxxxx	772	755	xxxxx	xxxx	752	1085
Move Cap.:	xxxx	xxxx	xxxxx	1623	xxxx	xxxxx	647	723	xxxxx	xxxx	720	1085
Volume/Cap:	xxxx	xxxx	xxxx	0.04	xxxx	xxxx	0.01	0.11	xxxx	xxxx	0.15	0.03
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0
Control Del:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.4
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	A
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	714	xxxx	xxxxx	xxxx	xxxx	750
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxxx	xxxx	0.6
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.8	xxxx	xxxxx	xxxxx	xxxx	10.7
Shared LOS:	*	*	*	*	*	*	B	*	*	*	*	B
ApproachDel:	xxxxxx			xxxxxx			10.8			10.5		
ApproachLOS:	*			*			B			B		

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1001: 3rd St / Carroll Ave



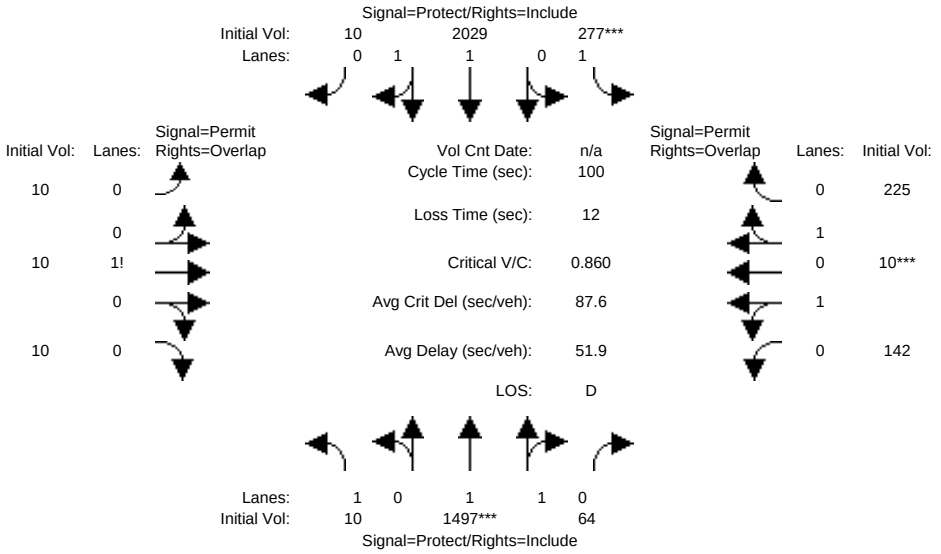
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	1	65	65	5	69	69	15	15	15	15	15	15
Volume Module:												
Base Vol:	10	1550	120	110	1150	10	10	10	20	90	10	280
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	1550	120	110	1150	10	10	10	20	90	10	280
Added Vol:	0	-84	-2	-24	-12	0	0	0	0	-12	0	-24
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	1466	118	86	1138	10	10	10	20	78	10	256
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:	10	1496	120	88	1161	10	10	10	20	80	10	261
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	1496	120	88	1161	10	10	10	20	80	10	261
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:	10	1496	120	88	1161	10	10	10	20	80	10	261
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.90	0.90	0.82	0.82	0.82	0.66	0.66	0.66
Lanes:	1.00	1.85	0.15	1.00	1.98	0.02	0.25	0.25	0.50	0.89	0.11	1.00
Final Sat.:	1718	3146	253	1718	3403	30	389	389	777	1114	143	1257
Capacity Analysis Module:												
Vol/Sat:	0.01	0.48	0.48	0.05	0.34	0.34	0.03	0.03	0.03	0.07	0.07	0.21
Crit Moves:		****			****							****
Green/Cycle:	0.01	0.65	0.65	0.06	0.70	0.70	0.17	0.17	0.18	0.17	0.17	0.23
Volume/Cap:	0.59	0.73	0.73	0.90	0.49	0.49	0.15	0.15	0.14	0.41	0.41	0.90
Delay/Veh:	146.6	13.9	13.9	114.7	7.7	7.7	36.3	36.3	35.3	38.3	38.3	64.3
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:	146.6	13.9	13.9	114.7	7.7	7.7	36.3	36.3	35.3	38.3	38.3	64.3
LOS by Move:	F	B	B	F	A	A	D	D	D	D	D	E
HCM2kAvgQ:	1	18	18	5	9	9	1	1	1	3	3	12

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1001: 3rd St / Carroll Ave



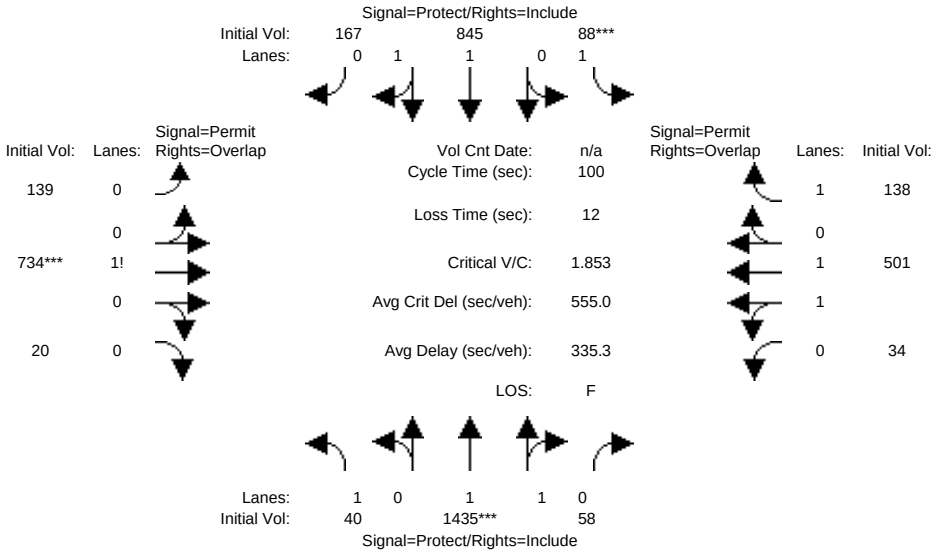
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	1	65	65	5	69	69	15	15	15	15	15	15
Volume Module:												
Base Vol:	10	1550	70	340	2060	10	10	10	10	150	10	240
Growth Adj:	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:	10	1550	70	340	2060	10	10	10	10	150	10	240
Added Vol:	0	-53	-6	-63	-31	0	0	0	0	-8	0	-15
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	1497	64	277	2029	10	10	10	10	142	10	225
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:	10	1528	65	283	2070	10	10	10	10	145	10	230
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	1528	65	283	2070	10	10	10	10	145	10	230
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:	10	1528	65	283	2070	10	10	10	10	145	10	230
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.90	0.90	0.75	0.75	0.75	0.65	0.65	0.65
Lanes:	1.00	1.92	0.08	1.00	1.99	0.01	0.34	0.33	0.33	0.93	0.07	1.00
Final Sat.:	1718	3276	140	1718	3416	17	475	475	475	1152	81	1233
Capacity Analysis Module:												
Vol/Sat:	0.01	0.47	0.47	0.16	0.61	0.61	0.02	0.02	0.02	0.13	0.13	0.19
Crit Moves:		****		****							****	
Green/Cycle:	0.01	0.65	0.65	0.08	0.72	0.72	0.15	0.15	0.16	0.15	0.15	0.23
Volume/Cap:	0.57	0.72	0.72	2.06	0.84	0.84	0.14	0.14	0.13	0.84	0.84	0.81
Delay/Veh:	139.8	13.5	13.5	545.5	13.7	13.7	38.3	38.3	37.2	57.9	57.9	50.3
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:	139.8	13.5	13.5	545.5	13.7	13.7	38.3	38.3	37.2	57.9	57.9	50.3
LOS by Move:	F	B	B	F	B	B	D	D	D	E	E	D
HCM2kAvgQ:	1	18	18	28	26	26	1	1	1	7	7	9

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



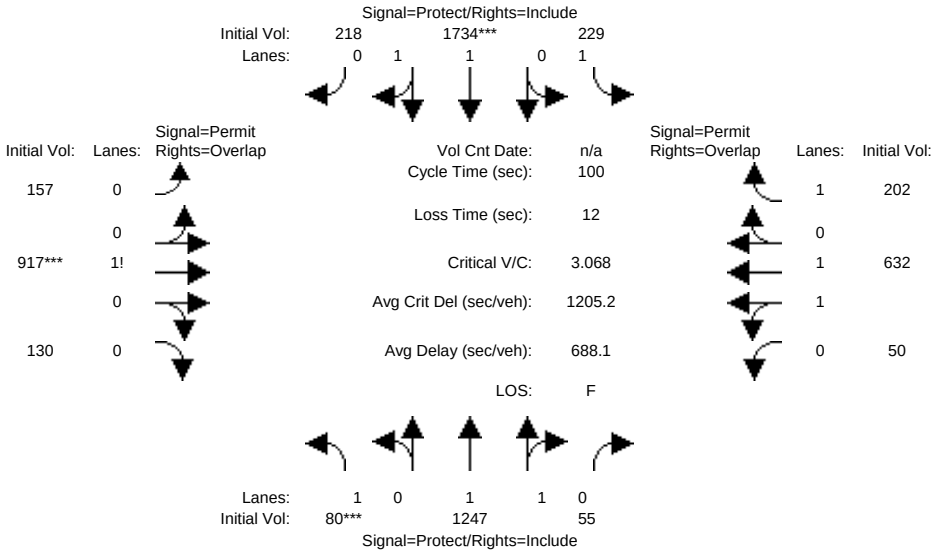
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Volume Module:												
Base Vol:	40	1440	60	100	870	170	140	750	20	50	530	150
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	40	1440	60	100	870	170	140	750	20	50	530	150
Added Vol:	0	-5	-2	-12	-25	-3	-1	-16	0	-16	-29	-12
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	40	1435	58	88	845	167	139	734	20	34	501	138
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:	41	1464	59	90	862	170	142	749	20	35	511	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	1464	59	90	862	170	142	749	20	35	511	141
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:	41	1464	59	90	862	170	142	749	20	35	511	141
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.88	0.88	0.43	0.43	0.43	0.72	0.72	0.82
Lanes:	1.00	1.92	0.08	1.00	1.67	0.33	0.16	0.82	0.02	0.13	1.87	1.00
Final Sat.:	1718	3251	131	1718	2798	553	126	664	18	174	2571	1551
Capacity Analysis Module:												
Vol/Sat:	0.02	0.45	0.45	0.05	0.31	0.31	1.13	1.13	1.13	0.20	0.20	0.09
Crit Moves:		****		****				****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.20	0.92	0.92	0.44	0.63	0.63	4.18	4.18	2.89	0.74	0.74	0.23
Delay/Veh:	41.8	33.4	33.4	47.4	20.6	20.6	1477	1477	890.5	39.7	39.7	21.4
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:	41.8	33.4	33.4	47.4	20.6	20.6	1477	1477	890.5	39.7	39.7	21.4
LOS by Move:	D	C	C	D	C	C	F	F	F	D	D	C
HCM2kAvgQ:	1	27	27	3	13	13	113	113	101	10	10	3

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



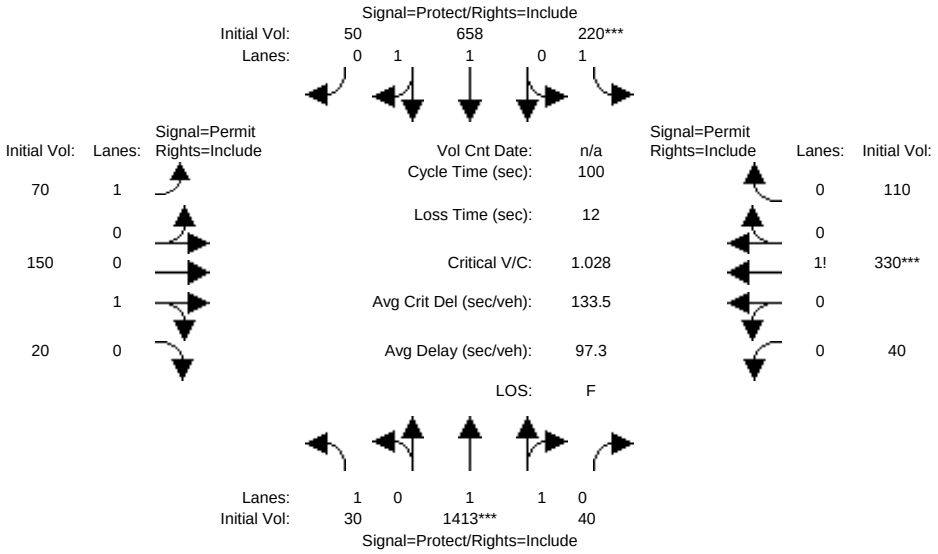
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Volume Module:												
Base Vol:	80	1260	60	260	1750	220	160	960	130	60	650	210
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	80	1260	60	260	1750	220	160	960	130	60	650	210
Added Vol:	0	-13	-5	-31	-16	-2	-3	-43	0	-10	-18	-8
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	80	1247	55	229	1734	218	157	917	130	50	632	202
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:	82	1272	56	234	1769	222	160	936	133	51	645	206
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	1272	56	234	1769	222	160	936	133	51	645	206
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:	82	1272	56	234	1769	222	160	936	133	51	645	206
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.89	0.89	0.31	0.31	0.31	0.65	0.65	0.82
Lanes:	1.00	1.92	0.08	1.00	1.78	0.22	0.13	0.76	0.11	0.15	1.85	1.00
Final Sat.:	1718	3239	143	1718	3001	377	78	454	64	182	2301	1551
Capacity Analysis Module:												
Vol/Sat:	0.05	0.39	0.39	0.14	0.59	0.59	2.06	2.06	2.06	0.28	0.28	0.13
Crit Moves:	****				****			****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.40	0.80	0.80	1.13	1.20	1.20	7.64	7.64	5.29	1.04	1.04	0.34
Delay/Veh:	46.3	25.6	25.6	147.1	123	123.0	3037	3037	1970	81.4	81.4	23.0
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:	46.3	25.6	25.6	147.1	123	123.0	3037	3037	1970	81.4	81.4	23.0
LOS by Move:	D	C	C	F	F	F	F	F	F	F	F	C
HCM2kAvgQ:	3	20	20	14	56	56	169	169	160	18	18	5

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1003: 3rd St / Jamestown Ave



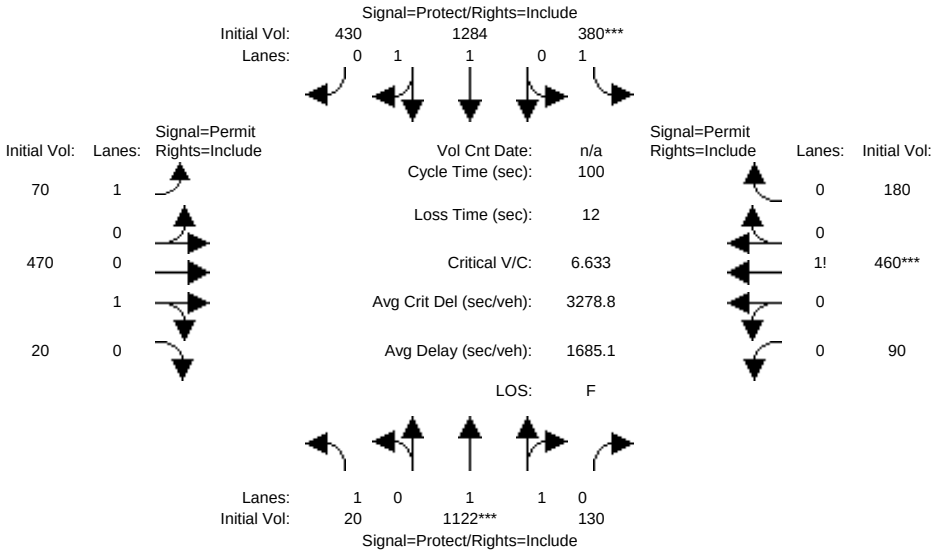
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	60	60	4	60	60	21	21	21	21	21	21
Volume Module:												
Base Vol:	30	1420	40	220	700	50	70	150	20	40	330	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	30	1420	40	220	700	50	70	150	20	40	330	110
Added Vol:	0	-7	0	0	-42	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	30	1413	40	220	658	50	70	150	20	40	330	110
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:	31	1442	41	224	671	51	71	153	20	41	337	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	1442	41	224	671	51	71	153	20	41	337	112
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:	31	1442	41	224	671	51	71	153	20	41	337	112
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.89	0.89	0.98	0.96	0.96	0.76	0.76	0.76
Lanes:	1.00	1.94	0.06	1.00	1.86	0.14	1.00	0.88	0.12	0.08	0.69	0.23
Final Sat.:	1718	3329	94	1718	3159	240	1862	1613	215	120	987	329
Capacity Analysis Module:												
Vol/Sat:	0.02	0.43	0.43	0.13	0.21	0.21	0.04	0.09	0.09	0.34	0.34	0.34
Crit Moves:		****		****							****	
Green/Cycle:	0.04	0.60	0.60	0.07	0.63	0.63	0.21	0.21	0.21	0.21	0.21	0.21
Volume/Cap:	0.43	0.72	0.72	1.87	0.34	0.34	0.18	0.45	0.45	1.62	1.62	1.62
Delay/Veh:	64.1	16.3	16.3	466.3	9.2	9.2	33.5	38.3	38.3	335.4	335	335.4
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:	64.1	16.3	16.3	466.3	9.2	9.2	33.5	38.3	38.3	335.4	335	335.4
LOS by Move:	E	B	B	F	A	A	C	D	D	F	F	F
HCM2kAvgQ:	1	18	18	21	5	5	2	5	5	40	40	40

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1003: 3rd St / Jamestown Ave



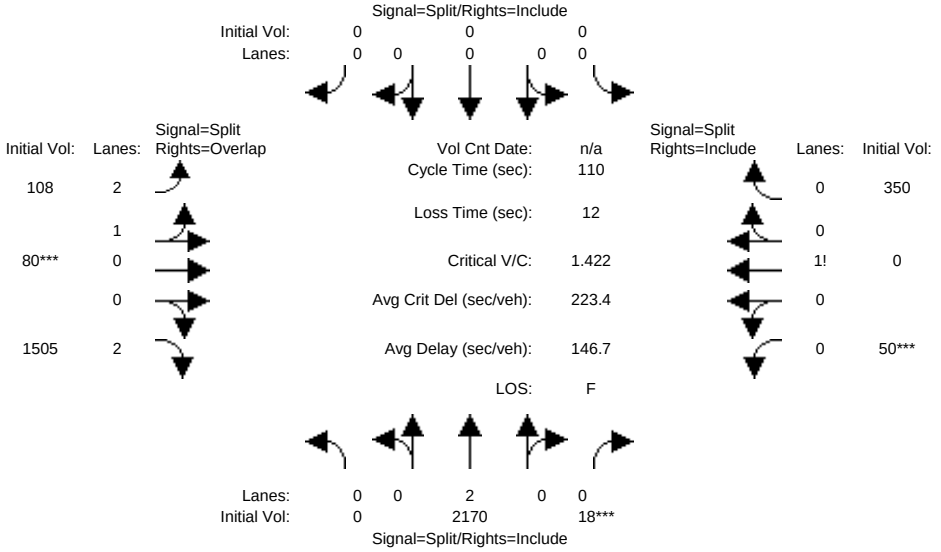
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	4	60	60	4	60	60	21	21	21	21	21	21
Volume Module:												
Base Vol:	20	1140	130	380	1310	430	70	470	20	90	460	180
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	1140	130	380	1310	430	70	470	20	90	460	180
Added Vol:	0	-18	0	0	-26	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	1122	130	380	1284	430	70	470	20	90	460	180
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:	20	1145	133	388	1310	439	71	480	20	92	469	184
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	1145	133	388	1310	439	71	480	20	92	469	184
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:	20	1145	133	388	1310	439	71	480	20	92	469	184
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.87	0.87	0.98	0.97	0.97	0.07	0.07	0.07
Lanes:	1.00	1.79	0.21	1.00	1.50	0.50	1.00	0.96	0.04	0.12	0.63	0.25
Final Sat.:	1718	3031	351	1718	2477	829	1862	1775	76	18	90	35
Capacity Analysis Module:												
Vol/Sat:	0.01	0.38	0.38	0.23	0.53	0.53	0.04	0.27	0.27	5.23	5.23	5.23
Crit Moves:		****		****							****	
Green/Cycle:	0.04	0.60	0.60	0.04	0.60	0.60	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.30	0.63	0.63	5.64	0.88	0.88	0.16	1.13	1.13	21.81	21.81	21.81
Delay/Veh:	57.3	14.4	14.4	2168	23.1	23.1	30.8	120	119.7	9456	9456	9456
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:	57.3	14.4	14.4	2168	23.1	23.1	30.8	120	119.7	9456	9456	9456
LOS by Move:	E	B	B	F	C	C	C	F	F	F	F	F
HCM2kAvgQ:	1	14	14	52	27	27	2	26	26	111	111	111

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1004: Bayshore Blvd / Hester Ave



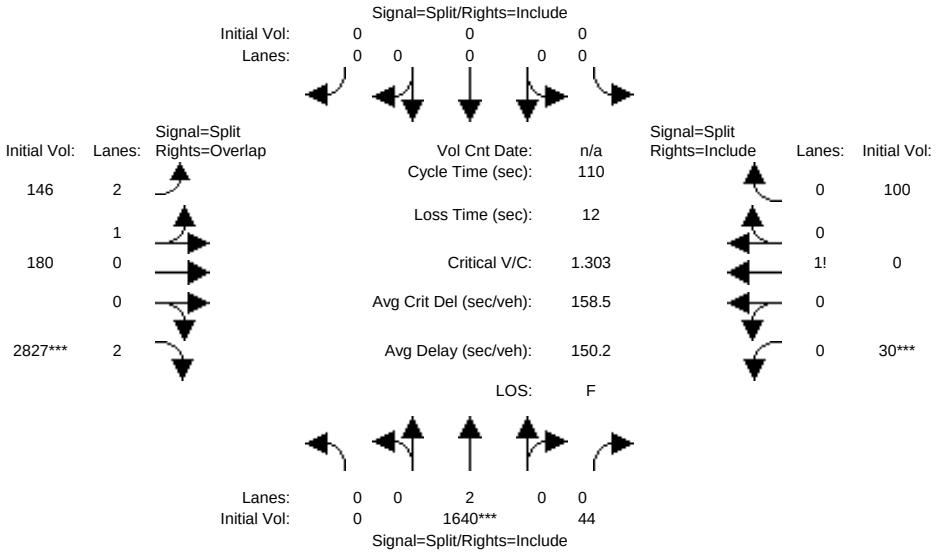
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	2170	20	0	0	0	130	80	1510	50	0	350
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	2170	20	0	0	0	130	80	1510	50	0	350
Added Vol:	0	0	-2	0	0	0	-22	0	-5	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	2170	18	0	0	0	108	80	1505	50	0	350
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	2214	18	0	0	0	110	82	1536	51	0	357
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2214	18	0	0	0	110	82	1536	51	0	357
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	2214	18	0	0	0	110	82	1536	51	0	357
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.90	0.93	0.71	0.73	1.00	0.73
Lanes:	0.00	1.99	0.01	0.00	0.00	0.00	2.00	1.00	2.00	0.13	0.00	0.87
Final Sat.:	0	2389	20	0	0	0	3411	1758	2706	173	0	1214
Capacity Analysis Module:												
Vol/Sat:	0.00	0.93	0.93	0.00	0.00	0.00	0.03	0.05	0.57	0.29	0.00	0.29
Crit Moves:			****					****		****		
Green/Cycle:	0.00	0.65	0.65	0.00	0.00	0.00	0.03	0.03	0.68	0.21	0.00	0.21
Volume/Cap:	0.00	1.42	1.42	0.00	0.00	0.00	0.99	1.42	0.83	1.42	0.00	1.42
Delay/Veh:	0.0	213	213.1	0.0	0.0	0.0	115.3	281	17.2	252.9	0.0	252.9
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	213	213.1	0.0	0.0	0.0	115.3	281	17.2	252.9	0.0	252.9
LOS by Move:	A	F	F	A	A	A	F	F	B	F	A	F
HCM2kAvgQ:	0	82	117	0	0	0	4	8	24	30	0	30

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1004: Bayshore Blvd / Hester Ave



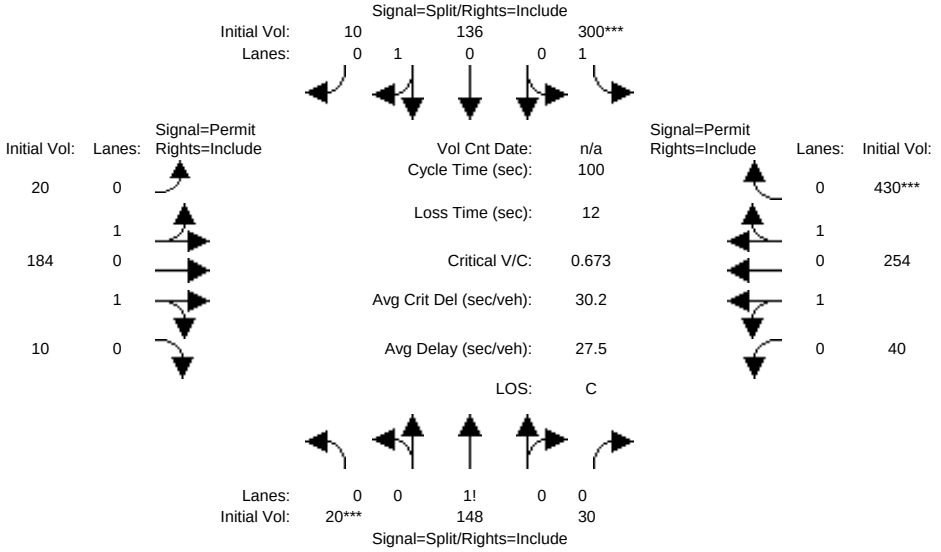
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	1640	50	0	0	0	160	180	2830	30	0	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1640	50	0	0	0	160	180	2830	30	0	100
Added Vol:	0	0	-6	0	0	0	-14	0	-3	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1640	44	0	0	0	146	180	2827	30	0	100
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	1673	45	0	0	0	149	184	2885	31	0	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1673	45	0	0	0	149	184	2885	31	0	102
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	1673	45	0	0	0	149	184	2885	31	0	102
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.90	0.93	0.71	0.74	1.00	0.74
Lanes:	0.00	1.96	0.04	0.00	0.00	0.00	2.00	1.00	2.00	0.23	0.00	0.77
Final Sat.:	0	2352	63	0	0	0	3432	1769	2706	324	0	1079
Capacity Analysis Module:												
Vol/Sat:	0.00	0.71	0.71	0.00	0.00	0.00	0.04	0.10	1.07	0.09	0.00	0.09
Crit Moves:		****							****	****		
Green/Cycle:	0.00	0.55	0.55	0.00	0.00	0.00	0.27	0.27	0.82	0.07	0.00	0.07
Volume/Cap:	0.00	1.30	1.30	0.00	0.00	0.00	0.16	0.38	1.30	1.30	0.00	1.30
Delay/Veh:	0.0	167	166.8	0.0	0.0	0.0	30.6	33.8	149.6	241.6	0.0	241.6
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:	0.0	167	166.8	0.0	0.0	0.0	30.6	33.8	149.6	241.6	0.0	241.6
LOS by Move:	A	F	F	A	A	A	C	C	F	F	A	F
HCM2kAvgQ:	0	57	80	0	0	0	2	5	102	10	0	10

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1005: Ingalls St / CarrollAve



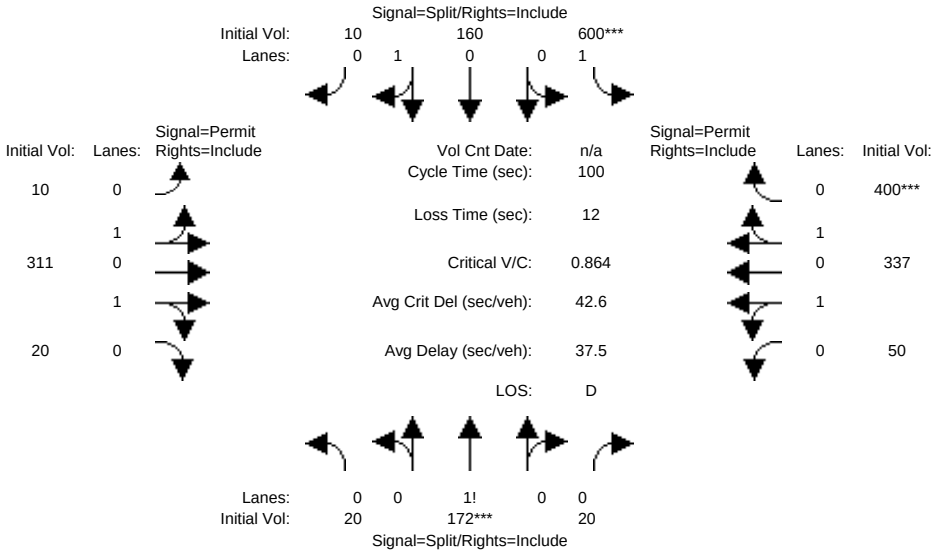
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	20	160	30	300	140	10	20	210	10	40	290	430
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	160	30	300	140	10	20	210	10	40	290	430
Added Vol:	0	-12	0	0	-4	0	0	-26	0	0	-36	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	148	30	300	136	10	20	184	10	40	254	430
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:	20	151	31	306	139	10	20	188	10	41	259	439
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	151	31	306	139	10	20	188	10	41	259	439
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:	20	151	31	306	139	10	20	188	10	41	259	439
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.90	0.94	0.94	0.81	0.81	0.81	0.76	0.76	0.76
Lanes:	0.10	0.75	0.15	1.00	0.93	0.07	0.19	1.72	0.09	0.14	0.86	1.00
Final Sat.:	183	1356	275	1718	1668	123	287	2637	143	197	1251	1448
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.18	0.08	0.08	0.07	0.07	0.07	0.21	0.21	0.30
Crit Moves:	****			****								****
Green/Cycle:	0.17	0.17	0.17	0.26	0.26	0.26	0.45	0.45	0.45	0.45	0.45	0.45
Volume/Cap:	0.67	0.67	0.67	0.67	0.31	0.31	0.16	0.16	0.16	0.46	0.46	0.67
Delay/Veh:	45.1	45.1	45.1	36.9	29.9	29.9	16.3	16.3	16.3	19.3	19.3	23.4
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:	45.1	45.1	45.1	36.9	29.9	29.9	16.3	16.3	16.3	19.3	19.3	23.4
LOS by Move:	D	D	D	D	C	C	B	B	B	B	B	C
HCM2kAvgQ:	7	7	7	9	4	4	2	2	2	7	7	12

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1005: Ingalls St / CarrollAve



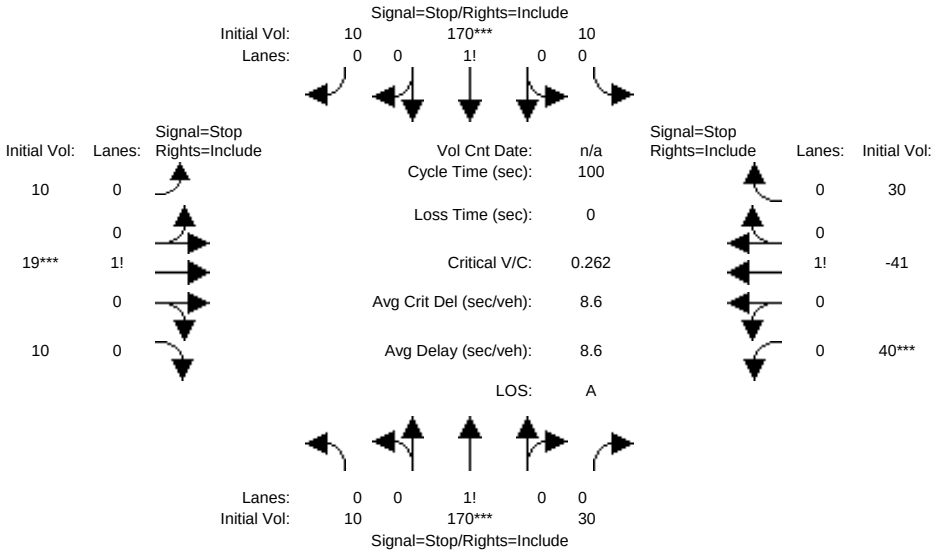
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	20	180	20	600	170	10	10	380	20	50	360	400
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	180	20	600	170	10	10	380	20	50	360	400
Added Vol:	0	-8	0	0	-10	0	0	-69	0	0	-23	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	172	20	600	160	10	10	311	20	50	337	400
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:	20	176	20	612	163	10	10	317	20	51	344	408
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	176	20	612	163	10	10	317	20	51	344	408
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:	20	176	20	612	163	10	10	317	20	51	344	408
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.96	0.90	0.94	0.94	0.86	0.86	0.86	0.75	0.75	0.75
Lanes:	0.09	0.82	0.09	1.00	0.94	0.06	0.06	1.82	0.12	0.13	0.87	1.00
Final Sat.:	173	1484	173	1718	1687	105	96	2974	191	185	1246	1431
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.36	0.10	0.10	0.11	0.11	0.11	0.28	0.28	0.29
Crit Moves:		****		****								****
Green/Cycle:	0.14	0.14	0.14	0.41	0.41	0.41	0.33	0.33	0.33	0.33	0.33	0.33
Volume/Cap:	0.86	0.86	0.86	0.86	0.23	0.23	0.32	0.32	0.32	0.84	0.84	0.86
Delay/Veh:	67.4	67.4	67.4	37.5	19.3	19.3	25.3	25.3	25.3	37.4	37.4	39.8
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:	67.4	67.4	67.4	37.5	19.3	19.3	25.3	25.3	25.3	37.4	37.4	39.8
LOS by Move:	E	E	E	D	B	B	C	C	C	D	D	D
HCM2kAvgQ:	9	9	9	20	3	3	4	4	4	14	14	15

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Cumulative AM

Intersection #1006: Ingalls St / Egbert Ave



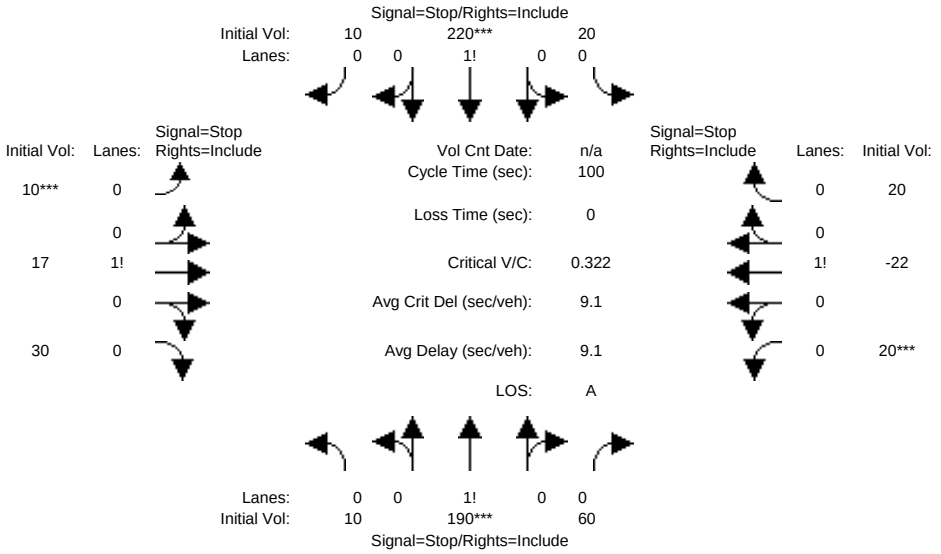
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	10	170	30	10	170	10	10	20	10	40	10	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	170	30	10	170	10	10	20	10	40	10	30
Added Vol:	0	0	0	0	0	0	0	-1	0	0	-51	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	170	30	10	170	10	10	19	10	40	-41	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.00	0.98
PHF Volume:	10	173	31	10	173	10	10	19	10	41	0	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	173	31	10	173	10	10	19	10	41	0	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
FinalVolume:	10	173	31	10	173	10	10	19	10	41	0	31
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.05	0.81	0.14	0.05	0.90	0.05	0.25	0.49	0.26	0.57	0.01	0.42
Final Sat.:	39	663	117	42	719	42	179	340	179	408	0	306
Capacity Analysis Module:												
Vol/Sat:	0.26	0.26	0.26	0.24	0.24	0.24	0.06	0.06	0.06	0.10	0.00	0.10
Crit Moves:		****			****			****			****	
Delay/Veh:	8.7	8.7	8.7	8.7	8.7	8.7	8.0	8.0	8.0	8.1	8.1	8.1
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
AdjDel/Veh:	8.7	8.7	8.7	8.7	8.7	8.7	8.0	8.0	8.0	8.1	8.1	8.1
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		8.7			8.7			8.0			8.1	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.7			8.7			8.0			8.1	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Cumulative PM

Intersection #1006: Ingalls St / Egbert Ave



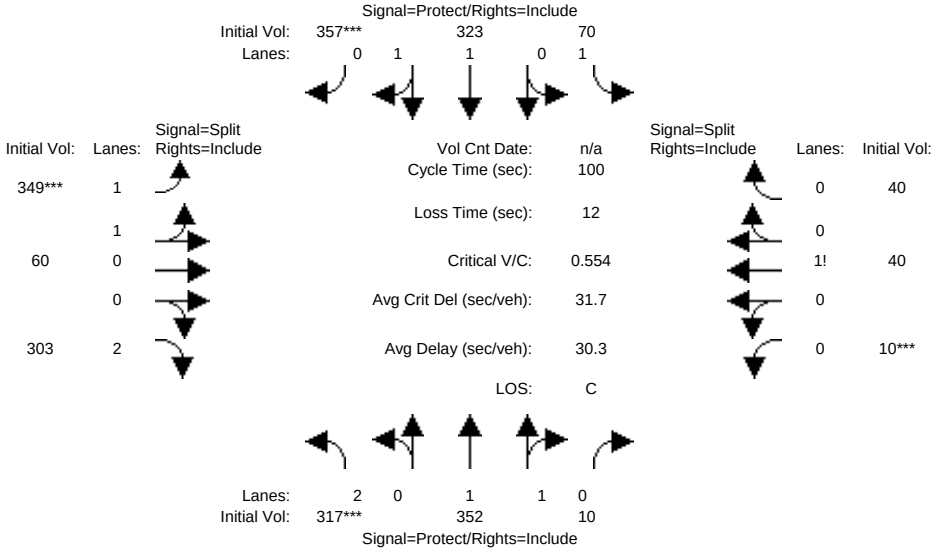
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	10	190	60	20	220	10	10	20	30	20	10	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	190	60	20	220	10	10	20	30	20	10	20
Added Vol:	0	0	0	0	0	0	0	-3	0	0	-32	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	190	60	20	220	10	10	17	30	20	-22	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.00	0.98
PHF Volume:	10	194	61	20	224	10	10	17	31	20	0	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	194	61	20	224	10	10	17	31	20	0	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
FinalVolume:	10	194	61	20	224	10	10	17	31	20	0	20
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.04	0.73	0.23	0.08	0.88	0.04	0.17	0.30	0.53	0.50	0.00	0.50
Final Sat.:	32	601	190	64	704	32	121	205	362	335	0	335
Capacity Analysis Module:												
Vol/Sat:	0.32	0.32	0.32	0.32	0.32	0.32	0.08	0.08	0.08	0.06	xxxx	0.06
Crit Moves:		****			****			****			****	
Delay/Veh:	9.2	9.2	9.2	9.4	9.4	9.4	8.2	8.2	8.2	8.2	0.0	8.2
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
AdjDel/Veh:	9.2	9.2	9.2	9.4	9.4	9.4	8.2	8.2	8.2	8.2	0.0	8.2
LOS by Move:	A	A	A	A	A	A	A	A	A	A	*	A
ApproachDel:		9.2			9.4			8.2			8.2	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.2			9.4			8.2			8.2	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.4	0.4	0.4	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1007: Arelious Walker Dr / Gilman Ave



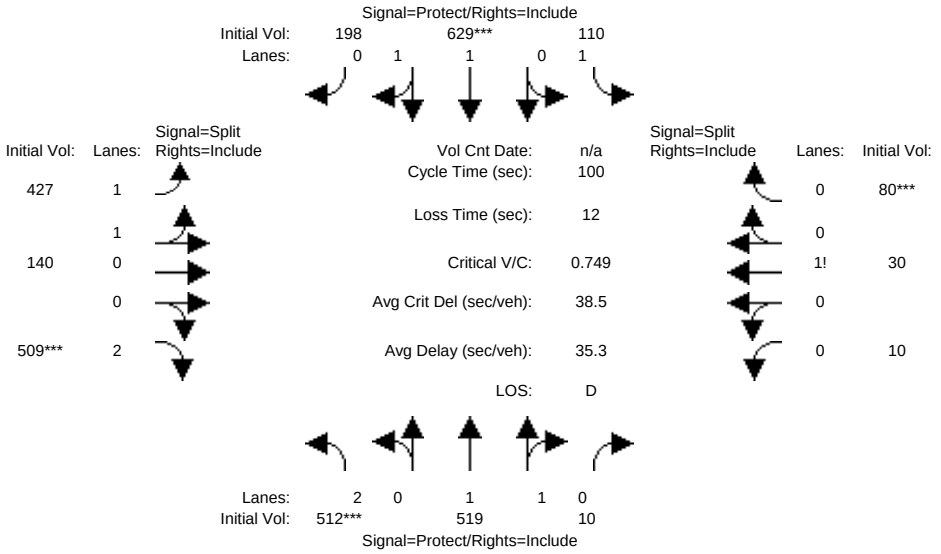
Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	320	360	10	70	340	360	350	60	320	10	40	40
Growth Adj:	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:	320	360	10	70	340	360	350	60	320	10	40	40
Added Vol:	-3	-8	0	0	-17	-3	-1	0	-17	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	317	352	10	70	323	357	349	60	303	10	40	40
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:	323	359	10	71	330	364	356	61	309	10	41	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	323	359	10	71	330	364	356	61	309	10	41	41
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:	323	359	10	71	330	364	356	61	309	10	41	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.93	0.93	0.93	0.86	0.86	0.94	0.94	0.73	0.92	0.92	0.92
Lanes:	2.00	1.94	0.06	1.00	1.00	1.00	1.71	0.29	2.00	0.11	0.45	0.44
Final Sat.:	3432	3426	97	1769	1629	1629	3047	524	2786	193	773	773
Capacity Analysis Module:												
Vol/Sat:	0.09	0.10	0.10	0.04	0.20	0.22	0.12	0.12	0.11	0.05	0.05	0.05
Crit Moves:	****					****	****			****		
Green/Cycle:	0.17	0.41	0.41	0.16	0.40	0.40	0.21	0.21	0.21	0.10	0.10	0.10
Volume/Cap:	0.55	0.25	0.25	0.25	0.50	0.55	0.55	0.55	0.53	0.55	0.55	0.55
Delay/Veh:	39.2	19.3	19.3	37.3	22.6	23.5	36.2	36.2	35.9	47.3	47.3	47.3
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:	39.2	19.3	19.3	37.3	22.6	23.5	36.2	36.2	35.9	47.3	47.3	47.3
LOS by Move:	D	B	B	D	C	C	D	D	D	D	D	D
HCM2kAvgQ:	5	4	4	2	8	9	6	6	5	4	4	4

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1007: Arelious Walker Dr / Gilman Ave

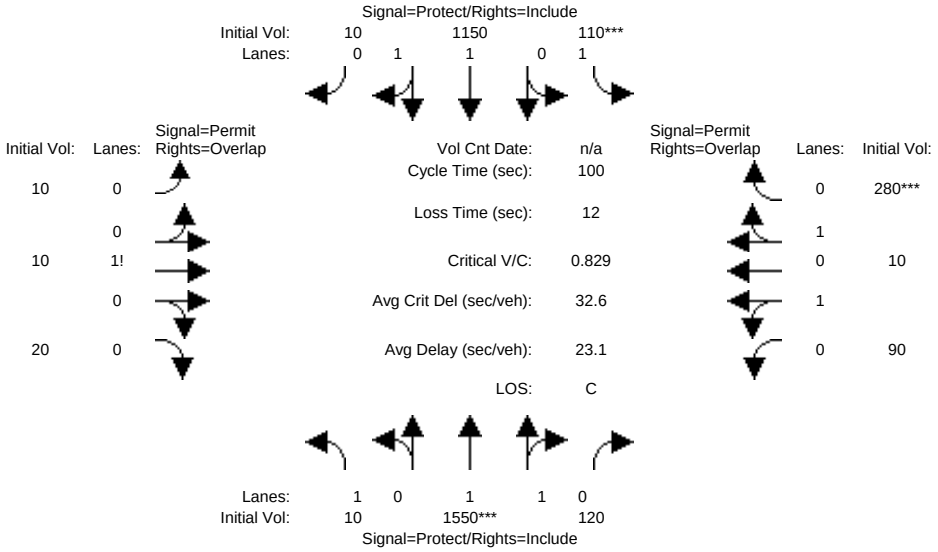


Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	520	540	10	110	640	200	430	140	520	10	30	80
Growth Adj:	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:	520	540	10	110	640	200	430	140	520	10	30	80
Added Vol:	-8	-21	0	0	-11	-2	-3	0	-11	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	512	519	10	110	629	198	427	140	509	10	30	80
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:	522	530	10	112	642	202	436	143	519	10	31	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	522	530	10	112	642	202	436	143	519	10	31	82
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:	522	530	10	112	642	202	436	143	519	10	31	82
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.93	0.93	0.93	0.90	0.90	0.94	0.94	0.73	0.89	0.89	0.89
Lanes:	2.00	1.96	0.04	1.00	1.52	0.48	1.51	0.49	2.00	0.08	0.25	0.67
Final Sat.:	3432	3461	67	1769	2594	817	2704	886	2786	141	422	1125
Capacity Analysis Module:												
Vol/Sat:	0.15	0.15	0.15	0.06	0.25	0.25	0.16	0.16	0.19	0.07	0.07	0.07
Crit Moves:	****				****				****			****
Green/Cycle:	0.20	0.38	0.38	0.16	0.33	0.33	0.25	0.25	0.25	0.10	0.10	0.10
Volume/Cap:	0.75	0.41	0.41	0.41	0.75	0.75	0.65	0.65	0.75	0.75	0.75	0.75
Delay/Veh:	41.9	23.1	23.1	39.0	32.6	32.6	35.3	35.3	39.2	61.2	61.2	61.2
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:	41.9	23.1	23.1	39.0	32.6	32.6	35.3	35.3	39.2	61.2	61.2	61.2
LOS by Move:	D	C	C	D	C	C	D	D	D	E	E	E
HCM2kAvgQ:	9	6	6	3	14	14	9	9	10	5	5	5

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative+Project AM

Intersection #1001: 3rd St / Carroll Ave



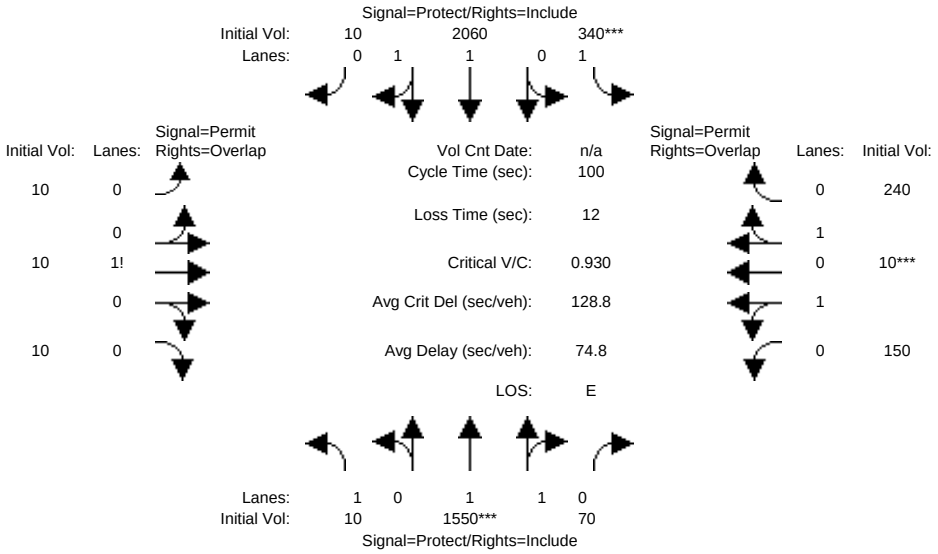
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	1	65	65	5	69	69	15	15	15	15	15	15
Volume Module:												
Base Vol:	10	1550	120	110	1150	10	10	10	20	90	10	280
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	1550	120	110	1150	10	10	10	20	90	10	280
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:	10	1550	120	110	1150	10	10	10	20	90	10	280
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:	10	1582	122	112	1173	10	10	10	20	92	10	286
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	1582	122	112	1173	10	10	10	20	92	10	286
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:	10	1582	122	112	1173	10	10	10	20	92	10	286
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.90	0.90	0.81	0.81	0.81	0.66	0.66	0.66
Lanes:	1.00	1.86	0.14	1.00	1.98	0.02	0.25	0.25	0.50	0.90	0.10	1.00
Final Sat.:	1718	3155	244	1718	3404	30	386	386	772	1126	125	1251
Capacity Analysis Module:												
Vol/Sat:	0.01	0.50	0.50	0.07	0.34	0.34	0.03	0.03	0.03	0.08	0.08	0.23
Crit Moves:		****		****								****
Green/Cycle:	0.01	0.65	0.65	0.07	0.71	0.71	0.16	0.16	0.17	0.16	0.16	0.23
Volume/Cap:	0.58	0.77	0.77	0.99	0.49	0.49	0.16	0.16	0.15	0.50	0.50	0.99
Delay/Veh:	143.8	15.0	15.0	129.5	7.3	7.3	37.2	37.2	36.2	40.3	40.3	82.3
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:	143.8	15.0	15.0	129.5	7.3	7.3	37.2	37.2	36.2	40.3	40.3	82.3
LOS by Move:	F	B	B	F	A	A	D	D	D	D	D	F
HCM2kAvgQ:	1	21	21	7	9	9	1	1	1	4	4	14

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative+Project PM

Intersection #1001: 3rd St / Carroll Ave



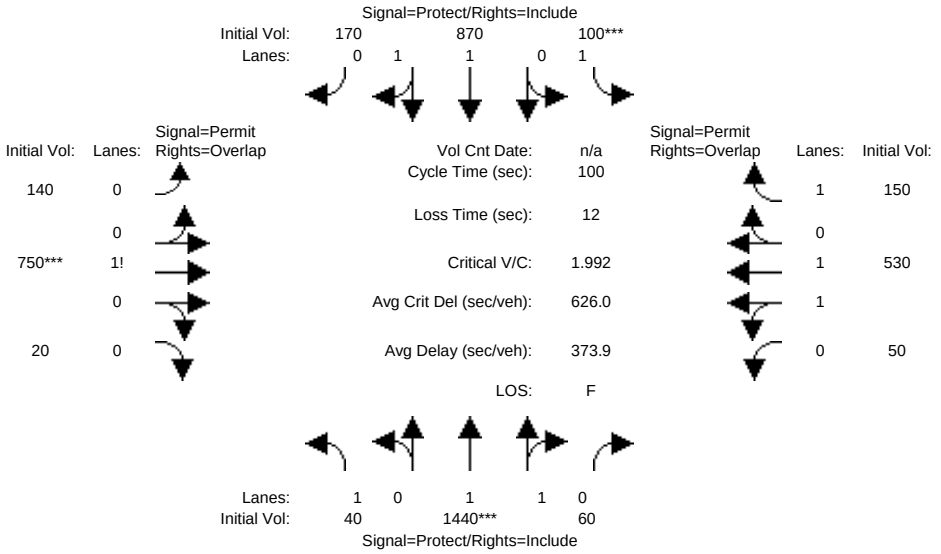
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	1	65	65	5	69	69	15	15	15	15	15	15
Volume Module:												
Base Vol:	10	1550	70	340	2060	10	10	10	10	150	10	240
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	1550	70	340	2060	10	10	10	10	150	10	240
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:	10	1550	70	340	2060	10	10	10	10	150	10	240
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:	10	1582	71	347	2102	10	10	10	10	153	10	245
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	1582	71	347	2102	10	10	10	10	153	10	245
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:	10	1582	71	347	2102	10	10	10	10	153	10	245
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.90	0.90	0.71	0.71	0.71	0.65	0.65	0.65
Lanes:	1.00	1.91	0.09	1.00	1.99	0.01	0.34	0.33	0.33	0.94	0.06	1.00
Final Sat.:	1718	3268	148	1718	3417	17	452	452	452	1156	77	1233
Capacity Analysis Module:												
Vol/Sat:	0.01	0.48	0.48	0.20	0.62	0.62	0.02	0.02	0.02	0.13	0.13	0.20
Crit Moves:		****		****							****	
Green/Cycle:	0.01	0.65	0.65	0.08	0.72	0.72	0.15	0.15	0.16	0.15	0.15	0.23
Volume/Cap:	0.57	0.74	0.74	2.52	0.85	0.85	0.15	0.15	0.14	0.88	0.88	0.86
Delay/Veh:	139.8	14.2	14.2	752.7	14.3	14.3	38.5	38.5	37.4	62.6	62.6	55.5
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:	139.8	14.2	14.2	752.7	14.3	14.3	38.5	38.5	37.4	62.6	62.6	55.5
LOS by Move:	F	B	B	F	B	B	D	D	D	E	E	E
HCM2kAvgQ:	1	19	19	37	27	27	1	1	1	8	8	11

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative+Project AM

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



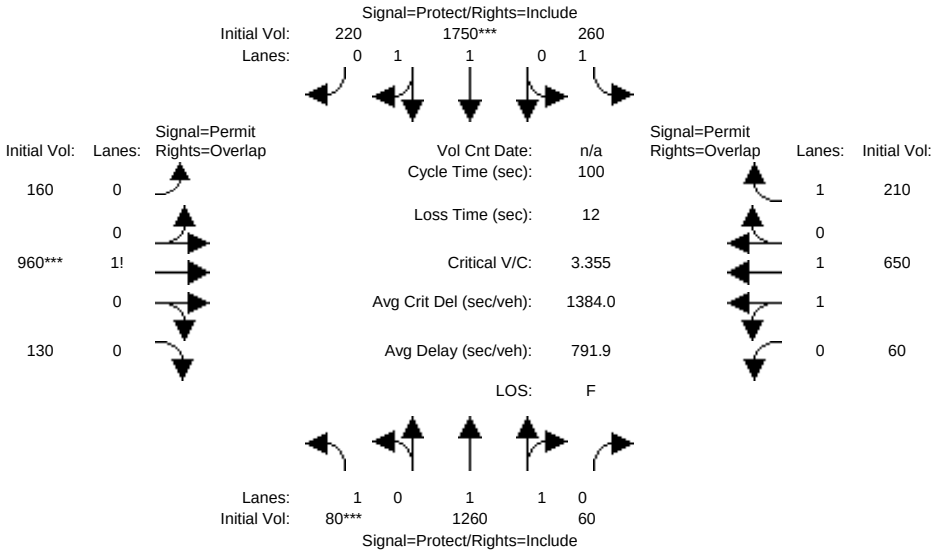
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Volume Module:												
Base Vol:	40	1440	60	100	870	170	140	750	20	50	530	150
Growth 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:	40	1440	60	100	870	170	140	750	20	50	530	150
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:	40	1440	60	100	870	170	140	750	20	50	530	150
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:	41	1469	61	102	888	173	143	765	20	51	541	153
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	1469	61	102	888	173	143	765	20	51	541	153
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:	41	1469	61	102	888	173	143	765	20	51	541	153
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.88	0.88	0.39	0.39	0.39	0.65	0.65	0.82
Lanes:	1.00	1.92	0.08	1.00	1.67	0.33	0.15	0.83	0.02	0.17	1.83	1.00
Final Sat.:	1718	3247	135	1718	2806	548	115	617	16	212	2250	1551
Capacity Analysis Module:												
Vol/Sat:	0.02	0.45	0.45	0.06	0.32	0.32	1.24	1.24	1.24	0.24	0.24	0.10
Crit Moves:		****			****			****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.20	0.92	0.92	0.49	0.65	0.65	4.59	4.59	3.18	0.89	0.89	0.25
Delay/Veh:	41.8	33.9	33.9	49.4	21.0	21.0	1665	1665	1021	51.5	51.5	21.6
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:	41.8	33.9	33.9	49.4	21.0	21.0	1665	1665	1021	51.5	51.5	21.6
LOS by Move:	D	C	C	D	C	C	F	F	F	D	D	C
HCM2kAvgQ:	1	28	28	4	13	13	118	118	107	13	13	3

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative+Project PM

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



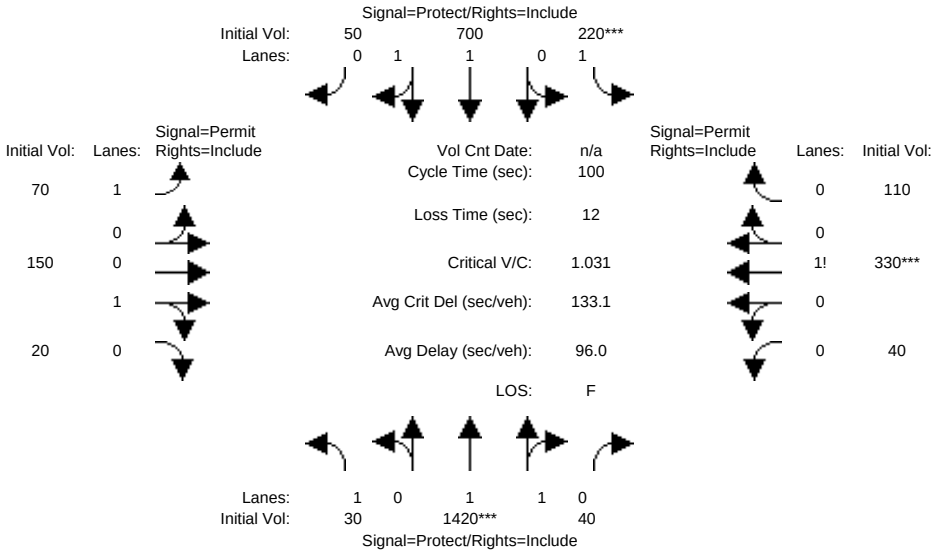
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Volume Module:												
Base Vol:	80	1260	60	260	1750	220	160	960	130	60	650	210
Growth 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:	80	1260	60	260	1750	220	160	960	130	60	650	210
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:	80	1260	60	260	1750	220	160	960	130	60	650	210
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:	82	1286	61	265	1786	224	163	980	133	61	663	214
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	1286	61	265	1786	224	163	980	133	61	663	214
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:	82	1286	61	265	1786	224	163	980	133	61	663	214
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.89	0.89	0.29	0.29	0.29	0.61	0.61	0.82
Lanes:	1.00	1.91	0.09	1.00	1.78	0.22	0.13	0.77	0.10	0.17	1.83	1.00
Final Sat.:	1718	3225	154	1718	3001	377	71	424	57	196	2121	1551
Capacity Analysis Module:												
Vol/Sat:	0.05	0.40	0.40	0.15	0.60	0.60	2.31	2.31	2.31	0.31	0.31	0.14
Crit Moves:	****				****			****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.40	0.81	0.81	1.29	1.21	1.21	8.55	8.55	5.92	1.16	1.16	0.35
Delay/Veh:	46.3	26.1	26.1	204.5	128	127.8	3450	3450	2256	124.6	125	23.2
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:	46.3	26.1	26.1	204.5	128	127.8	3450	3450	2256	124.6	125	23.2
LOS by Move:	D	C	C	F	F	F	F	F	F	F	F	C
HCM2kAvgQ:	3	20	20	18	57	57	177	177	169	21	21	5

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative+Project AM

Intersection #1003: 3rd St / Jamestown Ave



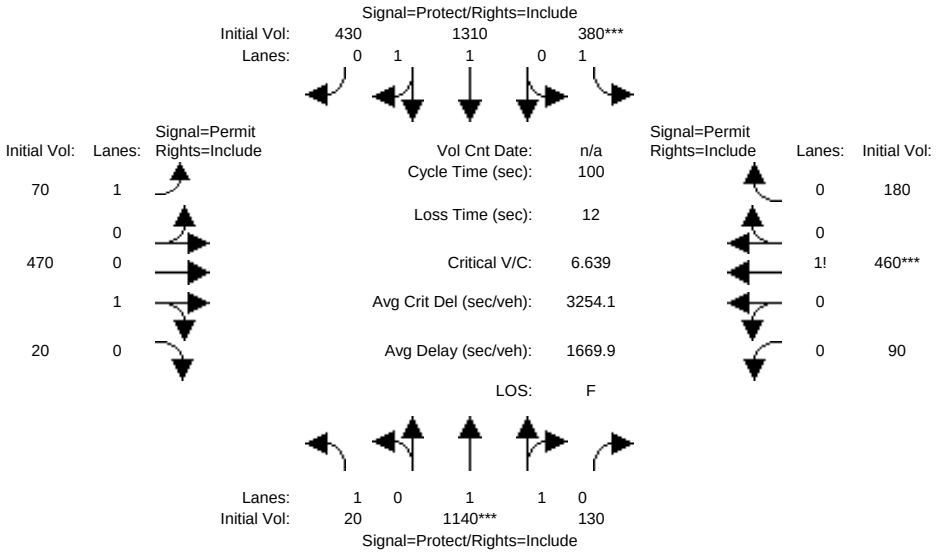
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	4	60	60	4	60	60	21	21	21	21	21	21
Volume Module:												
Base Vol:	30	1420	40	220	700	50	70	150	20	40	330	110
Growth Adj:	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:	30	1420	40	220	700	50	70	150	20	40	330	110
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:	30	1420	40	220	700	50	70	150	20	40	330	110
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:	31	1449	41	224	714	51	71	153	20	41	337	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	1449	41	224	714	51	71	153	20	41	337	112
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:	31	1449	41	224	714	51	71	153	20	41	337	112
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.90	0.90	0.98	0.96	0.96	0.76	0.76	0.76
Lanes:	1.00	1.95	0.05	1.00	1.87	0.13	1.00	0.88	0.12	0.08	0.69	0.23
Final Sat.:	1718	3329	94	1718	3176	227	1862	1613	215	120	987	329
Capacity Analysis Module:												
Vol/Sat:	0.02	0.44	0.44	0.13	0.22	0.22	0.04	0.09	0.09	0.34	0.34	0.34
Crit Moves:		****		****							****	
Green/Cycle:	0.04	0.60	0.60	0.07	0.63	0.63	0.21	0.21	0.21	0.21	0.21	0.21
Volume/Cap:	0.43	0.73	0.73	1.87	0.36	0.36	0.18	0.45	0.45	1.62	1.62	1.62
Delay/Veh:	64.1	16.4	16.4	466.3	9.4	9.4	33.5	38.3	38.3	335.4	335	335.4
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:	64.1	16.4	16.4	466.3	9.4	9.4	33.5	38.3	38.3	335.4	335	335.4
LOS by Move:	E	B	B	F	A	A	C	D	D	F	F	F
HCM2kAvgQ:	1	18	18	21	6	6	2	5	5	40	40	40

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative+Project PM

Intersection #1003: 3rd St / Jamestown Ave



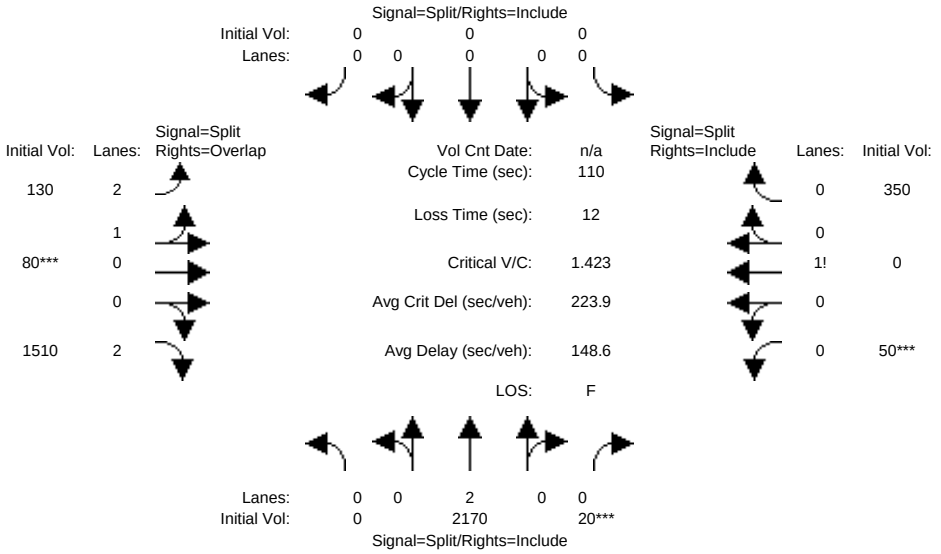
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	4	60	60	4	60	60	21	21	21	21	21	21
Volume Module:												
Base Vol:	20	1140	130	380	1310	430	70	470	20	90	460	180
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	1140	130	380	1310	430	70	470	20	90	460	180
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:	20	1140	130	380	1310	430	70	470	20	90	460	180
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:	20	1163	133	388	1337	439	71	480	20	92	469	184
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	1163	133	388	1337	439	71	480	20	92	469	184
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:	20	1163	133	388	1337	439	71	480	20	92	469	184
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.87	0.87	0.98	0.97	0.97	0.07	0.07	0.07
Lanes:	1.00	1.80	0.20	1.00	1.51	0.49	1.00	0.96	0.04	0.12	0.63	0.25
Final Sat.:	1718	3039	347	1718	2492	818	1862	1775	76	18	90	35
Capacity Analysis Module:												
Vol/Sat:	0.01	0.38	0.38	0.23	0.54	0.54	0.04	0.27	0.27	5.23	5.23	5.23
Crit Moves:		****		****							****	
Green/Cycle:	0.04	0.60	0.60	0.04	0.60	0.60	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.30	0.64	0.64	5.64	0.89	0.89	0.16	1.13	1.13	21.81	21.81	21.81
Delay/Veh:	57.3	14.5	14.5	2168	24.0	24.0	30.8	120	119.7	9456	9456	9456
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:	57.3	14.5	14.5	2168	24.0	24.0	30.8	120	119.7	9456	9456	9456
LOS by Move:	E	B	B	F	C	C	C	F	F	F	F	F
HCM2kAvgQ:	1	14	14	52	28	28	2	26	26	111	111	111

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative+Project AM

Intersection #1004: Bayshore Blvd / Hester Ave



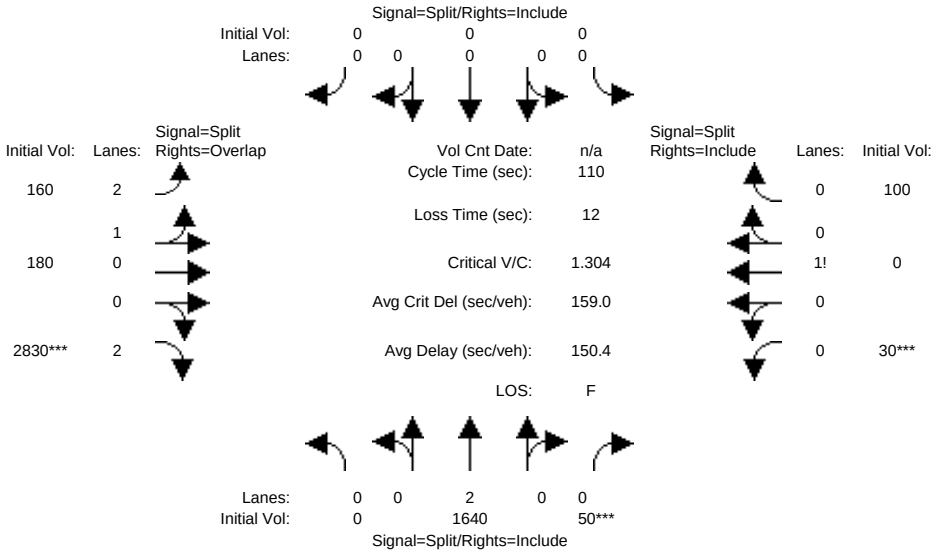
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	2170	20	0	0	0	130	80	1510	50	0	350
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	2170	20	0	0	0	130	80	1510	50	0	350
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:	0	2170	20	0	0	0	130	80	1510	50	0	350
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	2214	20	0	0	0	133	82	1541	51	0	357
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2214	20	0	0	0	133	82	1541	51	0	357
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	2214	20	0	0	0	133	82	1541	51	0	357
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.90	0.92	0.71	0.73	1.00	0.73
Lanes:	0.00	1.99	0.01	0.00	0.00	0.00	2.00	1.00	2.00	0.13	0.00	0.87
Final Sat.:	0	2388	22	0	0	0	3404	1755	2706	173	0	1214
Capacity Analysis Module:												
Vol/Sat:	0.00	0.93	0.93	0.00	0.00	0.00	0.04	0.05	0.57	0.29	0.00	0.29
Crit Moves:			****					****		****		
Green/Cycle:	0.00	0.65	0.65	0.00	0.00	0.00	0.03	0.03	0.68	0.21	0.00	0.21
Volume/Cap:	0.00	1.42	1.42	0.00	0.00	0.00	1.19	1.42	0.83	1.42	0.00	1.42
Delay/Veh:	0.0	213	213.4	0.0	0.0	0.0	181.5	278	17.3	253.3	0.0	253.3
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:	0.0	213	213.4	0.0	0.0	0.0	181.5	278	17.3	253.3	0.0	253.3
LOS by Move:	A	F	F	A	A	A	F	F	B	F	A	F
HCM2kAvgQ:	0	83	117	0	0	0	6	8	24	30	0	30

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative+Project PM

Intersection #1004: Bayshore Blvd / Hester Ave



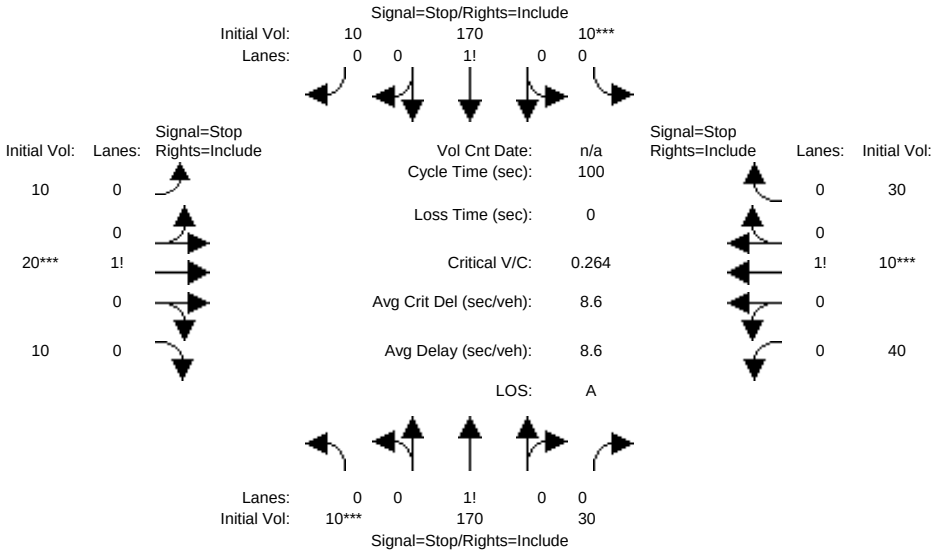
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	1640	50	0	0	0	160	180	2830	30	0	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1640	50	0	0	0	160	180	2830	30	0	100
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:	0	1640	50	0	0	0	160	180	2830	30	0	100
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	1673	51	0	0	0	163	184	2888	31	0	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1673	51	0	0	0	163	184	2888	31	0	102
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	1673	51	0	0	0	163	184	2888	31	0	102
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.90	0.93	0.71	0.74	1.00	0.74
Lanes:	0.00	1.96	0.04	0.00	0.00	0.00	2.00	1.00	2.00	0.23	0.00	0.77
Final Sat.:	0	2346	72	0	0	0	3428	1767	2706	324	0	1079
Capacity Analysis Module:												
Vol/Sat:	0.00	0.71	0.71	0.00	0.00	0.00	0.05	0.10	1.07	0.09	0.00	0.09
Crit Moves:			****						****	****		
Green/Cycle:	0.00	0.55	0.55	0.00	0.00	0.00	0.27	0.27	0.82	0.07	0.00	0.07
Volume/Cap:	0.00	1.30	1.30	0.00	0.00	0.00	0.18	0.38	1.30	1.30	0.00	1.30
Delay/Veh:	0.0	167	167.3	0.0	0.0	0.0	30.9	33.8	150.2	242.1	0.0	242.1
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:	0.0	167	167.3	0.0	0.0	0.0	30.9	33.8	150.2	242.1	0.0	242.1
LOS by Move:	A	F	F	A	A	A	C	C	F	F	A	F
HCM2kAvgQ:	0	57	81	0	0	0	2	5	102	10	0	10

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Cumulative+Project AM

Intersection #1006: Ingalls St / Egbert Ave



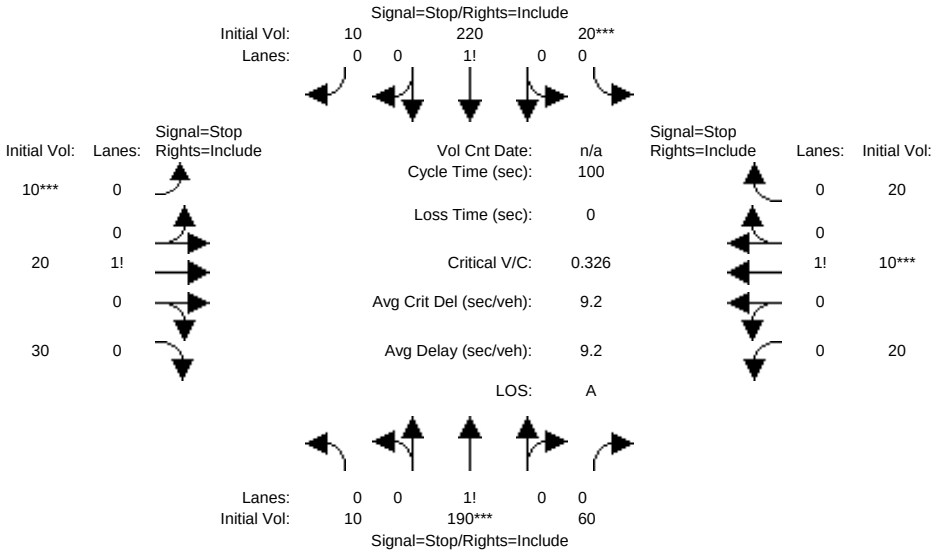
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	10	170	30	10	170	10	10	20	10	40	10	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	170	30	10	170	10	10	20	10	40	10	30
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:	10	170	30	10	170	10	10	20	10	40	10	30
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:	10	173	31	10	173	10	10	20	10	41	10	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	173	31	10	173	10	10	20	10	41	10	31
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:	10	173	31	10	173	10	10	20	10	41	10	31
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.05	0.81	0.14	0.05	0.90	0.05	0.25	0.50	0.25	0.51	0.12	0.37
Final Sat.:	39	658	116	42	713	42	174	347	174	356	89	267
Capacity Analysis Module:												
Vol/Sat:	0.26	0.26	0.26	0.24	0.24	0.24	0.06	0.06	0.06	0.11	0.11	0.11
Crit Moves:	****			****				****			****	
Delay/Veh:	8.8	8.8	8.8	8.7	8.7	8.7	8.0	8.0	8.0	8.3	8.3	8.3
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
AdjDel/Veh:	8.8	8.8	8.8	8.7	8.7	8.7	8.0	8.0	8.0	8.3	8.3	8.3
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		8.8			8.7			8.0			8.3	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.8			8.7			8.0			8.3	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Cumulative+Project PM

Intersection #1006: Ingalls St / Egbert Ave



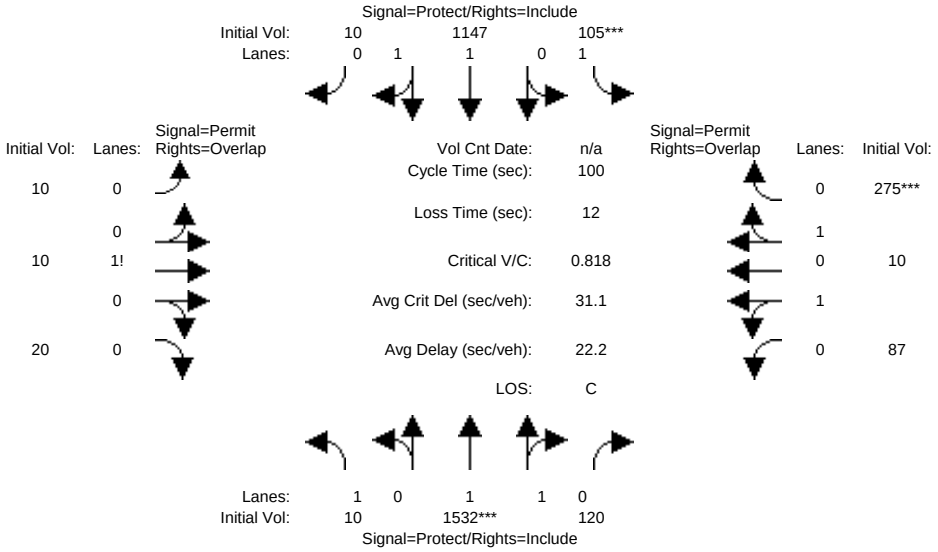
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	10	190	60	20	220	10	10	20	30	20	10	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	190	60	20	220	10	10	20	30	20	10	20
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:	10	190	60	20	220	10	10	20	30	20	10	20
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:	10	194	61	20	224	10	10	20	31	20	10	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	194	61	20	224	10	10	20	31	20	10	20
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:	10	194	61	20	224	10	10	20	31	20	10	20
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.04	0.73	0.23	0.08	0.88	0.04	0.17	0.33	0.50	0.40	0.20	0.40
Final Sat.:	31	595	188	63	696	32	114	227	341	266	133	266
Capacity Analysis Module:												
Vol/Sat:	0.33	0.33	0.33	0.32	0.32	0.32	0.09	0.09	0.09	0.08	0.08	0.08
Crit Moves:		****		****			****				****	
Delay/Veh:	9.3	9.3	9.3	9.5	9.5	9.5	8.2	8.2	8.2	8.3	8.3	8.3
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
AdjDel/Veh:	9.3	9.3	9.3	9.5	9.5	9.5	8.2	8.2	8.2	8.3	8.3	8.3
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		9.3			9.5			8.2			8.3	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.3			9.5			8.2			8.3	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.5	0.5	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1001: 3rd St / Carroll Ave



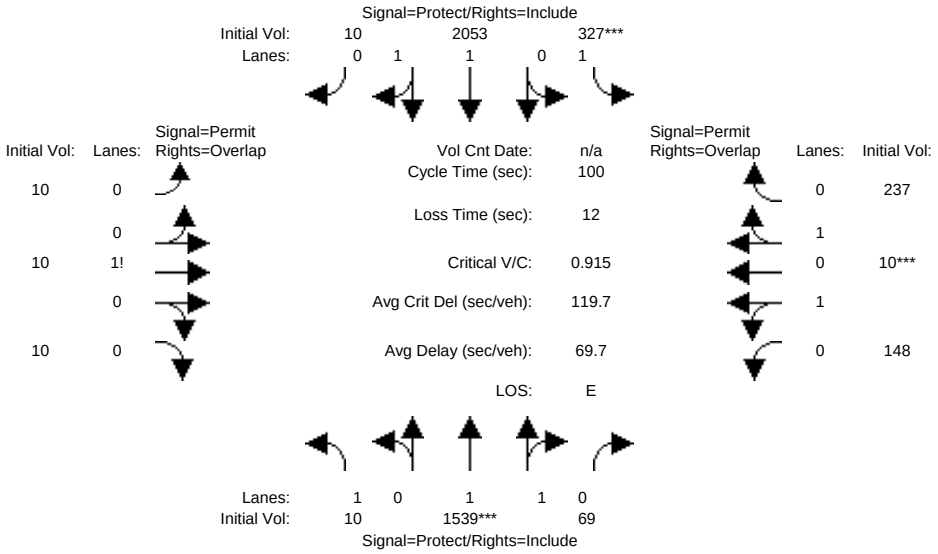
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	1	65	65	5	69	69	15	15	15	15	15	15
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	10	1550	120	110	1150	10	10	10	20	90	10	280
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:	10	1550	120	110	1150	10	10	10	20	90	10	280
Added Vol:	0	-18	0	-5	-3	0	0	0	0	-3	0	-5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	1532	120	105	1147	10	10	10	20	87	10	275
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:	10	1563	122	107	1170	10	10	10	20	89	10	281
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	1563	122	107	1170	10	10	10	20	89	10	281
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:	10	1563	122	107	1170	10	10	10	20	89	10	281
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.90	0.90	0.82	0.82	0.82	0.66	0.66	0.66
Lanes:	1.00	1.85	0.15	1.00	1.98	0.02	0.25	0.25	0.50	0.90	0.10	1.00
Final Sat.:	1718	3152	247	1718	3404	30	389	389	778	1125	129	1254
Capacity Analysis Module:												
Vol/Sat:	0.01	0.50	0.50	0.06	0.34	0.34	0.03	0.03	0.03	0.08	0.08	0.22
Crit Moves:		****			****							****
Green/Cycle:	0.01	0.65	0.65	0.06	0.70	0.70	0.17	0.17	0.18	0.17	0.17	0.23
Volume/Cap:	0.58	0.76	0.76	0.97	0.49	0.49	0.16	0.16	0.15	0.48	0.48	0.97
Delay/Veh:	144.3	14.7	14.7	125.5	7.4	7.4	37.0	37.0	36.0	39.8	39.8	77.5
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:	144.3	14.7	14.7	125.5	7.4	7.4	37.0	37.0	36.0	39.8	39.8	77.5
LOS by Move:	F	B	B	F	A	A	D	D	D	D	D	E
HCM2kAvgQ:	1	20	20	6	9	9	1	1	1	3	3	12

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1001: 3rd St / Carroll Ave



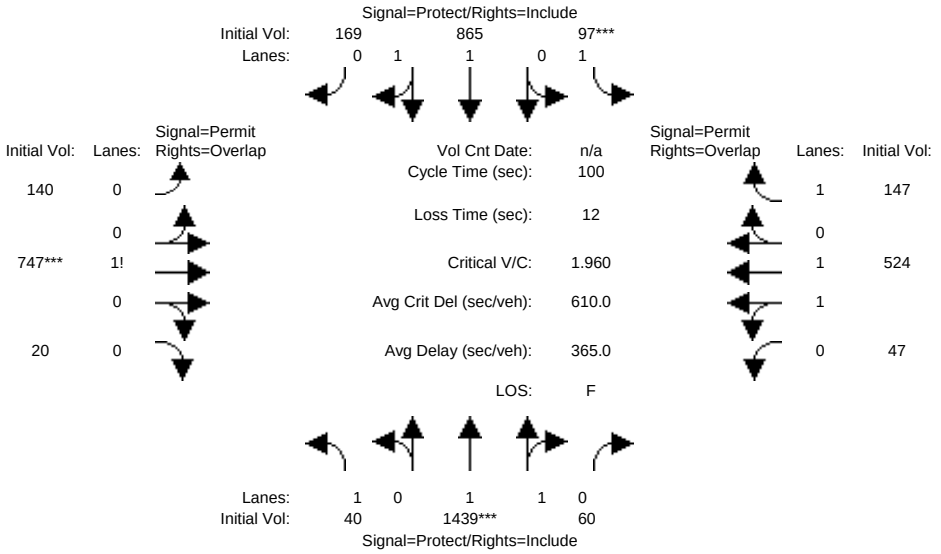
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	1	65	65	5	69	69	15	15	15	15	15	15
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	10	1550	70	340	2060	10	10	10	10	150	10	240
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:	10	1550	70	340	2060	10	10	10	10	150	10	240
Added Vol:	0	-11	-1	-13	-7	0	0	0	0	-2	0	-3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	1539	69	327	2053	10	10	10	10	148	10	237
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:	10	1570	70	334	2095	10	10	10	10	151	10	242
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	1570	70	334	2095	10	10	10	10	151	10	242
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:	10	1570	70	334	2095	10	10	10	10	151	10	242
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.90	0.90	0.76	0.76	0.76	0.65	0.65	0.65
Lanes:	1.00	1.91	0.09	1.00	1.99	0.01	0.34	0.33	0.33	0.94	0.06	1.00
Final Sat.:	1718	3270	147	1718	3417	17	484	484	484	1155	78	1233
Capacity Analysis Module:												
Vol/Sat:	0.01	0.48	0.48	0.19	0.61	0.61	0.02	0.02	0.02	0.13	0.13	0.20
Crit Moves:		****		****							****	
Green/Cycle:	0.01	0.65	0.65	0.08	0.72	0.72	0.15	0.15	0.16	0.15	0.15	0.23
Volume/Cap:	0.57	0.74	0.74	2.43	0.85	0.85	0.14	0.14	0.13	0.87	0.87	0.85
Delay/Veh:	139.8	14.0	14.0	709.8	14.1	14.1	38.3	38.3	37.2	61.3	61.3	54.3
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:	139.8	14.0	14.0	709.8	14.1	14.1	38.3	38.3	37.2	61.3	61.3	54.3
LOS by Move:	F	B	B	F	B	B	D	D	D	E	E	D
HCM2kAvgQ:	1	19	19	35	27	27	1	1	1	5	5	7

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



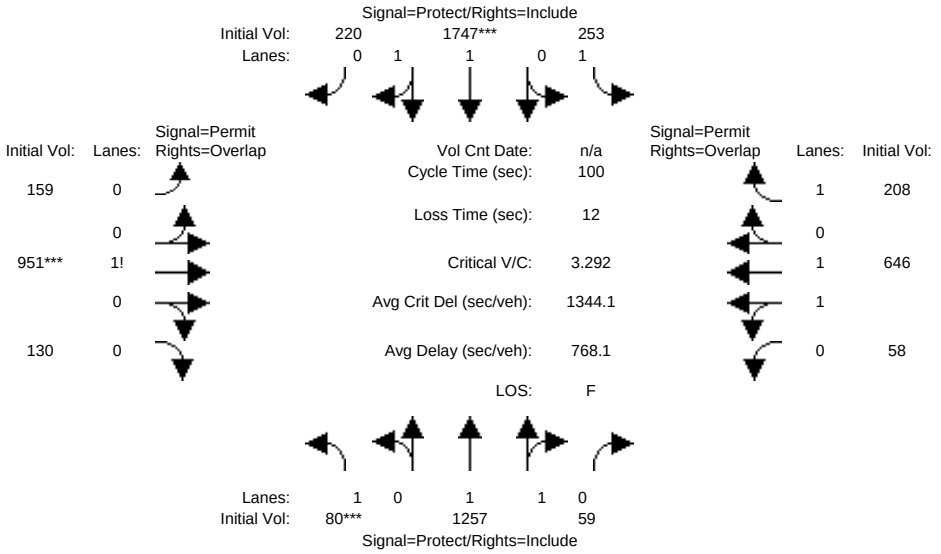
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	40	1440	60	100	870	170	140	750	20	50	530	150
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:	40	1440	60	100	870	170	140	750	20	50	530	150
Added Vol:	0	-1	0	-3	-5	-1	0	-3	0	-3	-6	-3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	40	1439	60	97	865	169	140	747	20	47	524	147
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:	41	1468	61	99	883	172	143	762	20	48	535	150
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	1468	61	99	883	172	143	762	20	48	535	150
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:	41	1468	61	99	883	172	143	762	20	48	535	150
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.88	0.88	0.40	0.40	0.40	0.67	0.67	0.82
Lanes:	1.00	1.92	0.08	1.00	1.67	0.33	0.15	0.83	0.02	0.16	1.84	1.00
Final Sat.:	1718	3247	135	1718	2806	548	118	627	17	209	2328	1551
Capacity Analysis Module:												
Vol/Sat:	0.02	0.45	0.45	0.06	0.31	0.31	1.21	1.21	1.21	0.23	0.23	0.10
Crit Moves:		****		****				****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.20	0.92	0.92	0.48	0.64	0.64	4.50	4.50	3.11	0.85	0.85	0.25
Delay/Veh:	41.8	33.8	33.8	48.9	20.9	20.9	1622	1622	991.0	47.2	47.2	21.6
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:	41.8	33.8	33.8	48.9	20.9	20.9	1622	1622	991.0	47.2	47.2	21.6
LOS by Move:	D	C	C	D	C	C	F	F	F	D	D	C
HCM2kAvgQ:	1	28	28	3	13	13	117	117	106	12	12	3

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



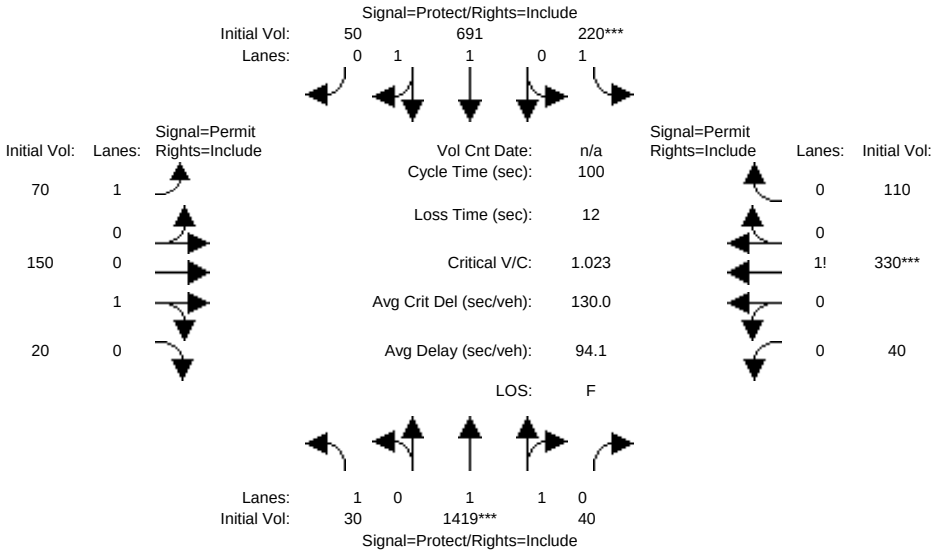
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	80	1260	60	260	1750	220	160	960	130	60	650	210
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:	80	1260	60	260	1750	220	160	960	130	60	650	210
Added Vol:	0	-3	-1	-7	-3	0	-1	-9	0	-2	-4	-2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	80	1257	59	253	1747	220	159	951	130	58	646	208
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:	82	1283	60	258	1783	224	162	970	133	59	659	212
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	1283	60	258	1783	224	162	970	133	59	659	212
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:	82	1283	60	258	1783	224	162	970	133	59	659	212
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.89	0.89	0.30	0.30	0.30	0.63	0.63	0.82
Lanes:	1.00	1.91	0.09	1.00	1.78	0.22	0.13	0.77	0.10	0.16	1.84	1.00
Final Sat.:	1718	3227	151	1718	3000	378	72	430	59	196	2185	1551
Capacity Analysis Module:												
Vol/Sat:	0.05	0.40	0.40	0.15	0.59	0.59	2.26	2.26	2.26	0.30	0.30	0.14
Crit Moves:	****				****			****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.40	0.81	0.81	1.25	1.21	1.21	8.35	8.35	5.78	1.12	1.12	0.35
Delay/Veh:	46.3	26.0	26.0	190.9	127	127.0	3359	3359	2193	108.8	109	23.2
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:	46.3	26.0	26.0	190.9	127	127.0	3359	3359	2193	108.8	109	23.2
LOS by Move:	D	C	C	F	F	F	F	F	F	F	F	C
HCM2kAvgQ:	2	21	21	17	57	57	176	176	167	20	20	5

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1003: 3rd St / Jamestown Ave



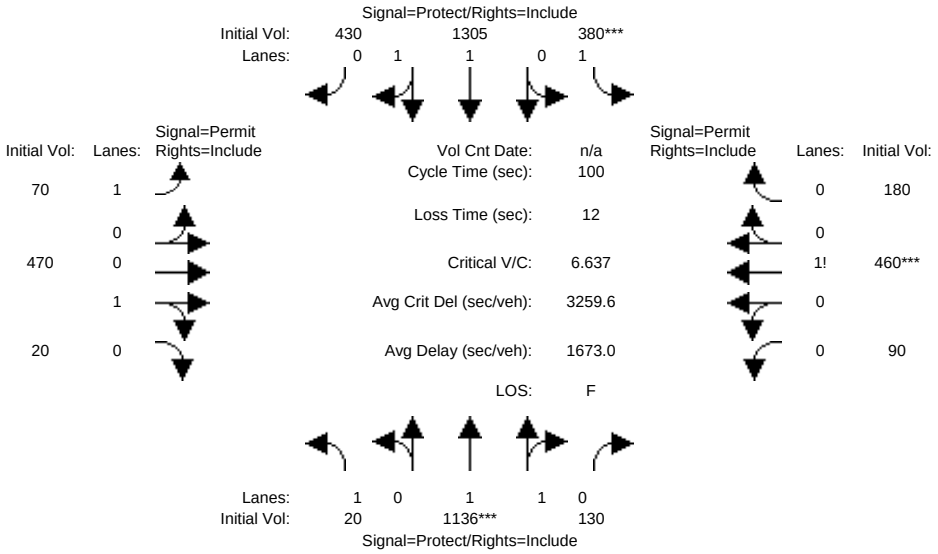
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	4	60	60	4	60	60	21	21	21	21	21	21
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	30	1420	40	220	700	50	70	150	20	40	330	110
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:	30	1420	40	220	700	50	70	150	20	40	330	110
Added Vol:	0	-1	0	0	-9	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	30	1419	40	220	691	50	70	150	20	40	330	110
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:	31	1448	41	224	705	51	71	153	20	41	337	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	1448	41	224	705	51	71	153	20	41	337	112
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:	31	1448	41	224	705	51	71	153	20	41	337	112
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.90	0.90	0.98	0.96	0.96	0.77	0.77	0.77
Lanes:	1.00	1.95	0.05	1.00	1.87	0.13	1.00	0.88	0.12	0.08	0.69	0.23
Final Sat.:	1718	3329	94	1718	3173	230	1862	1613	215	122	1007	336
Capacity Analysis Module:												
Vol/Sat:	0.02	0.43	0.43	0.13	0.22	0.22	0.04	0.09	0.09	0.33	0.33	0.33
Crit Moves:		****		****							****	
Green/Cycle:	0.04	0.60	0.60	0.07	0.63	0.63	0.21	0.21	0.21	0.21	0.21	0.21
Volume/Cap:	0.43	0.72	0.72	1.87	0.35	0.35	0.18	0.45	0.45	1.59	1.59	1.59
Delay/Veh:	64.1	16.4	16.4	466.3	9.4	9.4	33.5	38.3	38.3	321.0	321	321.0
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:	64.1	16.4	16.4	466.3	9.4	9.4	33.5	38.3	38.3	321.0	321	321.0
LOS by Move:	E	B	B	F	A	A	C	D	D	F	F	F
HCM2kAvgQ:	1	18	18	20	6	6	2	5	5	39	39	39

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1003: 3rd St / Jamestown Ave



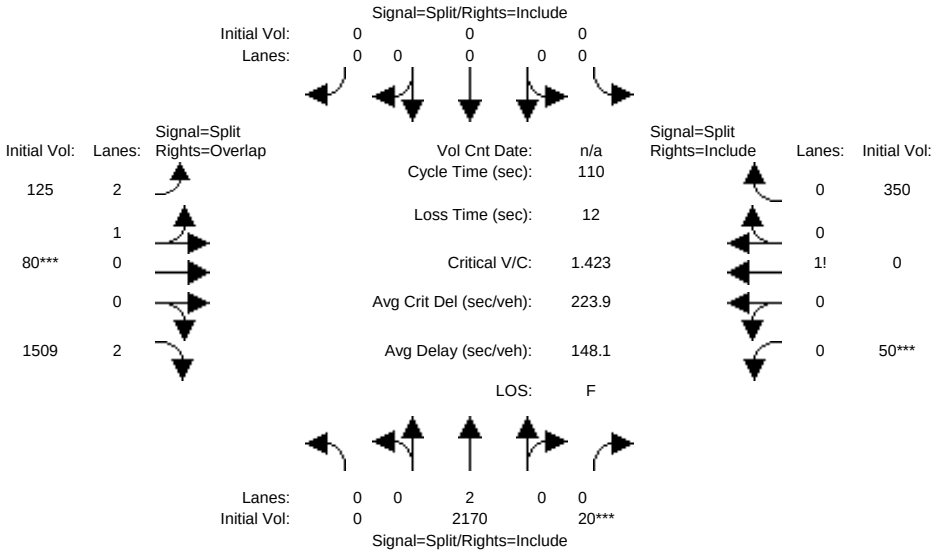
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	60	60	4	60	60	21	21	21	21	21	21
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	20	1140	130	380	1310	430	70	470	20	90	460	180
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:	20	1140	130	380	1310	430	70	470	20	90	460	180
Added Vol:	0	-4	0	0	-5	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	1136	130	380	1305	430	70	470	20	90	460	180
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:	20	1159	133	388	1332	439	71	480	20	92	469	184
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	1159	133	388	1332	439	71	480	20	92	469	184
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:	20	1159	133	388	1332	439	71	480	20	92	469	184
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.87	0.87	0.98	0.97	0.97	0.07	0.07	0.07
Lanes:	1.00	1.79	0.21	1.00	1.50	0.50	1.00	0.96	0.04	0.12	0.63	0.25
Final Sat.:	1718	3038	348	1718	2489	820	1862	1775	76	18	90	35
Capacity Analysis Module:												
Vol/Sat:	0.01	0.38	0.38	0.23	0.53	0.53	0.04	0.27	0.27	5.23	5.23	5.23
Crit Moves:		****		****							****	
Green/Cycle:	0.04	0.60	0.60	0.04	0.60	0.60	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.30	0.64	0.64	5.64	0.89	0.89	0.16	1.13	1.13	21.81	21.81	21.81
Delay/Veh:	57.3	14.5	14.5	2168	23.8	23.8	30.8	120	119.7	9456	9456	9456
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:	57.3	14.5	14.5	2168	23.8	23.8	30.8	120	119.7	9456	9456	9456
LOS by Move:	E	B	B	F	C	C	C	F	F	F	F	F
HCM2kAvgQ:	1	14	14	51	29	29	2	26	26	111	111	111

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1004: Bayshore Blvd / Hester Ave



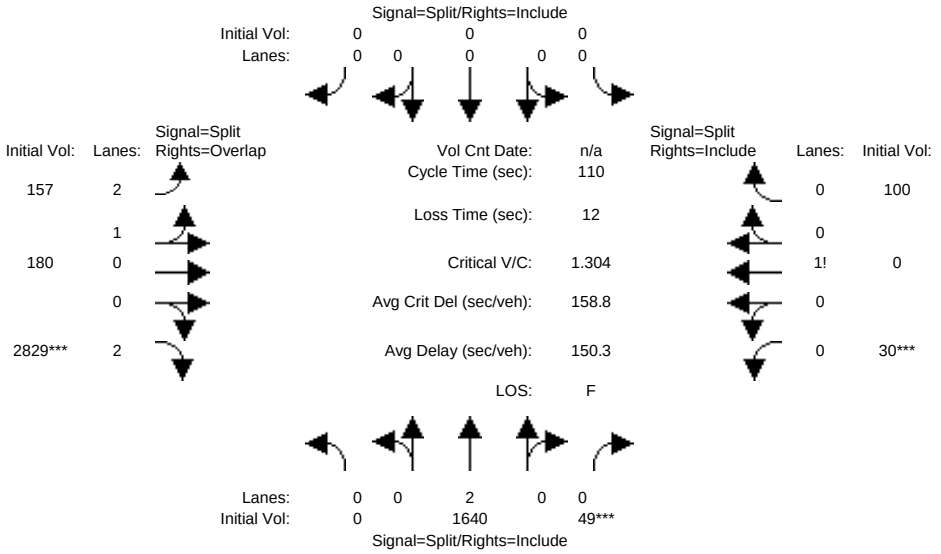
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	2170	20	0	0	0	130	80	1510	50	0	350
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	2170	20	0	0	0	130	80	1510	50	0	350
Added Vol:	0	0	0	0	0	0	-5	0	-1	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	2170	20	0	0	0	125	80	1509	50	0	350
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	2214	20	0	0	0	128	82	1540	51	0	357
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2214	20	0	0	0	128	82	1540	51	0	357
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	2214	20	0	0	0	128	82	1540	51	0	357
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.90	0.92	0.71	0.73	1.00	0.73
Lanes:	0.00	1.99	0.01	0.00	0.00	0.00	2.00	1.00	2.00	0.13	0.00	0.87
Final Sat.:	0	2388	22	0	0	0	3404	1755	2706	173	0	1214
Capacity Analysis Module:												
Vol/Sat:	0.00	0.93	0.93	0.00	0.00	0.00	0.04	0.05	0.57	0.29	0.00	0.29
Crit Moves:			****					****		****		
Green/Cycle:	0.00	0.65	0.65	0.00	0.00	0.00	0.03	0.03	0.68	0.21	0.00	0.21
Volume/Cap:	0.00	1.42	1.42	0.00	0.00	0.00	1.15	1.42	0.83	1.42	0.00	1.42
Delay/Veh:	0.0	213	213.4	0.0	0.0	0.0	164.7	278	17.3	253.3	0.0	253.3
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:	0.0	213	213.4	0.0	0.0	0.0	164.7	278	17.3	253.3	0.0	253.3
LOS by Move:	A	F	F	A	A	A	F	F	B	F	A	F
HCM2kAvgQ:	0	83	117	0	0	0	5	8	24	30	0	30

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1004: Bayshore Blvd / Hester Ave



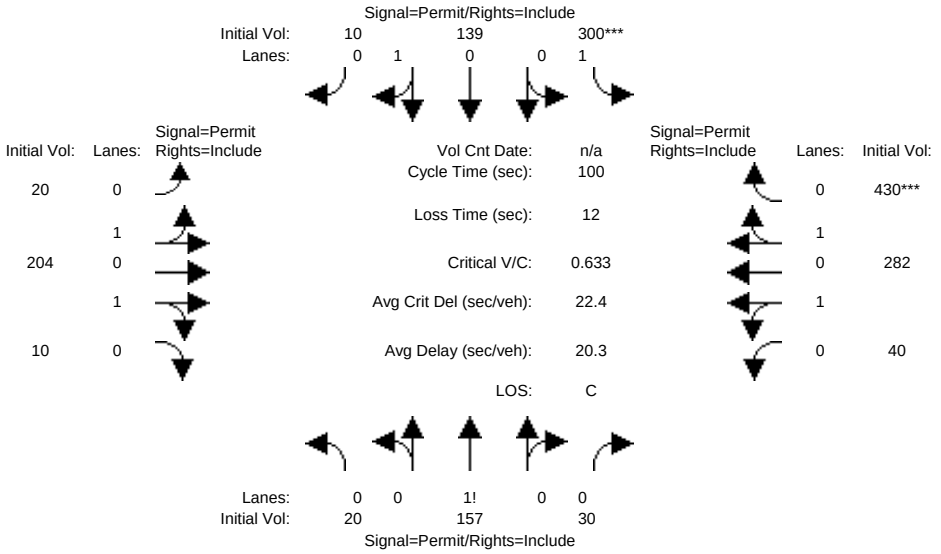
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	1640	50	0	0	0	160	180	2830	30	0	100
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	1640	50	0	0	0	160	180	2830	30	0	100
Added Vol:	0	0	-1	0	0	0	-3	0	-1	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1640	49	0	0	0	157	180	2829	30	0	100
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	1673	50	0	0	0	160	184	2887	31	0	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1673	50	0	0	0	160	184	2887	31	0	102
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	1673	50	0	0	0	160	184	2887	31	0	102
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.90	0.93	0.71	0.74	1.00	0.74
Lanes:	0.00	1.96	0.04	0.00	0.00	0.00	2.00	1.00	2.00	0.23	0.00	0.77
Final Sat.:	0	2347	70	0	0	0	3428	1767	2706	324	0	1079
Capacity Analysis Module:												
Vol/Sat:	0.00	0.71	0.71	0.00	0.00	0.00	0.05	0.10	1.07	0.09	0.00	0.09
Crit Moves:			****						****	****		
Green/Cycle:	0.00	0.55	0.55	0.00	0.00	0.00	0.27	0.27	0.82	0.07	0.00	0.07
Volume/Cap:	0.00	1.30	1.30	0.00	0.00	0.00	0.17	0.38	1.30	1.30	0.00	1.30
Delay/Veh:	0.0	167	167.2	0.0	0.0	0.0	30.8	33.8	150.0	242.0	0.0	242.0
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	167	167.2	0.0	0.0	0.0	30.8	33.8	150.0	242.0	0.0	242.0
LOS by Move:	A	F	F	A	A	A	C	C	F	F	A	F
HCM2kAvgQ:	0	57	81	0	0	0	2	5	102	10	0	10

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1005: Ingalls St / CarrollAve



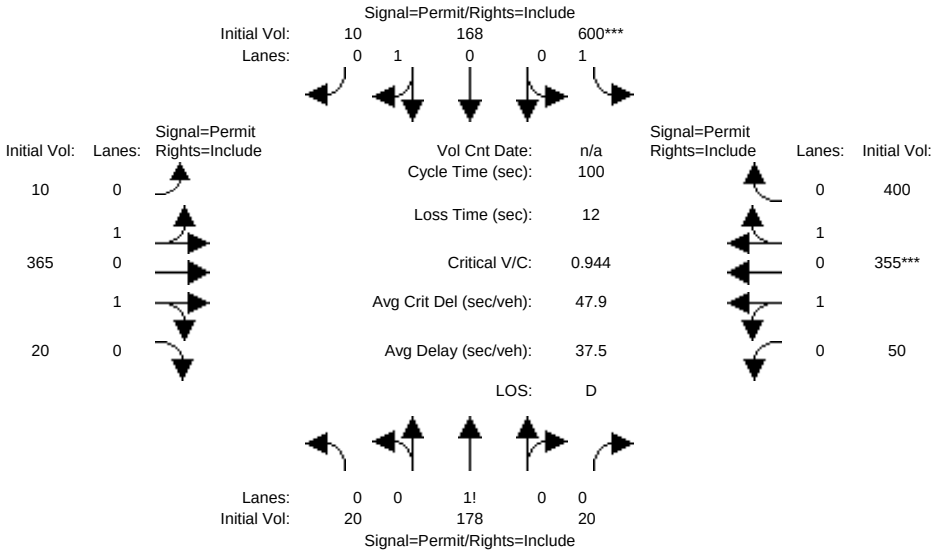
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	20	160	30	300	140	10	20	210	10	40	290	430
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	160	30	300	140	10	20	210	10	40	290	430
Added Vol:	0	-3	0	0	-1	0	0	-6	0	0	-8	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	157	30	300	139	10	20	204	10	40	282	430
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:	20	160	31	306	142	10	20	208	10	41	288	439
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	160	31	306	142	10	20	208	10	41	288	439
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:	20	160	31	306	142	10	20	208	10	41	288	439
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	0.63	0.94	0.94	0.81	0.81	0.81	0.76	0.76	0.76
Lanes:	0.10	0.76	0.14	1.00	0.93	0.07	0.17	1.74	0.09	0.12	0.88	1.00
Final Sat.:	170	1337	255	1205	1671	120	263	2679	131	180	1270	1450
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.25	0.08	0.08	0.08	0.08	0.08	0.23	0.23	0.30
Crit Moves:				****								****
Green/Cycle:	0.40	0.40	0.40	0.40	0.40	0.40	0.48	0.48	0.48	0.48	0.48	0.48
Volume/Cap:	0.30	0.30	0.30	0.63	0.21	0.21	0.16	0.16	0.16	0.47	0.47	0.63
Delay/Veh:	20.6	20.6	20.6	26.7	19.7	19.7	14.8	14.8	14.8	17.8	17.8	20.6
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:	20.6	20.6	20.6	26.7	19.7	19.7	14.8	14.8	14.8	17.8	17.8	20.6
LOS by Move:	C	C	C	C	B	B	B	B	B	B	B	C
HCM2kAvgQ:	4	4	4	8	3	3	2	2	2	7	7	11

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1005: Ingalls St / CarrollAve



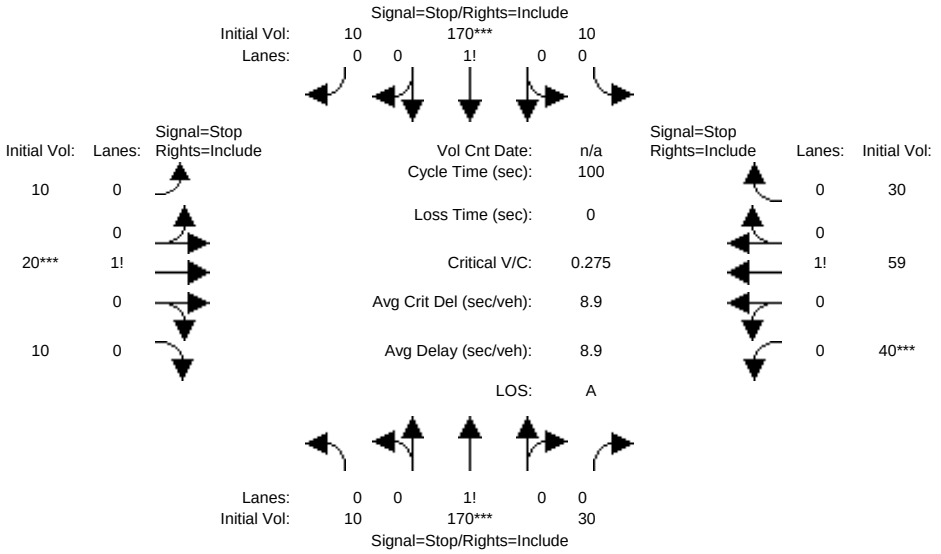
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	20	180	20	600	170	10	10	380	20	50	360	400
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	180	20	600	170	10	10	380	20	50	360	400
Added Vol:	0	-2	0	0	-2	0	0	-15	0	0	-5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	178	20	600	168	10	10	365	20	50	355	400
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:	20	182	20	612	171	10	10	372	20	51	362	408
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	182	20	612	171	10	10	372	20	51	362	408
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:	20	182	20	612	171	10	10	372	20	51	362	408
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.60	0.94	0.94	0.86	0.86	0.86	0.75	0.75	0.75
Lanes:	0.09	0.82	0.09	1.00	0.94	0.06	0.05	1.85	0.10	0.12	0.88	1.00
Final Sat.:	164	1456	164	1132	1694	101	82	3009	165	176	1250	1409
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.54	0.10	0.10	0.12	0.12	0.12	0.29	0.29	0.29
Crit Moves:				****							****	
Green/Cycle:	0.57	0.57	0.57	0.57	0.57	0.57	0.31	0.31	0.31	0.31	0.31	0.31
Volume/Cap:	0.22	0.22	0.22	0.94	0.18	0.18	0.40	0.40	0.40	0.94	0.94	0.94
Delay/Veh:	10.5	10.5	10.5	42.3	10.2	10.2	27.7	27.7	27.7	52.1	52.1	52.1
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:	10.5	10.5	10.5	42.3	10.2	10.2	27.7	27.7	27.7	52.1	52.1	52.1
LOS by Move:	B	B	B	D	B	B	C	C	C	D	D	D
HCM2kAvgQ:	3	3	3	23	3	3	5	5	5	18	18	18

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Cumulative AM

Intersection #1006: Ingalls St / Egbert Ave



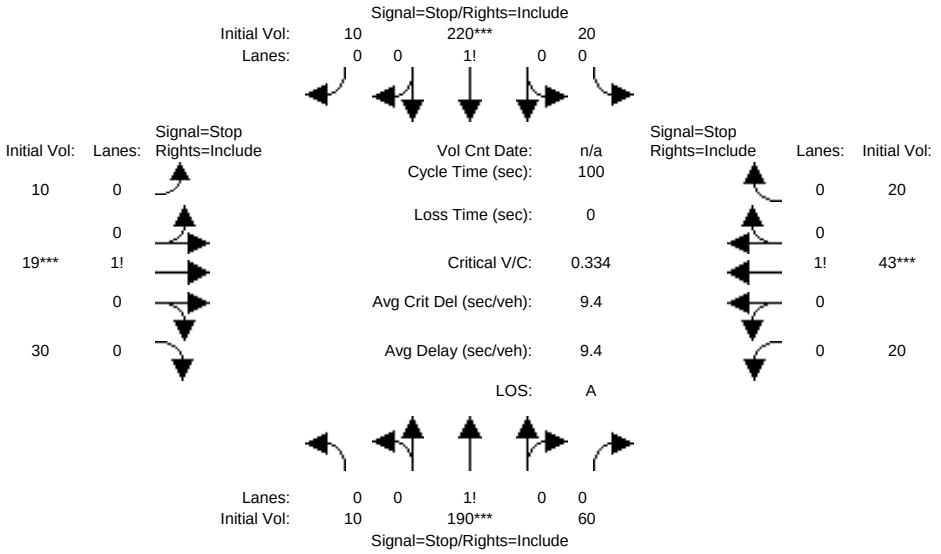
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	10	170	30	10	170	10	10	20	10	40	70	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	170	30	10	170	10	10	20	10	40	70	30
Added Vol:	0	0	0	0	0	0	0	0	0	0	-11	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	170	30	10	170	10	10	20	10	40	59	30
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:	10	173	31	10	173	10	10	20	10	41	60	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	173	31	10	173	10	10	20	10	41	60	31
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:	10	173	31	10	173	10	10	20	10	41	60	31
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.05	0.81	0.14	0.05	0.90	0.05	0.25	0.50	0.25	0.31	0.46	0.23
Final Sat.:	37	632	112	40	686	40	170	339	170	219	322	164
Capacity Analysis Module:												
Vol/Sat:	0.27	0.27	0.27	0.25	0.25	0.25	0.06	0.06	0.06	0.19	0.19	0.19
Crit Moves:		****			****			****			****	
Delay/Veh:	9.1	9.1	9.1	9.0	9.0	9.0	8.2	8.2	8.2	8.8	8.8	8.8
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
AdjDel/Veh:	9.1	9.1	9.1	9.0	9.0	9.0	8.2	8.2	8.2	8.8	8.8	8.8
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		9.1			9.0			8.2			8.8	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.1			9.0			8.2			8.8	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.2	0.2	0.2

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Cumulative PM

Intersection #1006: Ingalls St / Egbert Ave



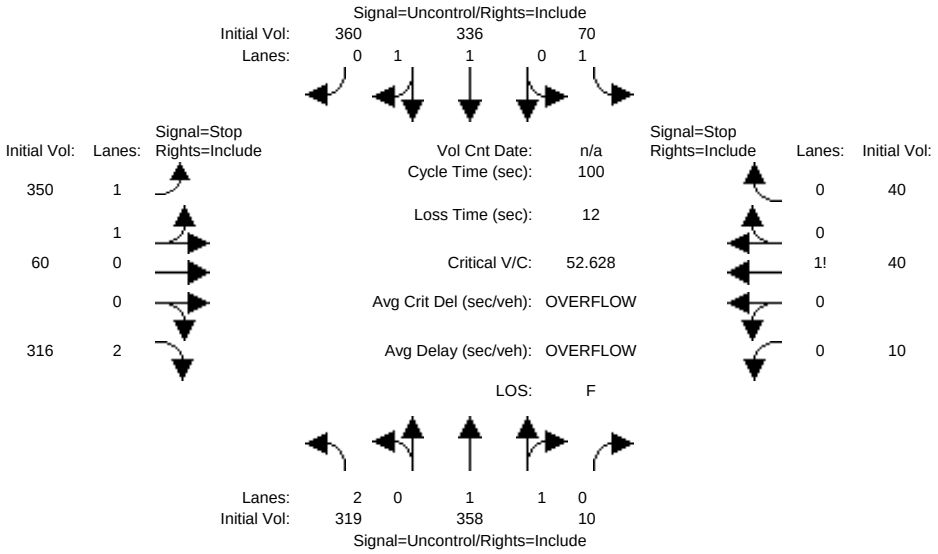
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	10	190	60	20	220	10	10	20	30	20	50	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	190	60	20	220	10	10	20	30	20	50	20
Added Vol:	0	0	0	0	0	0	0	-1	0	0	-7	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	190	60	20	220	10	10	19	30	20	43	20
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:	10	194	61	20	224	10	10	19	31	20	44	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	194	61	20	224	10	10	19	31	20	44	20
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:	10	194	61	20	224	10	10	19	31	20	44	20
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.04	0.73	0.23	0.08	0.88	0.04	0.17	0.32	0.51	0.24	0.52	0.24
Final Sat.:	31	580	183	62	679	31	113	215	340	158	340	158
Capacity Analysis Module:												
Vol/Sat:	0.33	0.33	0.33	0.33	0.33	0.33	0.09	0.09	0.09	0.13	0.13	0.13
Crit Moves:		****			****			****			****	
Delay/Veh:	9.5	9.5	9.5	9.7	9.7	9.7	8.3	8.3	8.3	8.7	8.7	8.7
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
AdjDel/Veh:	9.5	9.5	9.5	9.7	9.7	9.7	8.3	8.3	8.3	8.7	8.7	8.7
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		9.5			9.7			8.3			8.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.5			9.7			8.3			8.7	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative AM

Intersection #1007: Arelious Walker Dr / Gilman Ave



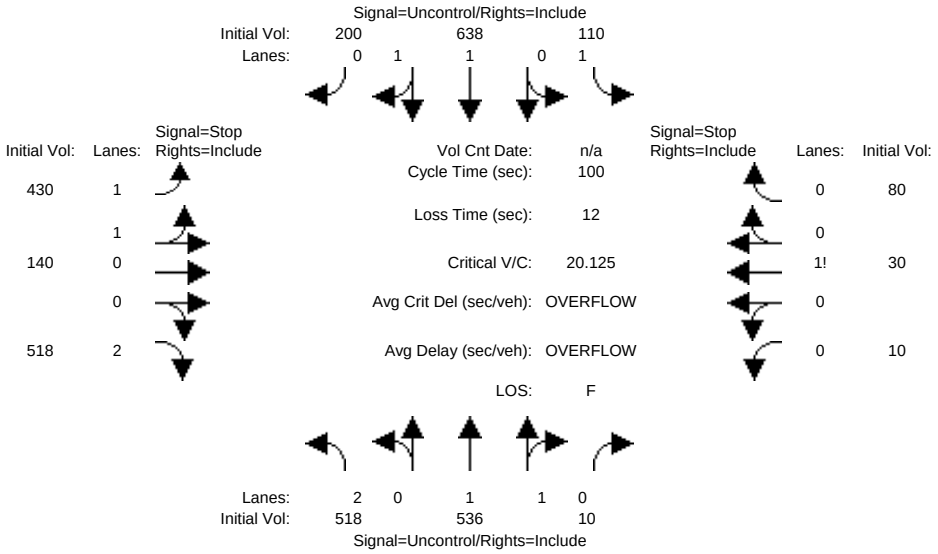
Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	320	360	10	70	340	360	350	60	320	10	40	40
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	320	360	10	70	340	360	350	60	320	10	40	40
Added Vol:	-1	-2	0	0	-4	0	0	0	-4	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	319	358	10	70	336	360	350	60	316	10	40	40
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:	326	365	10	71	343	367	357	61	322	10	41	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	326	365	10	71	343	367	357	61	322	10	41	41
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	710	xxxx	xxxxx	376	xxxx	xxxxx	1523	1696	355	1366	1874	188
Potent Cap.:	885	xxxx	xxxxx	1180	xxxx	xxxxx	81	92	641	106	71	822
Move Cap.:	885	xxxx	xxxxx	1180	xxxx	xxxxx	7	54	641	0	42	822
Volume/Cap:	0.37	xxxx	xxxx	0.06	xxxx	xxxx	52.63	1.12	0.50	xxxx	0.97	0.05
Level Of Service Module:												
2Way95thQ:	1.7	xxxx	xxxxx	0.2	xxxx	xxxxx	24.2	xxxx	2.7	xxxx	xxxx	xxxxx
Control Del:	11.4	xxxx	xxxxx	8.2	xxxx	xxxxx	12454	xxxx	16.2	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	A	*	*	F	*	C	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	9	xxxx	xxxxx	xxxx	0	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	17.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	12728	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	F	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			7128.8			xxxxxx		
ApproachLOS:	*			*			F			F		

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative PM

Intersection #1007: Arelious Walker Dr / Gilman Ave

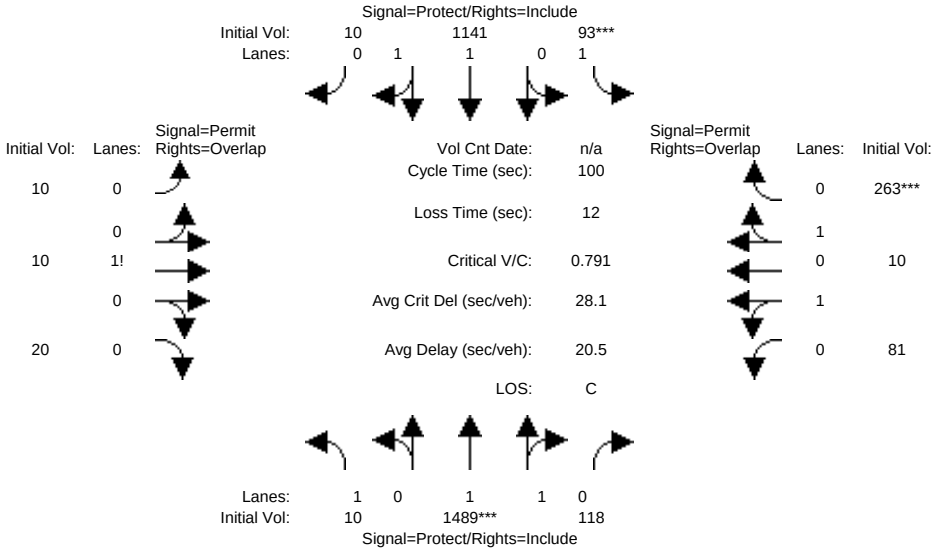


Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	520	540	10	110	640	200	430	140	520	10	30	80
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	520	540	10	110	640	200	430	140	520	10	30	80
Added Vol:	-2	-4	0	0	-2	0	0	0	-2	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	518	536	10	110	638	200	430	140	518	10	30	80
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:	529	547	10	112	651	204	439	143	529	10	31	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	529	547	10	112	651	204	439	143	529	10	31	82
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	855	xxxx	xxxxx	557	xxxx	xxxxx	2323	2592	428	2231	2689	279
Potent Cap.:	780	xxxx	xxxxx	1010	xxxx	xxxxx	20	25	575	24	21	719
Move Cap.:	780	xxxx	xxxxx	1010	xxxx	xxxxx	0	7	575	0	6	719
Volume/Cap:	0.68	xxxx	xxxx	0.11	xxxx	xxxx	xxxx	20.13	0.92	xxxx	4.99	0.11
Level Of Service Module:												
2Way95thQ:	4.8	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	8.6	xxxx	xxxx	xxxxx
Control Del:	18.7	xxxx	xxxxx	9.0	xxxx	xxxxx	xxxxx	xxxx	47.0	xxxxx	xxxx	xxxxx
LOS by Move:	C	*	*	A	*	*	*	*	E	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	0	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			+Inf			xxxxxx		
ApproachLOS:	*			*			F			F		

Note: Queue reported is the number of cars per lane.

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

Intersection #1001: 3rd St / Carroll Ave



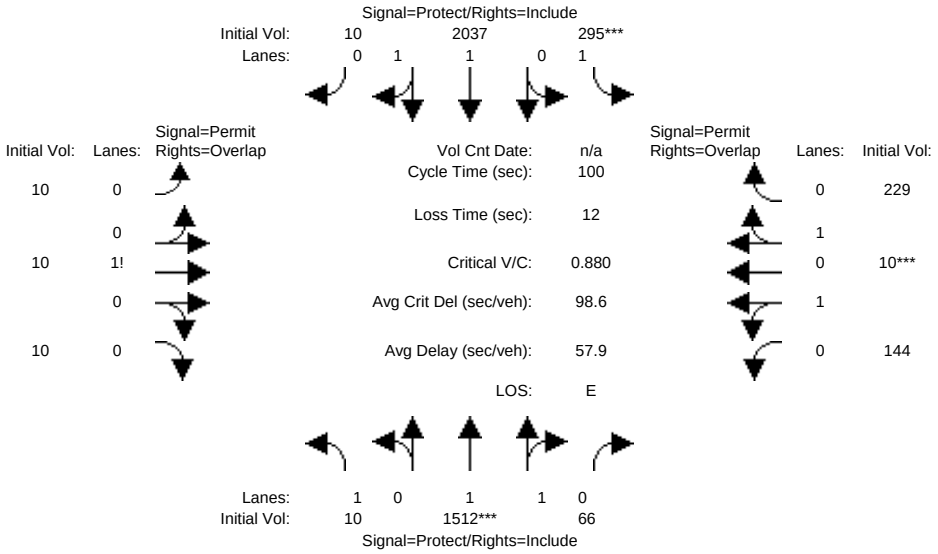
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	1	65	65	5	69	69	15	15	15	15	15	15
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	10	1550	120	110	1150	10	10	10	20	90	10	280
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:	10	1550	120	110	1150	10	10	10	20	90	10	280
Added Vol:	0	-61	-2	-17	-9	0	0	0	0	-9	0	-17
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	1489	118	93	1141	10	10	10	20	81	10	263
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:	10	1519	120	95	1164	10	10	10	20	83	10	268
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	1519	120	95	1164	10	10	10	20	83	10	268
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:	10	1519	120	95	1164	10	10	10	20	83	10	268
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.90	0.90	0.82	0.82	0.82	0.66	0.66	0.66
Lanes:	1.00	1.85	0.15	1.00	1.98	0.02	0.25	0.25	0.50	0.89	0.11	1.00
Final Sat.:	1718	3149	250	1718	3403	30	390	390	781	1120	138	1258
Capacity Analysis Module:												
Vol/Sat:	0.01	0.48	0.48	0.06	0.34	0.34	0.03	0.03	0.03	0.07	0.07	0.21
Crit Moves:		****			****							****
Green/Cycle:	0.01	0.65	0.65	0.06	0.70	0.70	0.17	0.17	0.18	0.17	0.17	0.23
Volume/Cap:	0.59	0.74	0.74	0.93	0.49	0.49	0.15	0.15	0.14	0.43	0.43	0.93
Delay/Veh:	145.6	14.1	14.1	117.7	7.6	7.6	36.6	36.6	35.6	38.8	38.8	68.2
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:	145.6	14.1	14.1	117.7	7.6	7.6	36.6	36.6	35.6	38.8	38.8	68.2
LOS by Move:	F	B	B	F	A	A	D	D	D	D	D	E
HCM2kAvgQ:	1	19	19	6	9	9	1	1	1	3	3	11

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1001: 3rd St / Carroll Ave



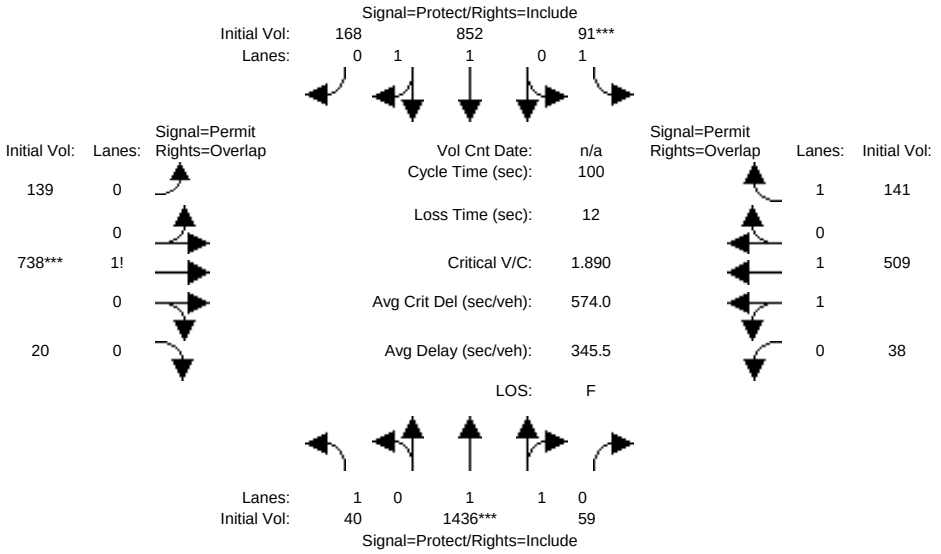
Street Name:	3rd St						Carroll Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	1	65	65	5	69	69	15	15	15	15	15	15
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	10	1550	70	340	2060	10	10	10	10	150	10	240
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:	10	1550	70	340	2060	10	10	10	10	150	10	240
Added Vol:	0	-38	-4	-45	-23	0	0	0	0	-6	0	-11
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	1512	66	295	2037	10	10	10	10	144	10	229
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:	10	1543	67	301	2079	10	10	10	10	147	10	234
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	1543	67	301	2079	10	10	10	10	147	10	234
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:	10	1543	67	301	2079	10	10	10	10	147	10	234
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.90	0.90	0.78	0.78	0.78	0.65	0.65	0.65
Lanes:	1.00	1.92	0.08	1.00	1.99	0.01	0.34	0.33	0.33	0.94	0.06	1.00
Final Sat.:	1718	3273	143	1718	3417	17	495	495	495	1153	80	1233
Capacity Analysis Module:												
Vol/Sat:	0.01	0.47	0.47	0.18	0.61	0.61	0.02	0.02	0.02	0.13	0.13	0.19
Crit Moves:		****		****							****	
Green/Cycle:	0.01	0.65	0.65	0.08	0.72	0.72	0.15	0.15	0.16	0.15	0.15	0.23
Volume/Cap:	0.57	0.73	0.73	2.19	0.85	0.85	0.14	0.14	0.13	0.85	0.85	0.82
Delay/Veh:	139.8	13.7	13.7	604.5	13.8	13.8	38.2	38.2	37.1	59.0	59.0	51.5
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:	139.8	13.7	13.7	604.5	13.8	13.8	38.2	38.2	37.1	59.0	59.0	51.5
LOS by Move:	F	B	B	F	B	B	D	D	D	E	E	D
HCM2kAvgQ:	1	18	18	31	26	26	1	1	1	5	5	7

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



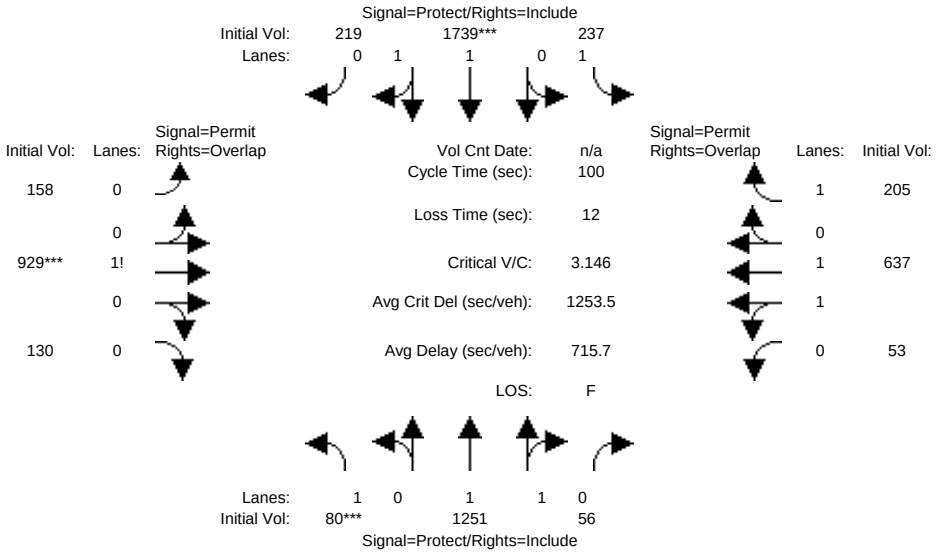
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	40	1440	60	100	870	170	140	750	20	50	530	150
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:	40	1440	60	100	870	170	140	750	20	50	530	150
Added Vol:	0	-4	-1	-9	-18	-2	-1	-12	0	-12	-21	-9
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	40	1436	59	91	852	168	139	738	20	38	509	141
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:	41	1465	60	93	869	171	142	753	20	39	519	144
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	1465	60	93	869	171	142	753	20	39	519	144
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:	41	1465	60	93	869	171	142	753	20	39	519	144
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.88	0.88	0.42	0.42	0.42	0.71	0.71	0.82
Lanes:	1.00	1.92	0.08	1.00	1.67	0.33	0.15	0.83	0.02	0.14	1.86	1.00
Final Sat.:	1718	3248	133	1718	2799	552	122	650	18	188	2515	1551
Capacity Analysis Module:												
Vol/Sat:	0.02	0.45	0.45	0.05	0.31	0.31	1.16	1.16	1.16	0.21	0.21	0.09
Crit Moves:		****		****				****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.20	0.92	0.92	0.45	0.63	0.63	4.29	4.29	2.97	0.76	0.76	0.24
Delay/Veh:	41.8	33.6	33.6	47.9	20.7	20.7	1528	1528	925.9	41.1	41.1	21.4
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:	41.8	33.6	33.6	47.9	20.7	20.7	1528	1528	925.9	41.1	41.1	21.4
LOS by Move:	D	C	C	D	C	C	F	F	F	D	D	C
HCM2kAvgQ:	1	28	28	3	13	13	114	114	103	10	10	3

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1002: 3rd St / Paul Ave / Gilman Ave



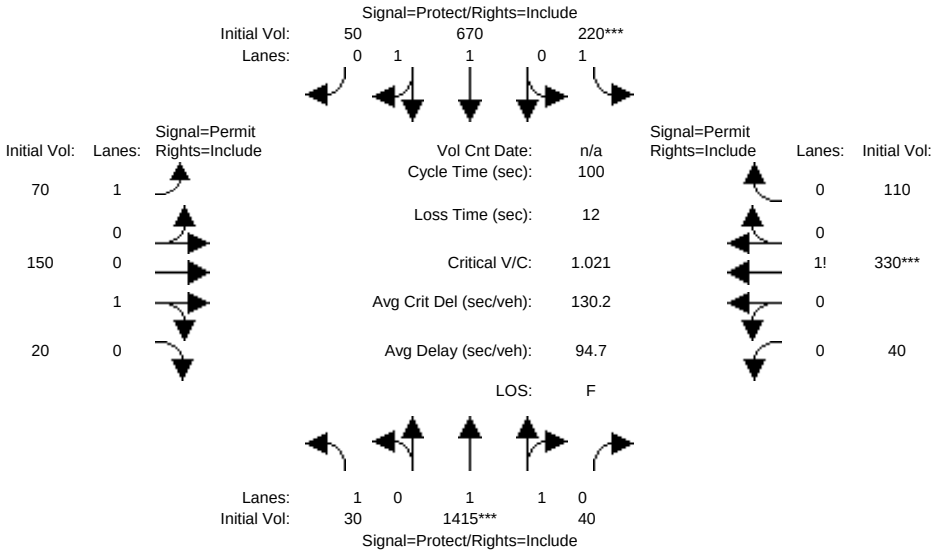
Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	80	1260	60	260	1750	220	160	960	130	60	650	210
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:	80	1260	60	260	1750	220	160	960	130	60	650	210
Added Vol:	0	-9	-4	-23	-11	-1	-2	-31	0	-7	-13	-5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	80	1251	56	237	1739	219	158	929	130	53	637	205
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:	82	1277	57	242	1774	223	161	948	133	54	650	209
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	1277	57	242	1774	223	161	948	133	54	650	209
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:	82	1277	57	242	1774	223	161	948	133	54	650	209
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.89	0.89	0.31	0.31	0.31	0.65	0.65	0.82
Lanes:	1.00	1.91	0.09	1.00	1.78	0.22	0.13	0.76	0.11	0.15	1.85	1.00
Final Sat.:	1718	3237	145	1718	3000	378	76	445	62	189	2267	1551
Capacity Analysis Module:												
Vol/Sat:	0.05	0.39	0.39	0.14	0.59	0.59	2.13	2.13	2.13	0.29	0.29	0.13
Crit Moves:	****				****			****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.40	0.80	0.80	1.17	1.21	1.21	7.89	7.89	5.46	1.06	1.06	0.35
Delay/Veh:	46.3	25.7	25.7	161.1	125	124.6	3149	3149	2048	89.1	89.1	23.1
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:	46.3	25.7	25.7	161.1	125	124.6	3149	3149	2048	89.1	89.1	23.1
LOS by Move:	D	C	C	F	F	F	F	F	F	F	F	C
HCM2kAvgQ:	2	20	20	15	57	57	171	171	163	19	19	5

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1003: 3rd St / Jamestown Ave



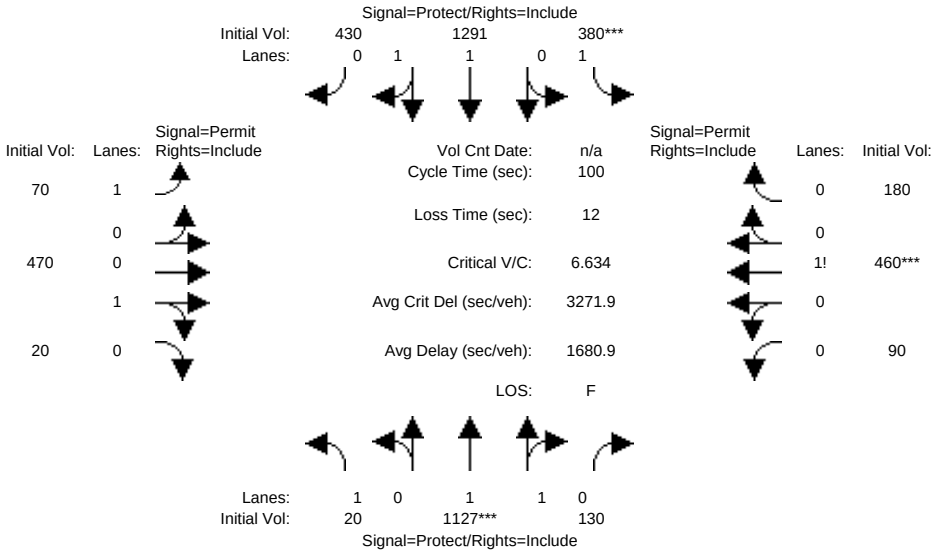
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	60	60	4	60	60	21	21	21	21	21	21
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	30	1420	40	220	700	50	70	150	20	40	330	110
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:	30	1420	40	220	700	50	70	150	20	40	330	110
Added Vol:	0	-5	0	0	-30	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	30	1415	40	220	670	50	70	150	20	40	330	110
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:	31	1444	41	224	684	51	71	153	20	41	337	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	1444	41	224	684	51	71	153	20	41	337	112
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:	31	1444	41	224	684	51	71	153	20	41	337	112
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.90	0.90	0.98	0.96	0.96	0.77	0.77	0.77
Lanes:	1.00	1.95	0.05	1.00	1.86	0.14	1.00	0.88	0.12	0.08	0.69	0.23
Final Sat.:	1718	3329	94	1718	3166	236	1862	1613	215	122	1007	336
Capacity Analysis Module:												
Vol/Sat:	0.02	0.43	0.43	0.13	0.22	0.22	0.04	0.09	0.09	0.33	0.33	0.33
Crit Moves:		****		****							****	
Green/Cycle:	0.04	0.60	0.60	0.07	0.63	0.63	0.21	0.21	0.21	0.21	0.21	0.21
Volume/Cap:	0.43	0.72	0.72	1.87	0.34	0.34	0.18	0.45	0.45	1.59	1.59	1.59
Delay/Veh:	64.1	16.4	16.4	466.3	9.3	9.3	33.5	38.3	38.3	321.0	321	321.0
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:	64.1	16.4	16.4	466.3	9.3	9.3	33.5	38.3	38.3	321.0	321	321.0
LOS by Move:	E	B	B	F	A	A	C	D	D	F	F	F
HCM2kAvgQ:	1	18	18	20	6	6	2	5	5	39	39	39

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1003: 3rd St / Jamestown Ave



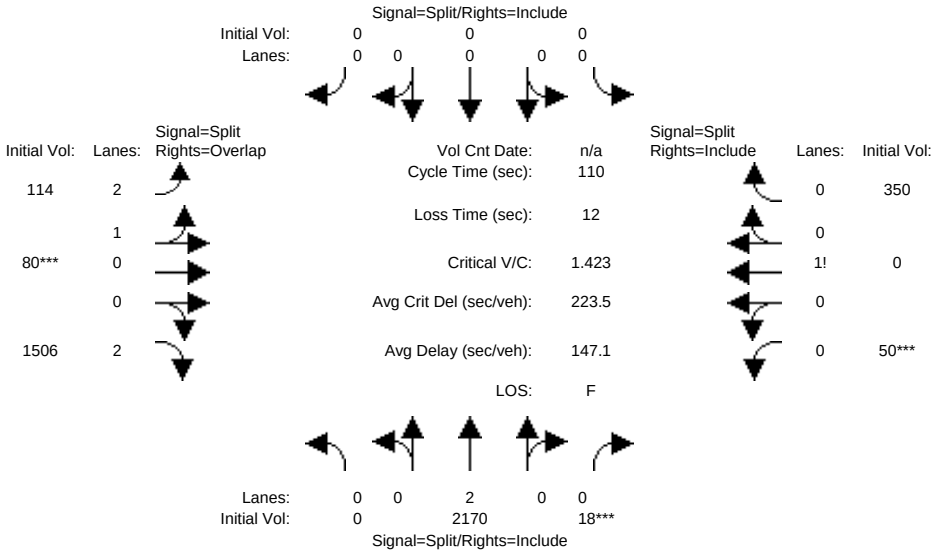
Street Name:	3rd St						Jamestown Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	4	60	60	4	60	60	21	21	21	21	21	21
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	20	1140	130	380	1310	430	70	470	20	90	460	180
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:	20	1140	130	380	1310	430	70	470	20	90	460	180
Added Vol:	0	-13	0	0	-19	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	1127	130	380	1291	430	70	470	20	90	460	180
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:	20	1150	133	388	1317	439	71	480	20	92	469	184
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	1150	133	388	1317	439	71	480	20	92	469	184
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:	20	1150	133	388	1317	439	71	480	20	92	469	184
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.87	0.87	0.98	0.97	0.97	0.07	0.07	0.07
Lanes:	1.00	1.79	0.21	1.00	1.50	0.50	1.00	0.96	0.04	0.12	0.63	0.25
Final Sat.:	1718	3035	350	1718	2483	827	1862	1775	76	18	90	35
Capacity Analysis Module:												
Vol/Sat:	0.01	0.38	0.38	0.23	0.53	0.53	0.04	0.27	0.27	5.23	5.23	5.23
Crit Moves:		****		****							****	
Green/Cycle:	0.04	0.60	0.60	0.04	0.60	0.60	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.30	0.63	0.63	5.64	0.88	0.88	0.16	1.13	1.13	21.81	21.81	21.81
Delay/Veh:	57.3	14.4	14.4	2168	23.2	23.2	30.8	120	119.7	9456	9456	9456
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:	57.3	14.4	14.4	2168	23.2	23.2	30.8	120	119.7	9456	9456	9456
LOS by Move:	E	B	B	F	C	C	C	F	F	F	F	F
HCM2kAvgQ:	1	14	14	51	29	29	2	26	26	111	111	111

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1004: Bayshore Blvd / Hester Ave



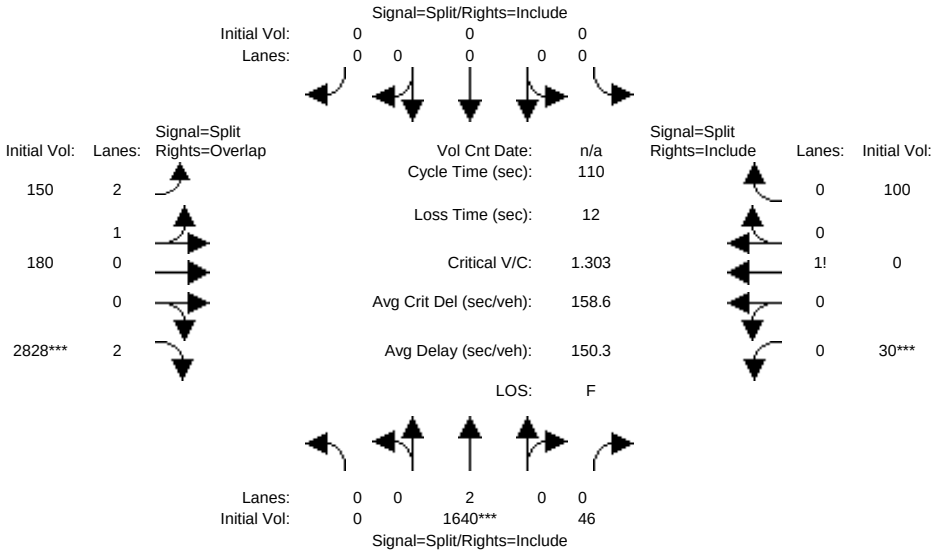
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	2170	20	0	0	0	130	80	1510	50	0	350
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	2170	20	0	0	0	130	80	1510	50	0	350
Added Vol:	0	0	-2	0	0	0	-16	0	-4	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	2170	18	0	0	0	114	80	1506	50	0	350
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	2214	18	0	0	0	116	82	1537	51	0	357
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2214	18	0	0	0	116	82	1537	51	0	357
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	2214	18	0	0	0	116	82	1537	51	0	357
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.90	0.92	0.71	0.73	1.00	0.73
Lanes:	0.00	1.99	0.01	0.00	0.00	0.00	2.00	1.00	2.00	0.13	0.00	0.87
Final Sat.:	0	2389	20	0	0	0	3407	1756	2706	173	0	1214
Capacity Analysis Module:												
Vol/Sat:	0.00	0.93	0.93	0.00	0.00	0.00	0.03	0.05	0.57	0.29	0.00	0.29
Crit Moves:			****					****		****		
Green/Cycle:	0.00	0.65	0.65	0.00	0.00	0.00	0.03	0.03	0.68	0.21	0.00	0.21
Volume/Cap:	0.00	1.42	1.42	0.00	0.00	0.00	1.04	1.42	0.83	1.42	0.00	1.42
Delay/Veh:	0.0	213	213.1	0.0	0.0	0.0	130.9	280	17.2	252.9	0.0	252.9
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	213	213.1	0.0	0.0	0.0	130.9	280	17.2	252.9	0.0	252.9
LOS by Move:	A	F	F	A	A	A	F	F	B	F	A	F
HCM2kAvgQ:	0	82	117	0	0	0	5	8	24	30	0	30

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1004: Bayshore Blvd / Hester Ave



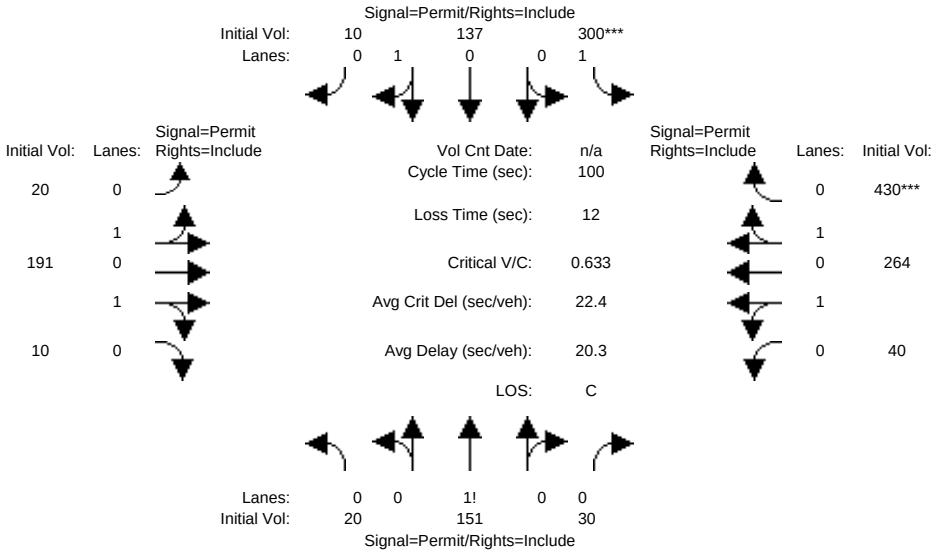
Street Name:	Bayshore Blvd						Hester Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	1640	50	0	0	0	160	180	2830	30	0	100
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	1640	50	0	0	0	160	180	2830	30	0	100
Added Vol:	0	0	-4	0	0	0	-10	0	-2	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1640	46	0	0	0	150	180	2828	30	0	100
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	1673	47	0	0	0	153	184	2886	31	0	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1673	47	0	0	0	153	184	2886	31	0	102
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	1673	47	0	0	0	153	184	2886	31	0	102
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.63	0.90	1.00	1.00	1.00	0.90	0.93	0.71	0.74	1.00	0.74
Lanes:	0.00	1.96	0.04	0.00	0.00	0.00	2.00	1.00	2.00	0.23	0.00	0.77
Final Sat.:	0	2350	66	0	0	0	3432	1769	2706	324	0	1079
Capacity Analysis Module:												
Vol/Sat:	0.00	0.71	0.71	0.00	0.00	0.00	0.04	0.10	1.07	0.09	0.00	0.09
Crit Moves:		****							****	****		
Green/Cycle:	0.00	0.55	0.55	0.00	0.00	0.00	0.27	0.27	0.82	0.07	0.00	0.07
Volume/Cap:	0.00	1.30	1.30	0.00	0.00	0.00	0.16	0.38	1.30	1.30	0.00	1.30
Delay/Veh:	0.0	167	167.0	0.0	0.0	0.0	30.7	33.8	149.8	241.8	0.0	241.8
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:	0.0	167	167.0	0.0	0.0	0.0	30.7	33.8	149.8	241.8	0.0	241.8
LOS by Move:	A	F	F	A	A	A	C	C	F	F	A	F
HCM2kAvgQ:	0	57	80	0	0	0	2	5	102	10	0	10

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1005: Ingalls St / CarrollAve



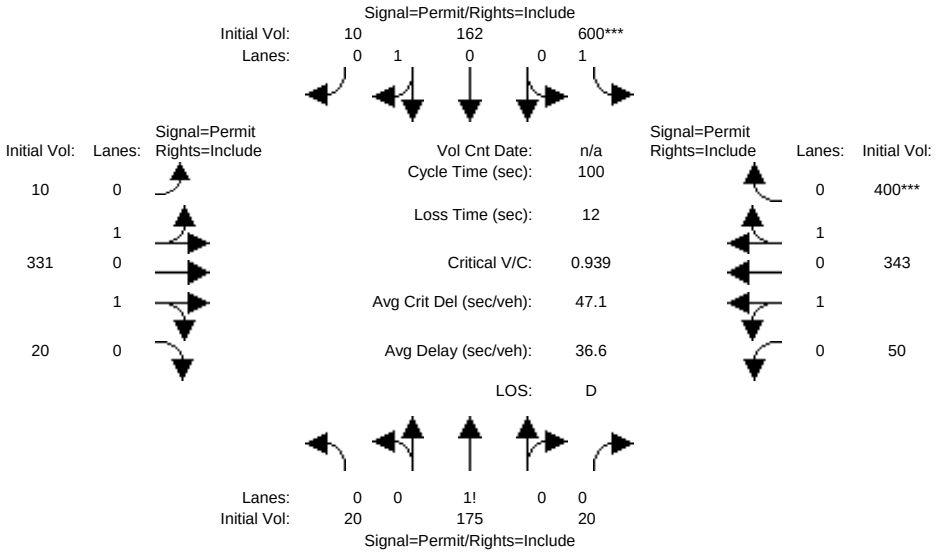
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	20	160	30	300	140	10	20	210	10	40	290	430
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	160	30	300	140	10	20	210	10	40	290	430
Added Vol:	0	-9	0	0	-3	0	0	-19	0	0	-26	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	151	30	300	137	10	20	191	10	40	264	430
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:	20	154	31	306	140	10	20	195	10	41	269	439
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	154	31	306	140	10	20	195	10	41	269	439
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:	20	154	31	306	140	10	20	195	10	41	269	439
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	0.63	0.94	0.94	0.81	0.81	0.81	0.76	0.76	0.76
Lanes:	0.10	0.75	0.15	1.00	0.93	0.07	0.18	1.73	0.09	0.13	0.87	1.00
Final Sat.:	175	1324	263	1206	1669	122	277	2648	139	191	1258	1448
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.25	0.08	0.08	0.07	0.07	0.07	0.21	0.21	0.30
Crit Moves:				****								****
Green/Cycle:	0.40	0.40	0.40	0.40	0.40	0.40	0.48	0.48	0.48	0.48	0.48	0.48
Volume/Cap:	0.29	0.29	0.29	0.63	0.21	0.21	0.15	0.15	0.15	0.45	0.45	0.63
Delay/Veh:	20.5	20.5	20.5	26.8	19.7	19.7	14.7	14.7	14.7	17.5	17.5	20.6
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:	20.5	20.5	20.5	26.8	19.7	19.7	14.7	14.7	14.7	17.5	17.5	20.6
LOS by Move:	C	C	C	C	B	B	B	B	B	B	B	C
HCM2kAvgQ:	4	4	4	8	3	3	2	2	2	7	7	11

Note: Queue reported is the number of cars per lane.

Existing

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

Intersection #1005: Ingalls St / CarrollAve



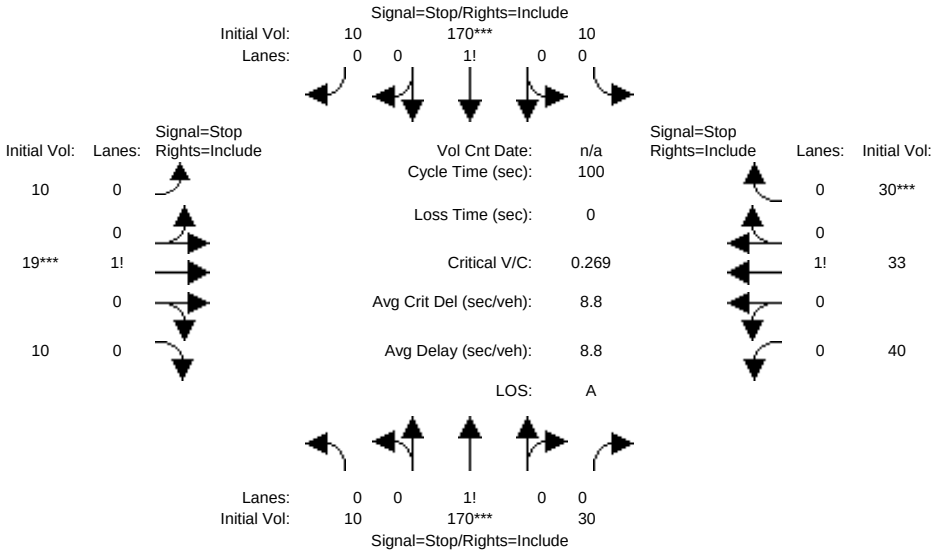
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	20	180	20	600	170	10	10	380	20	50	360	400
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	180	20	600	170	10	10	380	20	50	360	400
Added Vol:	0	-5	0	0	-8	0	0	-49	0	0	-17	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	175	20	600	162	10	10	331	20	50	343	400
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:	20	179	20	612	165	10	10	338	20	51	350	408
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	179	20	612	165	10	10	338	20	51	350	408
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:	20	179	20	612	165	10	10	338	20	51	350	408
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.60	0.94	0.94	0.86	0.86	0.86	0.75	0.75	0.75
Lanes:	0.09	0.82	0.09	1.00	0.94	0.06	0.06	1.83	0.11	0.13	0.87	1.00
Final Sat.:	166	1451	166	1134	1688	104	90	2986	180	181	1242	1423
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.54	0.10	0.10	0.11	0.11	0.11	0.28	0.28	0.29
Crit Moves:				****								****
Green/Cycle:	0.57	0.57	0.57	0.57	0.57	0.57	0.31	0.31	0.31	0.31	0.31	0.31
Volume/Cap:	0.21	0.21	0.21	0.94	0.17	0.17	0.37	0.37	0.37	0.92	0.92	0.94
Delay/Veh:	10.4	10.4	10.4	41.3	10.1	10.1	27.4	27.4	27.4	48.6	48.6	51.6
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:	10.4	10.4	10.4	41.3	10.1	10.1	27.4	27.4	27.4	48.6	48.6	51.6
LOS by Move:	B	B	B	D	B	B	C	C	C	D	D	D
HCM2kAvgQ:	3	3	3	22	3	3	5	5	5	17	17	17

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Cumulative AM

Intersection #1006: Ingalls St / Egbert Ave



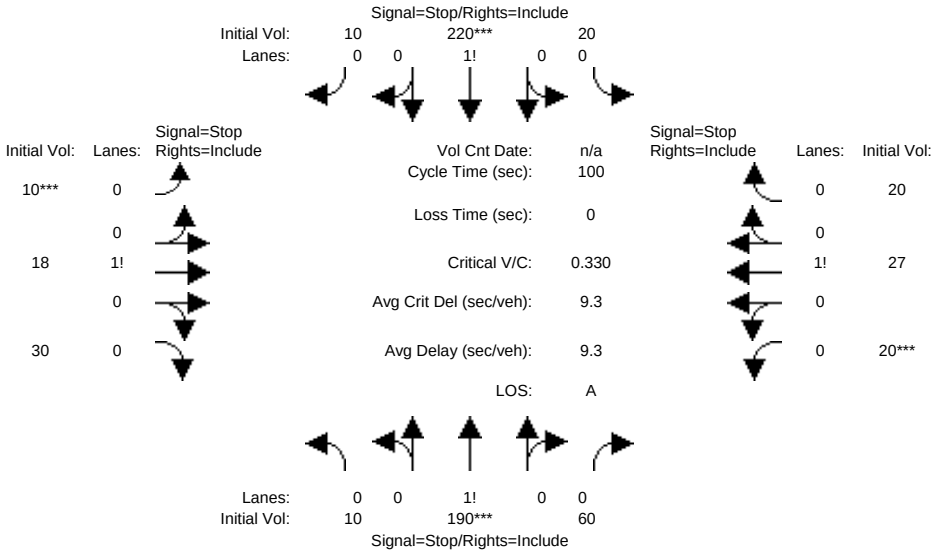
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	10	170	30	10	170	10	10	20	10	40	70	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	170	30	10	170	10	10	20	10	40	70	30
Added Vol:	0	0	0	0	0	0	0	-1	0	0	-37	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	170	30	10	170	10	10	19	10	40	33	30
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:	10	173	31	10	173	10	10	19	10	41	34	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	173	31	10	173	10	10	19	10	41	34	31
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:	10	173	31	10	173	10	10	19	10	41	34	31
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.05	0.81	0.14	0.05	0.90	0.05	0.25	0.49	0.26	0.39	0.32	0.29
Final Sat.:	38	646	114	41	701	41	176	335	176	275	227	206
Capacity Analysis Module:												
Vol/Sat:	0.27	0.27	0.27	0.25	0.25	0.25	0.06	0.06	0.06	0.15	0.15	0.15
Crit Moves:		****			****			****				****
Delay/Veh:	8.9	8.9	8.9	8.8	8.8	8.8	8.1	8.1	8.1	8.5	8.5	8.5
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
AdjDel/Veh:	8.9	8.9	8.9	8.8	8.8	8.8	8.1	8.1	8.1	8.5	8.5	8.5
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		8.9			8.8			8.1			8.5	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.9			8.8			8.1			8.5	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM 4-Way Stop (Future Volume Alternative)
Cumulative PM

Intersection #1006: Ingalls St / Egbert Ave



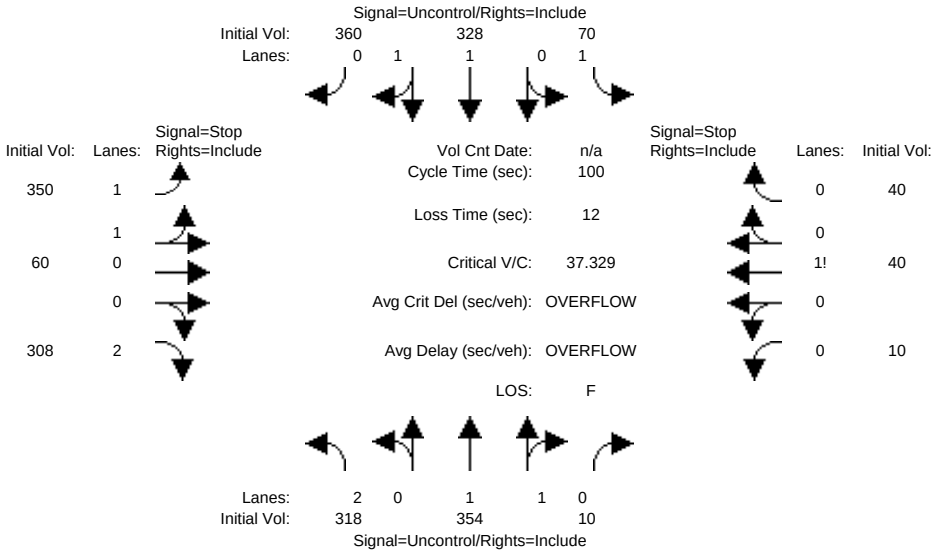
Street Name:	Ingalls St						Egbert Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	10	190	60	20	220	10	10	20	30	20	50	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	190	60	20	220	10	10	20	30	20	50	20
Added Vol:	0	0	0	0	0	0	0	-2	0	0	-23	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	190	60	20	220	10	10	18	30	20	27	20
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:	10	194	61	20	224	10	10	18	31	20	28	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	194	61	20	224	10	10	18	31	20	28	20
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:	10	194	61	20	224	10	10	18	31	20	28	20
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.04	0.73	0.23	0.08	0.88	0.04	0.17	0.31	0.52	0.30	0.40	0.30
Final Sat.:	31	587	185	63	688	31	117	210	350	197	266	197
Capacity Analysis Module:												
Vol/Sat:	0.33	0.33	0.33	0.33	0.33	0.33	0.09	0.09	0.09	0.10	0.10	0.10
Crit Moves:		****			****			****			****	
Delay/Veh:	9.4	9.4	9.4	9.6	9.6	9.6	8.2	8.2	8.2	8.5	8.5	8.5
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
AdjDel/Veh:	9.4	9.4	9.4	9.6	9.6	9.6	8.2	8.2	8.2	8.5	8.5	8.5
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		9.4			9.6			8.2			8.5	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.4			9.6			8.2			8.5	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.5	0.5	0.5	0.4	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative AM

Intersection #1007: Arelious Walker Dr / Gilman Ave



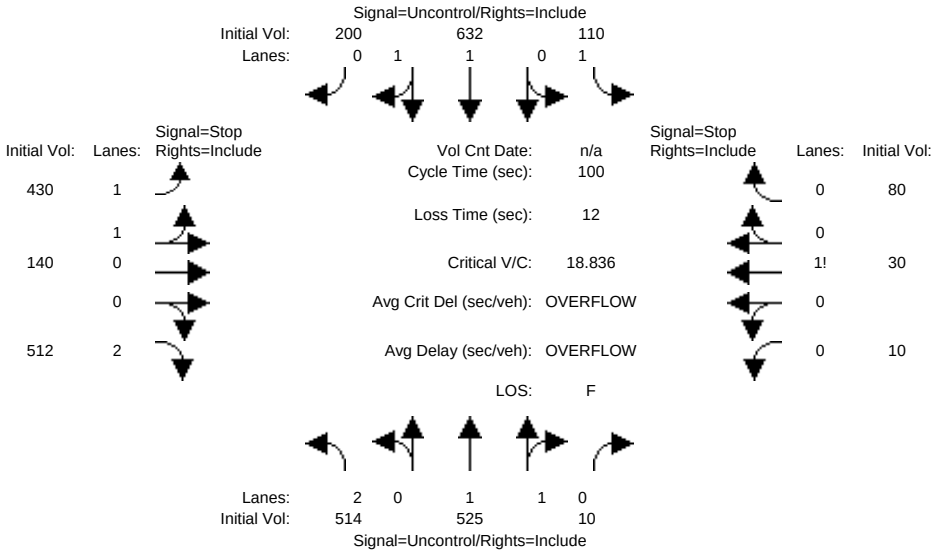
Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	320	360	10	70	340	360	350	60	320	10	40	40
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	320	360	10	70	340	360	350	60	320	10	40	40
Added Vol:	-2	-6	0	0	-12	0	0	0	-12	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	318	354	10	70	328	360	350	60	308	10	40	40
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:	324	361	10	71	335	367	357	61	314	10	41	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	324	361	10	71	335	367	357	61	314	10	41	41
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	702	xxxx	xxxxx	371	xxxx	xxxxx	1511	1682	351	1356	1860	186
Potent Cap.:	891	xxxx	xxxxx	1184	xxxx	xxxxx	83	94	645	108	72	825
Move Cap.:	891	xxxx	xxxxx	1184	xxxx	xxxxx	10	56	645	0	43	825
Volume/Cap:	0.36	xxxx	xxxx	0.06	xxxx	xxxx	37.33	1.10	0.49	xxxx	0.94	0.05
Level Of Service Module:												
2Way95thQ:	1.6	xxxx	xxxxx	0.2	xxxx	xxxxx	23.9	xxxx	2.5	xxxx	xxxx	xxxxx
Control Del:	11.3	xxxx	xxxxx	8.2	xxxx	xxxxx	8710	xxxx	15.8	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	A	*	*	F	*	C	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	12	xxxx	xxxxx	xxxx	0	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	16.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9045	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	F	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			5090.1			xxxxxx		
ApproachLOS:	*			*			F			F		

Note: Queue reported is the number of cars per lane.

Existing

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative PM

Intersection #1007: Arelious Walker Dr / Gilman Ave



Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Volume Module:												
Base Vol:	520	540	10	110	640	200	430	140	520	10	30	80
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:	520	540	10	110	640	200	430	140	520	10	30	80
Added Vol:	-6	-15	0	0	-8	0	0	0	-8	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	514	525	10	110	632	200	430	140	512	10	30	80
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:	524	536	10	112	645	204	439	143	522	10	31	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	524	536	10	112	645	204	439	143	522	10	31	82
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	849	xxxx	xxxxx	546	xxxx	xxxxx	2304	2566	424	2208	2663	273
Potent Cap.:	785	xxxx	xxxxx	1019	xxxx	xxxxx	21	26	578	24	22	725
Move Cap.:	785	xxxx	xxxxx	1019	xxxx	xxxxx	0	8	578	0	7	725
Volume/Cap:	0.67	xxxx	xxxx	0.11	xxxx	xxxx	xxxx	18.84	0.90	xxxx	4.67	0.11
Level Of Service Module:												
2Way95thQ:	4.7	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	8.3	xxxx	xxxx	xxxxx
Control Del:	18.3	xxxx	xxxxx	9.0	xxxx	xxxxx	xxxxx	xxxx	44.4	xxxxx	xxxx	xxxxx
LOS by Move:	C	*	*	A	*	*	*	*	E	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	0	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			+Inf			xxxxxx		
ApproachLOS:	*			*			F			F		

Note: Queue reported is the number of cars per lane.

APPENDIX C:
SELECTED OTHER RESOURCES CONSULTED

Candlestick Point & Hunters Point Shipyard Phase II

Transportation Plan

Approved June 3, 2010
Agency Commission Resolution No. 69-2010

FEHR & PEERS
TRANSPORTATION CONSULTANTS

AECOM

LENNAR URBAN

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1 Executive Summary

1.1 Introduction

The Candlestick Point and Hunters Point Shipyard Phase II Development Plan contemplates a new, mixed-use community in southeastern San Francisco. Lennar, the lead developer of the community, is working in partnership with various City agencies and departments to define the Development Plan. The Development Plan is subject to environmental review and approval by various city, state, and federal authorities.

This Transportation Plan is one of several plans and reports describing the proposed Development Plan. The Transportation Plan presents goals, principles, and strategies to meet the travel demand needs of an emerging mixed-use, urban neighborhood in southeast San Francisco. Incorporating innovative practices and sustainable development principles, the Plan seeks to provide residents, employees, and visitors of the two neighborhoods with high-quality transportation infrastructure and services.

Goals & Principles

The Transportation Plan's (referred to throughout as "the Plan") elements prioritize walking, bicycling, and transit travel, making these attractive and practical transportation options. At full build-out, the project targets a weekday PM peak hour work trip mode split of not more than 45 percent auto, and not less than 30 percent transit, 20 percent walk, and 5 percent bike, as shown in **Table 1**. This aspirational goal compares with an existing PM peak hour work trip mode split in Superdistrict 3 (SD 3) of 66 percent auto, 16 percent transit, 16 percent walk, and 2 percent bike. Integrating transportation and land use, providing new and improved transit options, an effective Transportation Demand Management (TDM) Program, and properly designed streets will help achieve this goal. The project also enhances the self-sufficiency and sustainability of adjacent neighborhoods (such as the Bayview, Executive Park/Visitacion Valley, the Central Waterfront, India Basin and across the border in Brisbane) by linking these areas to the project's strong transit, bicycle and pedestrian networks, and neighborhood services within close proximity while providing seamless transit to regional employment center and destinations. This linkage should also serve to reduce overall trips and vehicle miles traveled in the area.

Table 1: Project Mode Split Goals - PM Peak Hour Work Trips

Mode	SD-3 Mode Split[1]	Project Travel Behavior Goal[2]	Difference
Auto/Carpool	66%	45%	**-21%**
Transit	16%	30%	**+14%**
Walk	16%	20%	**+4%**
Bike	2%	5%	**+3%**
Total	100%	100%	

Source: Fehr & Peers – May 2009

1 The Metropolitan Transportation Commission (MTC) maintains a set of regional travel analysis zones for use in MTC planning studies. In addition to regional travel analysis zones and counties, MTC supports an intermediate geographic scale, "superdistricts," for analysis and reporting purposes. There are 34 superdistricts in the nine-county Bay Area.

2 Goals are based on precedents described in Table 3 at full project build-out. Auto mode share is a maximum, others are minimums.

It is important to note that even small differences in the current SD-3 mode split and the project travel behavior goal will have a large effect due to the scale of the Project.

In addition, the project aims to create a community with all of the services necessary to achieve self-sufficiency, and serve as a model of sustainable development and transportation.

Integration of Transportation & Land Use

The land use plan incorporates a dense, compact development pattern centered around mixed-use transit nodes. The following illustrate a few features of the plan designed to promote pedestrian, bicycle, and transit travel:

- The development pattern is designed to facilitate walking and cycling for internal trips, and bus service for internal trips, trips downtown and to regional transit hubs;
- Significant portions of the project area are preserved as open space;
- Streets are designed to support a variety of travel modes at moderate to low speeds, and are arranged in a pedestrian-oriented grid of small blocks;
- All of the homes within each community are within a 15-minute walk of a transit stop, where frequent service will be available;
- Neighborhood services and retail are integrated into residential blocks;
- The mixed-use center of each community will serve as an arrival point and activity hub, and provide a source of identity; and
- The phasing of development and supporting transportation infrastructure is designed to support the goals above at each major increment.

Integration of Transportation Improvements with Surrounding Bayview Neighborhood

The proposed street and transit improvements would be integrated with the surrounding transportation network and facilities to benefit the entire Bayview/Hunters Point neighborhood, in addition to serving the proposed project demands.

1.2 Project Definition

The proposed land use program for the redevelopment of Candlestick Point and Hunters Point Shipyard, summarized in **Table 2**, includes residential, regional and local-serving retail, research and development space, office, hotel, and open space. In addition to these uses, the program includes a new stadium for the San Francisco 49ers and an arena that could be used for smaller events and performances.

Table 2: Land Use Program

Land Use	Candlestick Point	Hunters Point Shipyard
Residential	7,850 homes	2,650 homes
Regional-Serving Retail	635,000 sq. ft.	---
Neigborhood-Serving Retail	125,000 sq. ft.	125,000 sq. ft.
Office	150,000 sq. ft.	---
Research & Development	---	2,500,000 sq. ft.
Hotel	220 rooms	---
Stadium	---	69,000 seats
Arena	10,000 seats	---
Parks & Open Space	105 acres	231 acres
Artist Studios	---	255,000 sq. ft.[1]
Community Services	50,000 sq. ft.	50,000 sq. ft.

Source: Lennar Urban – October 2009

1 The Project includes 225,000 sq. ft. of existing artist studio space that would be renovated and replaced.

The density and arrangement of land uses at Candlestick Point and Hunters Point Shipyard are designed to actively encourage the use of walking and bicycling as primary travel modes within the project area. The street network is intended to better manage vehicle access while supporting transit ridership, public character, and sustainability.

A comprehensive set of roadway improvements, shown with transit improvements in Figure 1, have been identified to meet the project's increase in auto travel demand. These include, but are not limited to:

- Major roadway access improvements that would provide four to six lanes from US 101 / Harney Way to Candlestick Point and four lanes from US 101 / Cesar Chavez Street to Hunters Point Boulevard;
- A new Yosemite Slough Bridge to provide a Bus Rapid Transit (BRT), pedestrian/bicycle, and game day-only auto connection between Hunters Point Shipyard and Candlestick Point; and
- Various location-specific improvements discussed later in this document.

1.3 Transportation Program

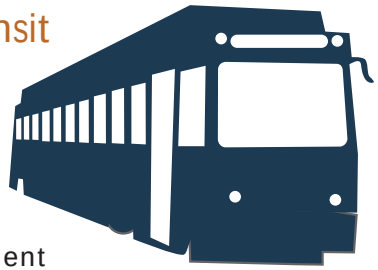
The Transportation Program consists of strategies to contain as many trips as possible within Candlestick Point and Hunters Point Shipyard, maximize the usefulness of walking and bicycling, and discourage the overall use of private automobiles through a parking plan, increased transit service, and a Transportation Demand Management (TDM) Program. The Transportation Program is shown in **Figure 1** and described below.

Internal Trip Capture & Pedestrian and Bicycle Facilities

The mixed-use neighborhoods proposed by the Development Plan will include office, retail, recreation, and entertainment centers designed to meet residents' and employee needs, and reduce the demand for off-site trips. Travel within the project will be facilitated by a network of pedestrian and bicycle routes, secure bike parking, traffic-calmed streets, and urban design that makes walking and bicycling comfortable and convenient.

Figure 1: **Potential Transportation Improvements**

New and Improved Transit



Current Muni service to Candlestick Point and Hunters Point Shipyard is limited, and no circulation is provided between the two areas. Connections to major employment centers in Downtown San Francisco and the Peninsula are inefficient. To maximize the effectiveness and convenience of transit service to and within the project site, the following strategies have been developed:

- Extensions of existing Muni routes to Candlestick Point and Hunters Point Shipyard, and new express buses providing direct service to Downtown San Francisco;
- New BRT (Muni Line 28L) service operating between Candlestick Point and Hunters Point Shipyard, and connecting to SamTrans, BART, Caltrain, and the T-Third Metro line at the Bayshore Caltrain station and Balboa Park BART station;
- A transit center at Hunters Point Shipyard to enable efficient and convenient transfers;
- Bus service throughout the day, evening, and weekends at high levels of service to provide convenient connections to employment and activity centers and the regional transit network; and
- Other areawide improvements associated with the Transit Effectiveness Project (TEP) and Muni's Service Plan

Transportation Demand Management Program

Also included in the Plan is a comprehensive TDM program that will include elements to facilitate carpools and vanpools, encourage carsharing, increase the convenience of transit services, and create a walkable and bikeable community. Specific components of the TDM program include:

- A full-time Transportation Coordinator to manage the real-time transportation needs of residents, employees and visitors to Candlestick Point and Hunters Point Shipyard;
- Residential parking sold or leased separately from units[3];
- Bicycle support facilities to encourage bicycling, including parking facilities (racks, lockers and showers), stations at key locations with attended bicycle parking and repair facilities, and potentially a bike sharing program;
- The inclusion of a transit pass with monthly homeowner's dues; and
- Visitor parking charges at variable market rates to encourage transit use. This can be accomplished by increasing parking rates during the peak period when transit service is most frequent, or increasing parking rates progressively to favor short-term parking over long-term parking, discouraging commuter parking.

3 This arrangement would not apply to the 1,655 "Agency Affordable" units, which are limited by tax-credit financing requirements.

Implementation and Monitoring

A phasing strategy has been developed for the transportation improvements and programs to coincide with the project's development. Some specific components of the monitoring plan include:

- The Plan will be implemented at the earliest stages of development and specific phasing of the programs and services will be adopted;
- Outreach to residents, employees and visitors will inform them of all available transportation options; and
- The impact of events at the football stadium and performance venue will be monitored to determine the opportunities for applying TDM to encourage the use of non-auto modes.

1.4 Game Day Considerations

As part of the development of Hunters Point Shipyard, a new state-of-the-art 69,000-seat stadium for the San Francisco 49ers is planned. Based on input from the operators of the existing stadium and the 49ers staff, parking, access, and operations have been analyzed for typical football game day events, with the following results:

- The new stadium would provide approximately 17,415 parking spaces for all types of game day attendees;
- Secured valet bike parking should be provided for a minimum of one percent of all expected participants and be located within a one block radius of an entrance to the stadium;
- The new stadium would be served by more transit-only routes (streets or lanes closed to all traffic other than buses) including regular and game-day service to and from regional transit connections (e.g., BART, Caltrain, etc.) compared to the existing stadium;
- At build-out, the new stadium would be expected to clear 46 percent faster following events than the existing stadium at Candlestick Point; and
- As a key improvement for the stadium, the project proposes a network of traffic signals, overhead lane use control signals, changeable message signs, and reversible lanes to optimize intersection operations during pre- and post-game conditions.

1.5 Non-Stadium Variants

Alternate plans have been developed in the event that the 49ers franchise elects not to build a new stadium at Hunters Point Shipyard. These alternatives place an expanded research and development campus on the stadium site, adding between one half and two and a half million square feet of space to the two million square feet indicated in **Table 2**. The non-stadium alternatives aspire to achieve the same mode split goals as the stadium alternative.

1.6 Analogies

Comparison to other San Francisco Neighborhoods

The project's mode split goals have been compared with 2000 U.S. Census data on existing travel behavior in other San Francisco neighborhoods. As shown in Table 3, at least eight other neighborhoods in San Francisco exhibit travel behavior comparable to the project's goals.

The auto mode share goal of 45 percent is a desired maximum share, while the transit, walk and bike mode share goals are desired minimum mode shares.

Table 3: Mode Split Comparison - San Francisco Neighborhoods

Neighborhood	PM Peak Hour Residential Work Trips		
	Transit	Walk/Bike	Auto/Carpool
Marina	40%	11%	49%
Mission	39%	14%	47%
Nob Hill	39%	32%	29%
North Beach	30%	40%	30%
Parkmerced	31%	4%	65%
Russian Hill	35%	15%	50%
Telegraph Hill	31%	29%	40%
Western Addition	45%	16%	39%
% That Would Achieve **Project Goals**	**30%**	**25%**	**45%**

Source: U.S. Census Bureau – 2000

TDM Program Case Studies

In an effort to evaluate the effectiveness of the TDM measures proposed by the project, other projects that have implemented similar programs and conducted post-implementation monitoring and analysis have been reviewed.

Case studies from northern California (including San Jose, Stanford University, Berkeley, and Sacramento), Oregon, British Columbia, and Florida have been identified that evaluate the effectiveness of TDM measures, such as transit passes and improved bus service, that are similar to those proposed for this project. These TDM case studies are presented in detail in Section 7.2 of this Plan. Since the TDM case studies relate primarily to employers at office or campus uses, additional strategies and innovations for large scale residential and retail will be needed.

While it is difficult to isolate the effectiveness of any one of the TDM elements described in the Plan, it is clear from these case studies that comprehensive, multi-faceted TDM plans can achieve dramatic shifts in mode choice.

2 Introduction

2.1 The Development Plan

The Candlestick Point and Hunters Point Shipyard Phase II Development Plan (the Development Plan, referred to throughout as "the project") contemplates a new, mixed-use community within the Bayview/Hunters Point Redevelopment Area. The project consists of 10,500 homes; over 3 million square feet of retail, office, and research and development uses; one hotel; over 300 acres of new and restored parklands and recreational open spaces; civic and community uses; and a new stadium site for the San Francisco 49ers. Additional research and development uses are proposed for the site should the 49ers select another location for the stadium. This Transportation Plan (referred to throughout as "the Plan") is one of several plans and reports (including a Sustainability Plan and Urban Design Plan) describing the project and the existing and future circumstances of the project site and surrounding areas.

Lennar is the lead developer for the Development Plan. Lennar is working in partnership with various City agencies and departments to define the project and plan for its implementation, including, among others, the Mayor's Office of Economic and Workforce Development, the Redevelopment Agency, the Planning Department, and the Municipal Transportation Agency (SFMTA). The project's components and design have been informed by feedback obtained at over 200 public meetings and workshops with the Bayview/Hunters Point communities and presentations before the Bayview Project Area Committee (PAC) and Shipyard Citizens Advisory Committee (CAC).

The project is subject to environmental review under the California Environmental Quality Act, and the approval of the Redevelopment Commission, the Planning Commission, and the Board of Supervisors as well as other city, state, and federal permitting authorities. The Transportation Plan has been refined through discussions with City representatives and the environmental review process. Implementation of the final Transportation Plan will require commitments from Lennar, the City (including SFMTA), and other transportation agencies.

2.2 Project Location

The Candlestick Point and Hunters Point Shipyard Phase II Development Plan site is located along the San Francisco Bay waterfront in the Bayview/Hunters Point neighborhood in southeastern San Francisco, as shown in **Figure 2**. The neighborhood is generally bounded by Cesar Chavez Street to the north, US 101 to the west, the San Mateo County line and the City of Brisbane to the south, and San Francisco Bay to the east.

Figure 2: **Project Location**

The project site includes Candlestick Point, a 267-acre site within the Bayview/Hunters Point Redevelopment Plan Area; and Hunters Point Shipyard Phase II, a 421-acre site within the Hunters Point Shipyard Redevelopment Plan Area. Phase I of the Hunters Point Shipyard is a 75-acre site within the Shipyard Redevelopment Plan Area and is under development with 1,600 new homes and approximately 20,000 square feet of retail uses.

2.3 Goals, Principles & Strategies

The Candlestick Point and Hunters Point Shipyard Phase II Transportation Plan presents goals, principles, and strategies to meet the travel demand needs of an emerging mixed-use, urban neighborhood in southeast San Francisco. Incorporating innovative practices and sustainable development principles, the Plan seeks to provide residents, employees, and visitors of the two neighborhoods with high-quality transportation infrastructure and services.

The Plan's elements prioritize walking, bicycling, and transit, making these attractive and practical transportation options, which are consistent with the City's Climate Action Plan (CAP) (September 2004). The CAP outlined a number of transportation strategies, which, when combined with other strategies, will help the City reduce its overall greenhouse gas emissions to 20 percent below 1990 levels by the year 2012. The CAP's recommended transportation actions are grouped into six categories:

- Increase the use of public transit as an alternative to driving
- Increase the use of ridesharing as an alternative to single occupancy driving
- Increase bicycling and walking as an alternative to driving
- Support trip reduction through employer based programs
- Discourage driving
- Increase the use of clean air vehicles and improve fleet efficiency

The goals, principles, and strategies in this Transportation Plan are centered around these six themes, and are supported by investment in infrastructure and services that provide alternatives to private auto travel. Also included in the Plan are travel demand management strategies designed to encourage the use of transit and alternative modes of travel.

Another objective of the project is to integrate the proposed roadway and transit improvements with the surrounding neighborhood, as many of these improvements will have impacts on adjacent communities. The Plan seeks to create transportation solutions that benefit the entire Bayview/Hunters Point neighborhood in addition to serving the proposed project demands.

Goals

- The project targets a weekday PM peak hour mode split for work trips of not more than 45 percent auto travel, and not less than 30 percent transit, 20 percent walk and 5 percent bike;
- The project will create a lively community with a strong sense of place and the services necessary to help achieve self-sufficiency;
- The project proposes a balance of uses that will enable residents to meet their daily needs with reduced automobile dependency;
- The project will serve as a model for the region and the nation of sustainable development and transportation and land use integration; and
- The project will reduce vehicle miles traveled and carbon emissions compared to traditional development patterns.

Principles

- Transportation systems should be fully integrated with existing networks to provide seamless connections and service;
- The development pattern is designed to facilitate walking, cycling, and transit trips;
- Internal streets are designed to support a variety of travel modes at moderate to low speeds (between 15 and 25 mph), arranged within a pedestrian-oriented grid of small blocks;
- Arterials have a design speed of 35 mph to allow for rapid transit service competitive with the private car;
- The mixed-use center of each community should serve as an arrival point and activity hub, and provide a source of identity;
- All of the homes within each community should be within a quarter mile of a transit stop, where frequent bus service will be available;
- All residences should also be within walking distance of basic neighborhood retail;
- Transit service to and from Candlestick Point and Hunters Point Shipyard should operate throughout the day, evening, and weekends at high levels of service to provide convenient connections to employment and activity centers and the regional transit network;
- Auto access should be discouraged through traffic calming, parking management, and other policies;
- Transportation demand measures should support transit, pedestrian, and bicycle travel and will be directed at residents, employees, and visitors; and
- Phasing of development and transportation infrastructure shall be coordinated to support the achievement of the goals above in each major increment of development.

Strategies

To achieve the project goals according to the above principles, the Plan includes the following elements:

- Homeowners' dues will include the cost of a transit pass that can be used on Muni, Caltrain, or BART services;
- Residential parking will be "unbundled", i.e., sold or leased separately from units[4];
- All non-residential parking will be unbundled from residential and visitor uses, and incur a parking charge at variable market rates to encourage transit use (potentially with increased rates during peak periods and/or for long-term parking);
- A full-time Transportation Coordinator will be employed to manage the real-time transportation needs of residents, employees, and visitors;
- Travel within the development areas will be facilitated by bike lanes and frequent bus rapid transit service operating in dedicated lanes and with signal priority;
- Elements of the Transportation Demand Management (TDM) Program will be implemented at the earliest stages of development and specific phasing of the measures and services will be adopted;
- The TDM program will be monitored for its effectiveness in meeting the Plan's objectives. Outreach to residents, employees, and visitors will inform them of all available transportation options. The TDM Plan is an Appendix to this Transportation Plan;
- The impact of events held at the stadium and performance venue will be monitored to determine opportunities for applying TDM to encourage the use of non-auto modes; and
- Development controls and design guidelines will require that public and private spaces be designed to create a high quality pedestrian environment.

4 This arrangement would not apply to the 1,655 "Agency Affordable" units, which are limited by tax-credit financing requirements.

2.4 Outreach & Community Feedback

This plan relies extensively on community outreach and input. Input and guidance from City agencies and long-standing agreements with members of the Bayview/Hunters Point community have been carried into this Plan, ranging from the high-level (e.g., San Francisco's "Transit First" policy and SFMTA's policies supporting safe pedestrian and bicycle circulation) to specific neighborhood-related transportation goals and objectives of the Bayview/Hunters Point area.

To complement the broader policies and agreements, input and feedback reflecting the most current conditions informed by new developments in the transportation system is included. An extensive multi-agency series of workshops, panels, hearings, and presentations were conducted between 2008 and 2010 to update and refine information for this Transportation Plan.

Community-Based Outreach & Input

The specially-formed, community-staffed, Project-based Policy Advisory Committee (PAC) and Citizens Advisory Committee (CAC) presided over numerous meetings focused on transportation and were held in the project area. In the spring and summer of 2009, a transportation workshop series with a brainstorming/report-back format was held with three focus areas:

- India Basin Roundtable (specific focus on the India Basin area);
- Northern Connections Workshop (brainstorming/report-back, broad scope with special focus on Hunters Point);
- Southern Connections Workshop (brainstorming/report-back, broad scope with special focus on Candlestick Point and Yosemite Slough);
- Workshop summary presentations to the CAC and the PAC.

To complement these workshops and broaden the discussion to adjoining neighborhoods and regional connections, other specific community meetings were held with these areas of focus:

- Adjoining neighborhoods: Visitacion Valley, India Basin, and Bayview;
- Environmental sustainability;
- The San Francisco Bay Trail;
- The San Francisco Bicycle Plan;
- Bi-County Study (San Francisco County/San Mateo County transportation & land use coordination).

Community Priorities

These community-based workshops informed a set of goals to guide the decisions, multi-modal balance, and phasing/implementation strategies of this Plan, and expressed the following priorities and focus areas:

- **Safety:** to address perceived safety concerns as well as incidents;

- **Equity:** to avoid a "gated community" effect;
- **Connectivity:** to ensure efficient and fast transit to other city neighborhoods and the region, and for seamless travel for all modes between neighborhoods;
- **Community:** to create a walkable "village" context;
- **Sustainability:** to emphasize transit, pedestrian, and bicycle circulation;
- **Vitality:** to promote economic and aesthetic health of the area;
- **Quality of Life:** to address noise and other impacts to residential areas;
- **Adaptability:** to ensure "complete" communities in all phases.

The community also provided specific direction related to the design of key arterials such as Harney Way, Innes Avenue, and Palou Avenue, defining alternative transportation paths and routes (including over and around Yosemite Slough and India Basin), managing impacts on residential areas, refining transit and bicycle route extensions and service plans, protecting the on-street parking supply, integrating the safety and design enhancements of the San Francisco Better Streets Plan, and implementing development and infrastructure in phases.

Public Agency Review

Input and feedback from the public agencies involved in the development of the Transportation Plan was obtained from a series of technical meetings to focus on transportation engineering issues such as emergency vehicle access, Muni service planning needs, land use and transportation coordination and phasing, street greening, truck route circulation, highway and interchange design, waterfront transportation access and parks access.

The agencies engaged include, among others:

- San Francisco Planning Department and Commission
- SF Redevelopment Agency and Commission
- Board of Supervisors and its various committees
- SF Municipal Transportation Agency (MTA Board, Board CAC, Traffic Engineering, Muni Capital and Service Planning)
- San Francisco County Transportation Authority: Bi-County project and CAC
- Bayview Transportation Improvements Project
- TASC (includes SFMTA, DPW, SF Police Department and SF Fire Department)
- Mayor's Office on Disability
- SF Public Utilities Commission
- SF Environment and Commission
- SF Department of Public Health
- SF Greening
- City/County Association of Governments for San Mateo County
- City of Brisbane
- Caltrain/SamTrans
- Association of Bay Area Governments
- Metropolitan Transportation Commission
- Water Emergency Transportation Authority
- California Department of Transportation
- California State Parks Foundation

Through these processes, the Plan incorporates community priorities, coordination between local and regional networks and between transportation and land use phases, and recommendations following technical review and refinements from responsible agencies. The outreach and input also assisted in accommodating a variety of goals, reconciling conflicts, and ensuring the over-arching accommodation of safety and sustainability in the Project area.

3 Existing Conditions

The Project site is located in the southeastern portion of San Francisco along the Bayview Waterfront. The Candlestick Point and Hunters Point Shipyard Phase II portions of the project lie within the Bayview/Hunters Point Redevelopment Plan Area and the Hunters Point Shipyard Redevelopment Plan Area, respectively.

The site is relatively isolated from the rest of the City. The surrounding topography of hills and Yosemite Slough create a context with limited connections to the existing regional transportation network. Essentially, only two main roads serve the site, Harney Way on the south and Innes Avenue on the north, and many intermediate streets do not connect through to other neighborhoods. These conditions create challenges with respect to providing convenient transit service and accommodating traffic demand.

3.1 Transit Challenges

In the existing transit network, shown on **Figure 3**, two Muni lines currently reach the edge of the project area: 19-Polk and 29-Sunset. This is inadequate to serve the project, as the lines do not provide any circulation within the project area, nor do they directly serve employment centers in San Francisco or the Peninsula. Both lines provide access to Downtown San Francisco via a transfer to the T-Third Metro line. Although the 29-Sunset connects to the regional rail system at Balboa Park BART station, it is accessed via a circuitous route that is subject to congestion. Further, neither the 19-Polk nor the 29-Sunset connects to Caltrain, which operates in the project's vicinity[5] and serves as the primary connection to the major employment centers on the Peninsula and in the South Bay.

Bayshore remains the only Caltrain Station in the project area after the closure of Paul Avenue Station in 2005. No other transit services connect directly to Bayshore Station, which is served only by local trains running on an hourly basis during peak periods. An average of only 171 weekday boardings was recorded at the station in 2007. Without convenient transit connections from Candlestick Point and Hunters Point Shipyard and with limited service, the existing Bayshore Station is insufficient to serve the project area. In addition to the two lines previously mentioned, four additional Muni lines – 23-Monterey, 24-Divisadero, 44-O'Shaughnessy and 54-Felton – serve the greater Bayview neighborhood west of Candlestick Point and Hunters Point Shipyard.

Muni has recently conducted a comprehensive review of its services in an effort to improve its performance and efficiency. This "Transit Effectiveness Project" (TEP) specifies changes to several of the lines that would serve Candlestick Point and Hunters Point Shipyard. One of the proposals from the TEP involved replacing the 19-Polk line with the 48-Quintara line in the study area. These changes would improve service to the Bayview/Hunters Point neighborhood, but additional improvements beyond the TEP proposals would be needed to serve the project.

5 Bayshore Caltrain Station is located in San Mateo County.

Figure 3: **Existing Transit Network**

3.2 Traffic Challenges

The existing street network at Hunters Point Shipyard has served relatively little traffic since the shipyard that occupied the site closed. The street network within Candlestick Point also sees comparatively low levels of traffic, except on game days at Candlestick Park, where the 49ers currently play home games. Streets in both areas have been only marginally maintained and are not sufficient for the high-density development of the proposed land use plan.

Further outside the project boundaries, the arterial streets in the area – Third Street, Cesar Chavez Street, and Harney Way – lack the capacity needed to accommodate frequent transit service and the level of auto traffic expected to be generated by the project. Hunters Point Shipyard in particular has only two access points and an indirect route to the freeway network. Access to Candlestick Point is currently constrained by the narrow right-of-way between Executive Park and San Francisco Bay. East-west access is inhibited by the limited number of streets that cross the Caltrain tracks, some of which are narrow or have steep grades. Current Candlestick Park game-day and special event conditions present additional challenges related to street traffic and on-street parking prohibitions. These include use of sidewalks for parking, private automobiles on streets designated for transit and taxis only, overcrowded buses delayed on congested streets, and numerous automobile/pedestrian/bicycle conflict points.

Other transportation challenges that exist in the area include:

- Third Street cuts across the street grid at an angle, with no direct alternate routes;
- Industrial and residential land uses are mixed together in Bayview, resulting in truck traffic in some residential areas; and
- Streets are relatively wide, potentially encouraging higher vehicular speeds.

For regional access to the project area, the project is near US 101, part of the regional freeway network. The US 101 interchanges that serve the project area (at Harney Way, Third Street, Paul Avenue, Silver Avenue, Alemany Boulevard / Industrial Avenue, and Cesar Chavez Street / Jerrold Avenue) will likely lack the capacity to accommodate the additional auto travel demand for a project of this size in the future. There is no direct on-ramp from westbound Cesar Chavez Street to southbound US 101 or from southbound Third Street to northbound US 101. In contrast to congested US 101 interchanges, the interchanges on I-280 that serve the project area (Silver Avenue / Alemany Boulevard / Industrial Street, and Cesar Chavez / 25th Street) are underutilized. The existing roadway network is shown in **Figure 4**.

3.3 Pedestrian & Bicycle Challenges

Pedestrian access throughout the project site is limited due to topographic constraints and minimal connectivity within the street network. Existing land uses are primarily industrial and not conducive to pedestrian activity. Currently waterfront access is limited to a portion of the Bay Trail, a Class I facility that provides a completely separate right-of-way and is designated for the exclusive use of bicycles and pedestrians, which extends along the southern shoreline of the Candlestick Point State Recreation Area.

Currently, bicycle facilities within the project area include Class III bicycle routes, which provide for a right-of-way designated by signs and pavement markings for shared use with motor vehicles. Existing Class III bicycle facilities are located on Carroll Avenue, Fitch Street, Hunters Point Expressway and Jamestown Avenue. The existing bicycle facilities provide minimal access to the proposed project site. There are no Class II on-street bicycle facilities separating vehicular traffic from bicycles within the project site.

Figure 4: **Existing Roadway Network**

3.4 Other Proposed Developments in the Project Area

There are also a number of other new development projects underway or at the planning stage in the area of the project site that will increase transit demand and automobile traffic. These proposed developments are summarized below, in terms of their net overall increases. **Figure 5** shows the location of these proposed developments in relation to the two project areas and to major transportation facilities.

Executive Park (far left) and Visitacion Valley (left) are other proposed developments

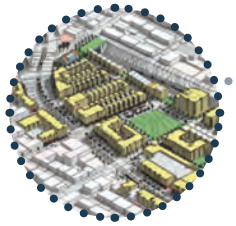
Executive Park
3,400 homes
90,000 sq. ft. of retail/restaurant

Hunters View
800 homes
6,400 sq. ft. of retail
21,600 sq. ft. of community services

India Basin Shoreline Area C
1,240 homes
100,000 sq. ft. of retail
1,365,000 sq. ft. of commercial space

Hunters Point Shipyard Phase I
1,600 homes
20,000 sq. ft. of retail

Brisbane Baylands
8,400,000 sq. ft. of development

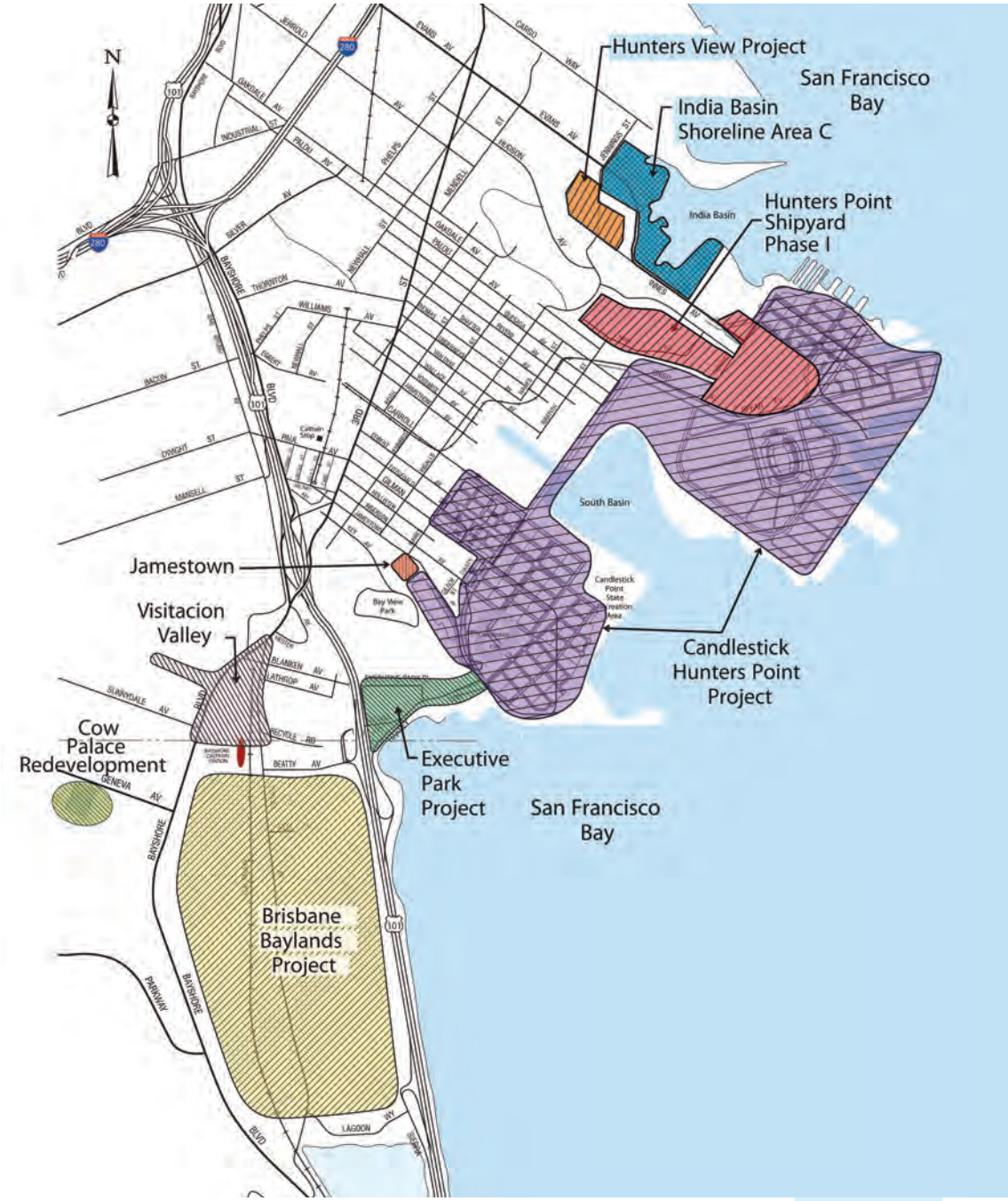


Cow Palace Redevelopment
1,700 homes
550,000 sq. ft. of commercial/
research & development

Jamestown
approximately 200 homes

Visitacion Valley
1,600 homes
170,000 sq. ft. of retail
25,000 sq. ft. of community services

Figure 5: **Proposed Nearby Developments**



4 Project Definition

4.1 Land Use Program

The proposed Candlestick Point and Hunters Point Shipyard Phase II Development Plan land use program includes 10,500 homes; 885,000 square feet of retail uses; 150,000 square feet of office space; a research and development campus; one hotel; a 10,000-seat performance venue, and a National Football League stadium. The Plan also includes a number of city parks, sports fields, and new and restored open space in the Candlestick Point Recreation Area. A total of 336 acres are designated for recreational uses, including dual-use fields, and as open space. **Table 4** summarizes the proposed land use program for Candlestick Point and Hunters Point Shipyard Phase II. The location of the project's proposed land uses are shown in **Figure 6**. A project alternative that does not include the stadium is discussed in Chapter 7.

Table 4: Land Use Program			
Land Use	**Candlestick Point**	**Hunters Point Shipyard**	**Project Total**
Residential	7,850 homes	2,650 homes	10,500 homes
Regional-Serving Retail	635,000 sq. ft.	-	635,000 sq. ft.
Neighborhood-Serving Retail	125,000 sq. ft.	125,000 sq. ft.	250,000 sq. ft.
Office	150,000 sq. ft.	-	150,000 sq. ft.
Research & Development	-	2,500,000 sq. ft.	2,500,000 sq. ft.
Hotel	220 rooms	-	220 rooms
Community Facilities	50,000 sq. ft.	50,000 sq. ft.	100,000 sq. ft.
Stadium	-	69,000 seats	69,000 seats
Arena	10,000 seats	-	10,000 seats
Parks & Open Space	105 acres	231 acres	336 acres
Artists Studios	-	255,000 sq. ft [1]	255,000 sq. ft
Source: Lennar Urban – October 2009			

1 The Project includes 225,000 sq. ft. of existing artist studio space that would be renovated and replaced.

Candlestick Point

At Candlestick Point, 7,850 new residential units are proposed. These units would be developed as two-story townhomes, four-to-eight-story mid-rise buildings, and high-rise towers. Some residential buildings will be mixed-use with residential units above ground-floor retail or office uses. Other residential buildings may include corner-store retail.

The housing program includes the redevelopment of the San Francisco Housing Authority's Alice Griffith site (also known as "Double Rock"), replacing the 263 existing units with a total of about 1,000 townhomes and four-story stacked flats. These new units will be made available to existing residents before the existing units are removed, so that no residents will have to be relocated.

A 635,000-square foot regional retail center is also envisioned at Candlestick Point. The proposed retail program is anticipated to include large-format shopping venues, restaurants, and entertainment uses such as a multi-screen movie theater and clubs with live music. The retail center is also proposed to include a 75,000-square foot performance venue seating 8,000 to 10,000. In addition, a hotel with 220 rooms would be located at the regional-serving retail center. A parking structure adjacent to the regional retail center would accommodate approximately 2,600 vehicles.

An additional 125,000 square feet of neighborhood-serving retail space, such as grocers or coffee shops, and 150,000 square feet of office uses, is planned for Candlestick Point.

Hunters Point Shipyard Phase II

Hunters Point Shipyard Phase II includes 2,500 new residential units. These units would be developed as a mix of housing types including townhomes, four-story flats over parking, and residential towers. Some residential buildings will be mixed-use with residential units above ground-floor retail or office uses. Other residential buildings may include corner-store retail.

In addition, 125,000 square feet of neighborhood-serving commercial development would also be located at Hunters Point Shipyard, adjacent to an approximately two and a half million square-foot research and development campus, focused on "clean/green technology."

A site for a new, approximately 69,000-seat stadium for the San Francisco 49ers has also been designated at Hunters Point Shipyard. This site would accommodate an expanded research and development campus if the stadium is not built.

Figure 6: **Land Use Program**

4.2 Street Network & Urban Form

As noted earlier, Candlestick Point and Hunters Point Shipyard are relatively isolated and currently have limited connections to the existing roadway network and US 101 interchanges in the immediate vicinity. The condition of the existing streets is insufficient to meet the travel demand that the project will generate and there is no existing direct connection between Hunters Point Shipyard and Candlestick Point.

Both Candlestick Point and Hunters Point Shipyard have extensive waterfronts; however, access to the waterfront is currently limited to a portion of the Bay Trail at the southern end of Candlestick State Recreation Area. This project prioritizes multimodal access to the waterfront, which has been coordinated with Executive Park and other local developments.

The street network proposed for Hunters Point Shipyard and Candlestick Point is an extension of the existing grid of the adjacent Bayview neighborhood, using typical Bayview block sizes. This street pattern allows the axes of most streets to lie perpendicular to the Bay Shore with terminating vistas of the bay.

The proposed internal street network is intended to provide improved vehicular access while supporting transit ridership, public character, and sustainability. Streets are designed to emphasize non-auto travel and moderate the speed of auto traffic where required, successfully facilitating all movements. Proposed techniques include driveway access management; traffic calming features such as signage and striping, pedestrian bulbouts at intersections, and refuge islands; streetscape amenities including street furniture, lighting, and plantings; and other features that will assist in creating a high-quality pedestrian and bicycle network. Streets are designed to reflect their roles as the community's organizing framework while providing a safe and comfortable environment for all users.

The internal street network is composed of eight types of streets, as classified by the *San Francisco Better Streets Plan* (Draft for Public Review, June 2008): *Commercial Throughway, Residential Throughway, Neighborhood Commercial Street, Neighborhood Residential Street, Mixed-Use Street, Parkway, Park Edge Street, and Alley.*

The guidelines of San Francisco's Better Streets Plan (BSP) were consulted throughout the planning of the project streets and sidewalks. In some cases, constraints in topography, transportation engineering, and abutting land uses resulted in proposed sidewalk widths narrower than the idealized suggestions of the BSP. In extreme cases, constraints resulted in proposed sidewalks that, while ADA-complying, are narrower than the suggested BSP minimums.

The locations of each street type and sections for the variations of each are presented in **Figures 7A through 7P** on the following pages. The BSP strives to, when possible, have minimum sidewalk widths of 10 feet. The American Association of State Highway and Transportation Officials (AASHTO) and the San Francisco Bicycle Plan recommend a minimum on-street bicycle lane width of 5 feet when adjacent to a curb. All cross-sections strive to be consistent with the objectives of the BSP, AASHTO, and the San Francisco Bicycle Plan:

The spine of the project's street network is a continuous arterial beginning in the northwest of Hunters Point and traveling south to Candlestick Point that connects the two project sites. The portion of the arterial within Hunters Point incorporates Innes Avenue, Robinson Street, and Crisp Road, growing wider as it moves south (as shown in **Figure 7A**). The portion of the arterial connecting Hunters Point and Candlestick Point incorporates an improved Griffith Street, Thomas Avenue, Ingalls Street and Carroll Avenue (**Figure 7B**). The final portion, Arelious Walker Drive, lies on the western edge of Candlestick Point and connects to an improved Harney Way at the southernmost point of Candlestick Point (**Figure 7C**).

Most locations on the project site would be within four to five blocks of this roadway spine, affording convenient access to residences and offices. The arterial skirts the edge of the two mixed-use "village centers" at Hunters Point Shipyard and Candlestick Point, providing access to their parking facilities and to transit services. The arterial is intended to provide extra capacity for truck traffic, which would use interior streets only as a direct connection from the arterial to a particular destination.

The Hunters Point Shipyard and Candlestick Point arterial streets would function as the primary thoroughfares of the project, with generally perpendicular collector, parkway and park edge streets (**Figures 7D, 7E and 7F**) playing a subordinate role.

BRT (Muni Line 28L) lanes would be coupled with Harney Way before diverting through the Candlestick Point site, using the Yosemite Slough Bridge to reach Hunters Point Shipyard. Automobiles would not be permitted to use the Yosemite Slough Bridge except on game days, and would instead be routed along an auto route alignment via Carroll Avenue, Ingalls Street, Thomas Avenue and Griffith Street. (**Figure 7B**).

The local streets which form the balance of the street network are Neighborhood Residential streets, of which there are four variations, and both private and public alleys. Their cross-sections are shown in **Figure 7G**. Auto travel lanes are uniformly ten feet except in instances where the travel lane is shared by a bicycle or bus route in which case they are eleven feet wide. Local streets at the stadium site are comprised of an inner and outer ring road, as shown in **Figure 7H**.

The proposed Yosemite Slough Bridge would extend Arelious Walker from Candlestick Point to Crisp Avenue in Hunters Point Shipyard. The bridge would contain a landscaped greenway, two BRT lanes, and a Class I bicycle/pedestrian path. On 49ers game days, the landscaped greenway would be converted to four peak direction travel lanes for game day auto traffic. The Yosemite Slough Bridge would not be used for vehicular traffic during secondary events or other non-game day purposes, excepting emergency vehicle access, as needed. In the case of the non-stadium variants, the bridge would have the same profile, less the landscaped greenway, as shown in **Figure 7I**.

Several roadway lane configurations would be temporarily changed to allow for the efficient egress of auto traffic from the proposed 49ers stadium after a game's conclusion. These roadways include Innes Avenue, Robinson Avenue, and Fisher Avenue on the north side of the Hunters Point Shipyard; Crisp Avenue on the southern side of the Hunters Point Shipyard

(**Figure 7J**); Griffith Street, Thomas Avenue, and Ingalls Street between the Shipyard and Candlestick Point (**Figure 7K**); and Arelious Walker and Harney Way on Candlestick Point (**Figure 7L**). In all cases, a lane of inbound traffic will be dedicated for local traffic and emergency access vehicles.

Initially, Harney Way would be designed with a wide landscaped strip between the general-purpose roadway and the state park along the waterfront, as shown in **Figure 7C**. If needed, a portion of this landscaped area would be rebuilt to provide an additional lane from the proposed Harney interchange east to Arelious Walker Drive, as shown in the corresponding Sections in **Figure 7M**. Refinements to this configuration (number, locations, and design of turn lanes, for example) may be necessary following completion of ongoing studies related to the Executive Park development site and the Harney Way interchange.

In the case of the non-stadium variants (discussed in Chapter 7), three types of Neighborhood Commercial streets would serve the research and development campus (**Figure 7N**), and the width of Crisp Road would be reduced, as shown in **Figure 7O**.

A number of improvements would be made to off-site streets, generally those that provide east-west access to Third Street. **Figure 7P** shows the improvements to off-site streets, including Jamestown Avenue, Gilman Avenue, and Innes Avenue/Hunters Point Boulevard. Improvements would also be made to Palou Avenue and Ingerson Avenue; however the cross-sections of those streets would remain unchanged.

Dedicated BRT (Muni Line 28L) lanes are shown in these cross-sections and in plan to illustrate the continuity of this transit alignment through the project area. The project intends to construct most or all of these lanes with "greenways" (permeable surfaces with durable landscaping/planting) as an innovation supporting the principles of San Francisco's Better Streets Plan. Greenways are also planned where BRT or auto traffic does not regularly travel to serve as a visual, permeable green buffer between traffic/travel lanes and sidewalks. On game days, these greenways would accommodate either transit or extra traffic to provide an additional travel lane for vehicle traffic. This innovative treatment has been successfully employed in several other cities in the US.

Many street cross-sections include asterisks and/or alternative dimensions that indicate how key streets would function in accommodating post-game traffic on days when the stadium is in use. These complement the more detailed information about traffic lane configurations on select streets and access to regional arterial and freeways covered in Chapter 6.5.

For maximum flexibility, the grades, width, and turning radii for the BRT lanes are designed to be consistent with SFMTA design standards for light rail operations. However, no light rail is proposed as part of this project.

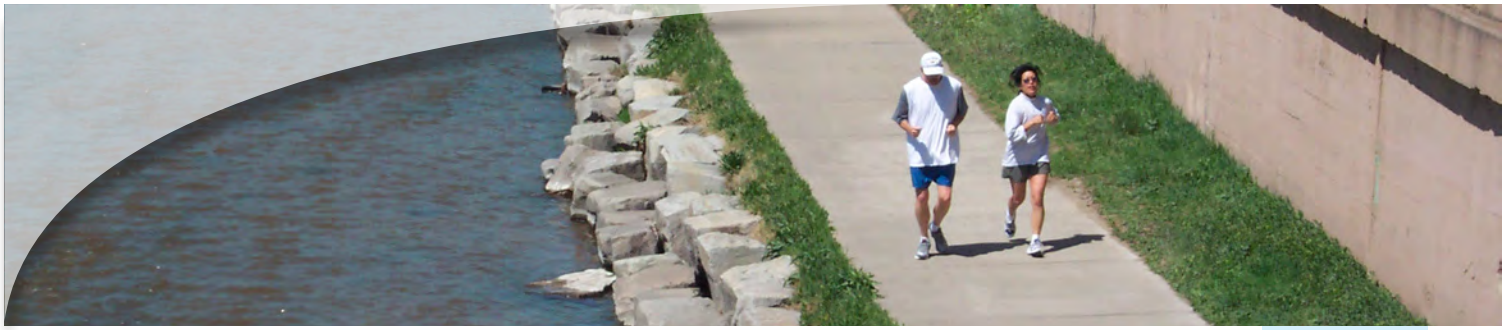


Figure 7A: **Hunters Point Shipyard Arterials**

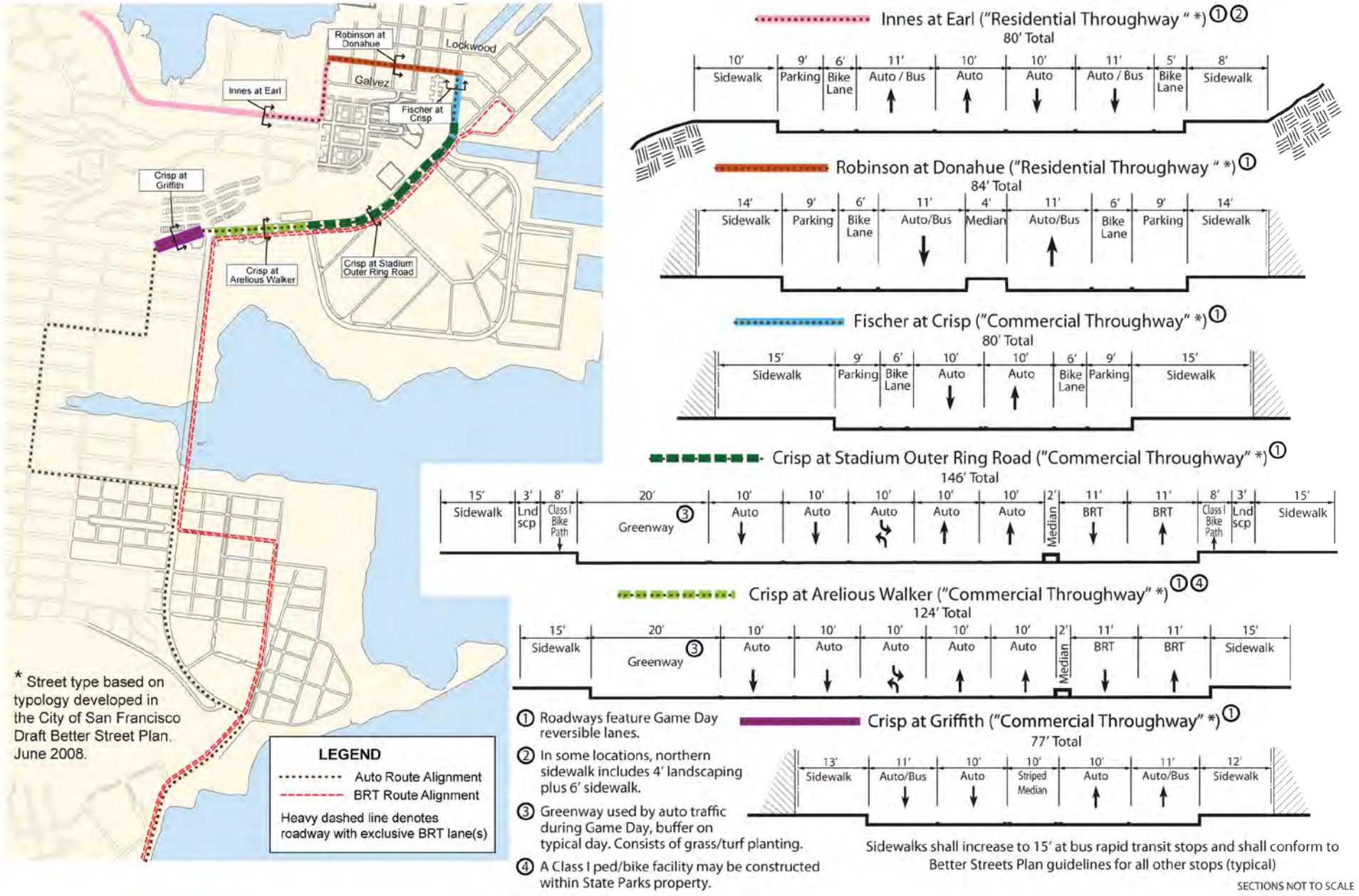


Figure 7B: **Yosemite Slough Arterials**

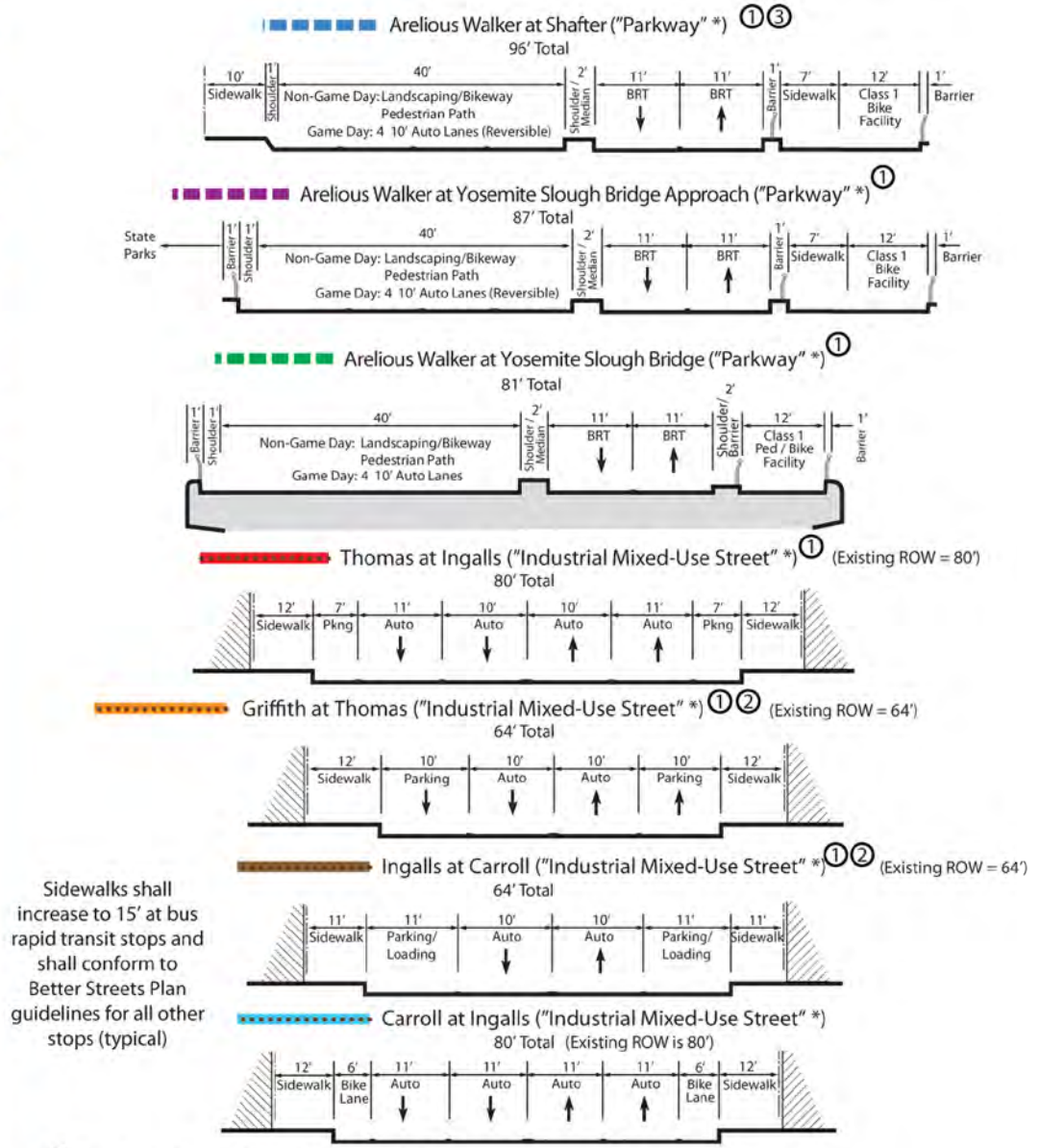


Figure 7C: **Candlestick Point Arterials**

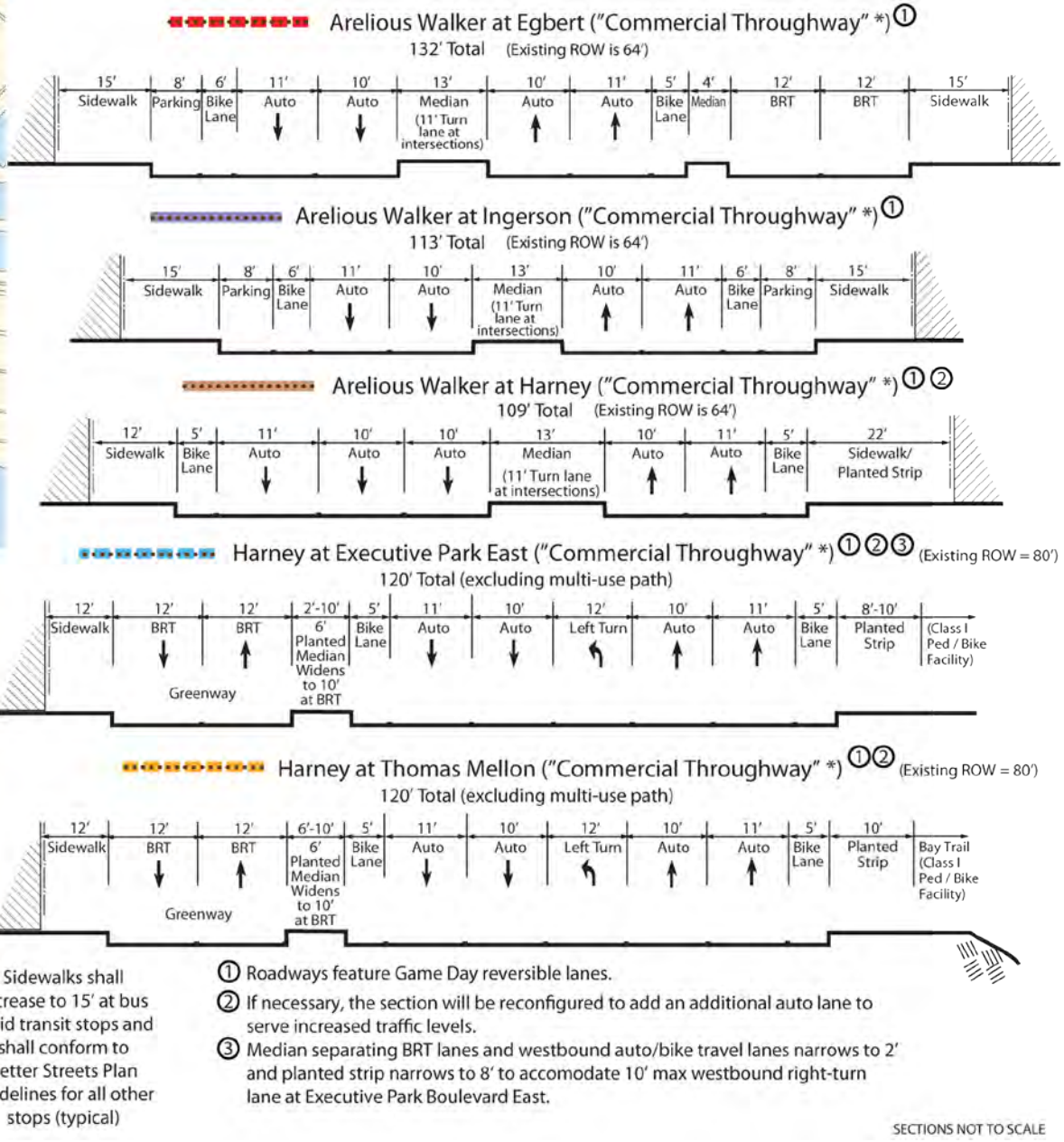
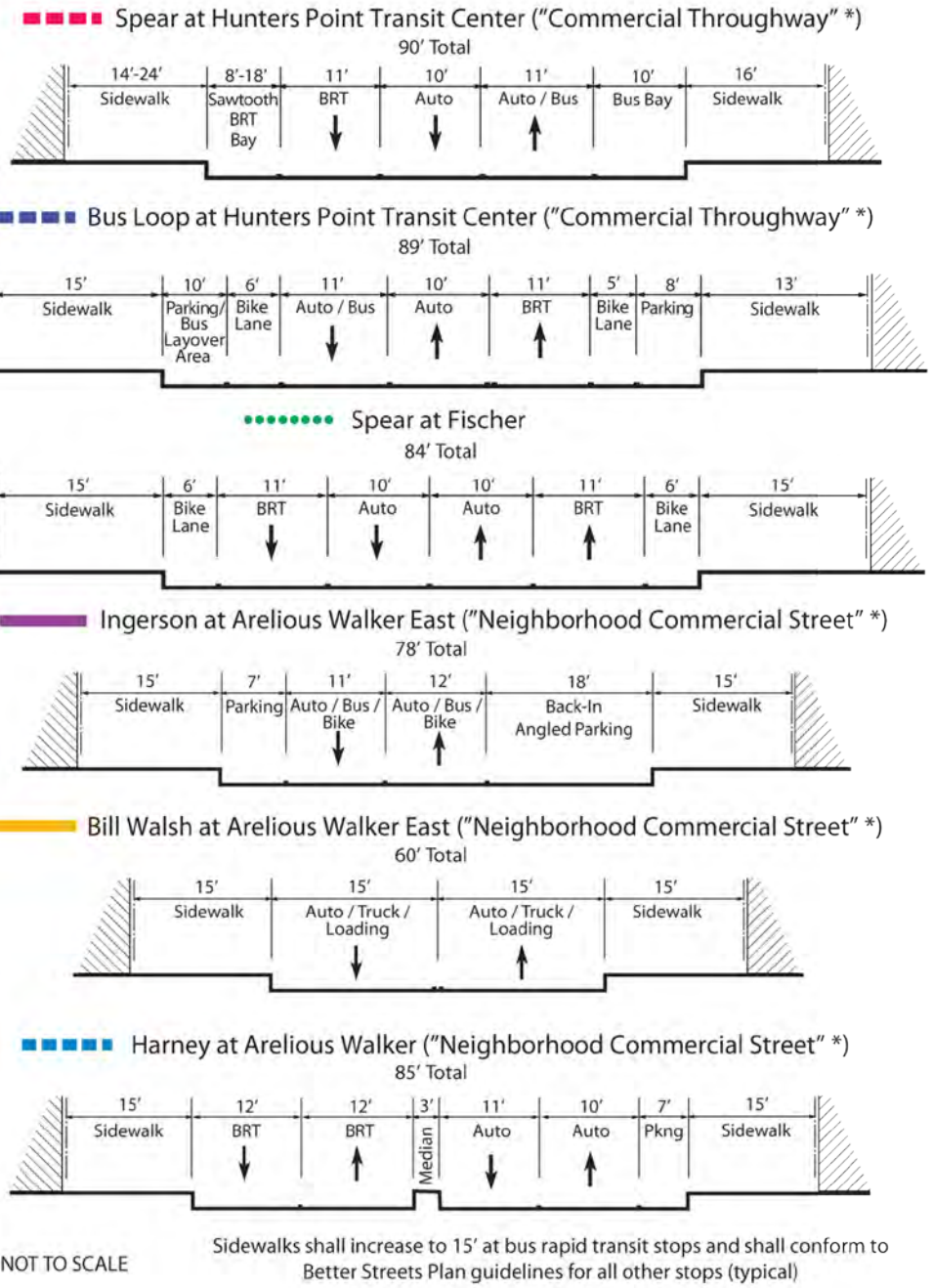


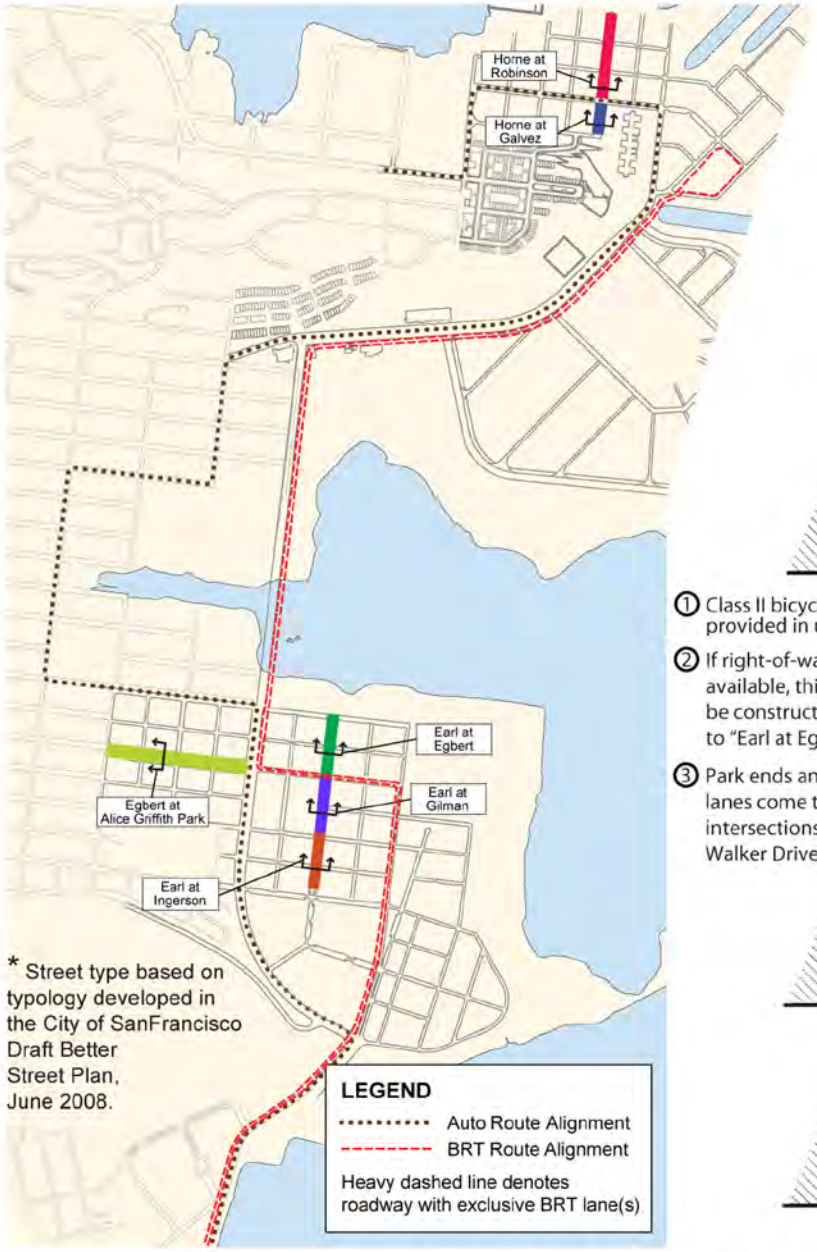
Figure 7D: **Collectors**



SECTIONS NOT TO SCALE

Sidewalks shall increase to 15' at bus rapid transit stops and shall conform to Better Streets Plan guidelines for all other stops (typical)

Figure 7E: **Parkways**



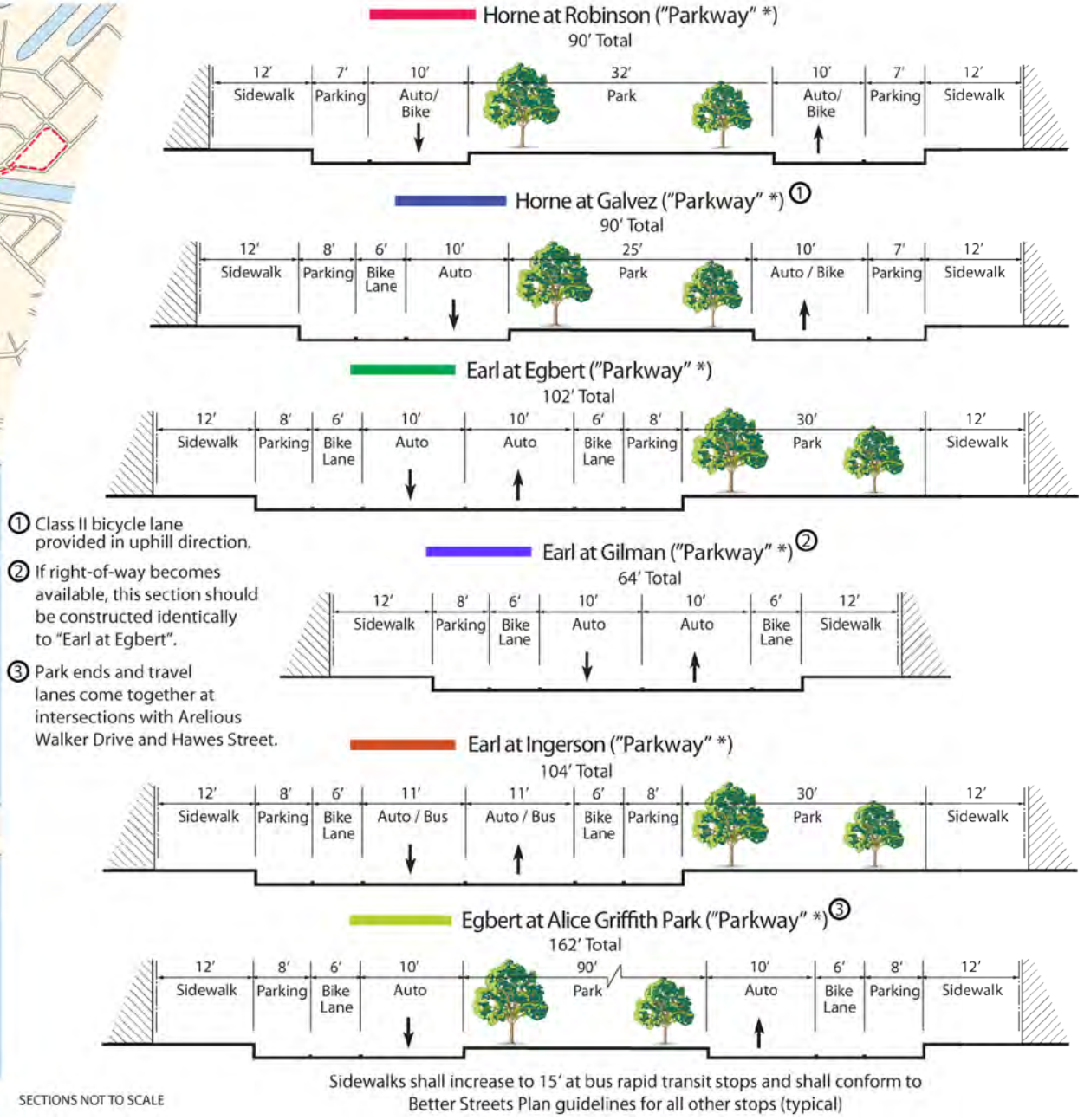
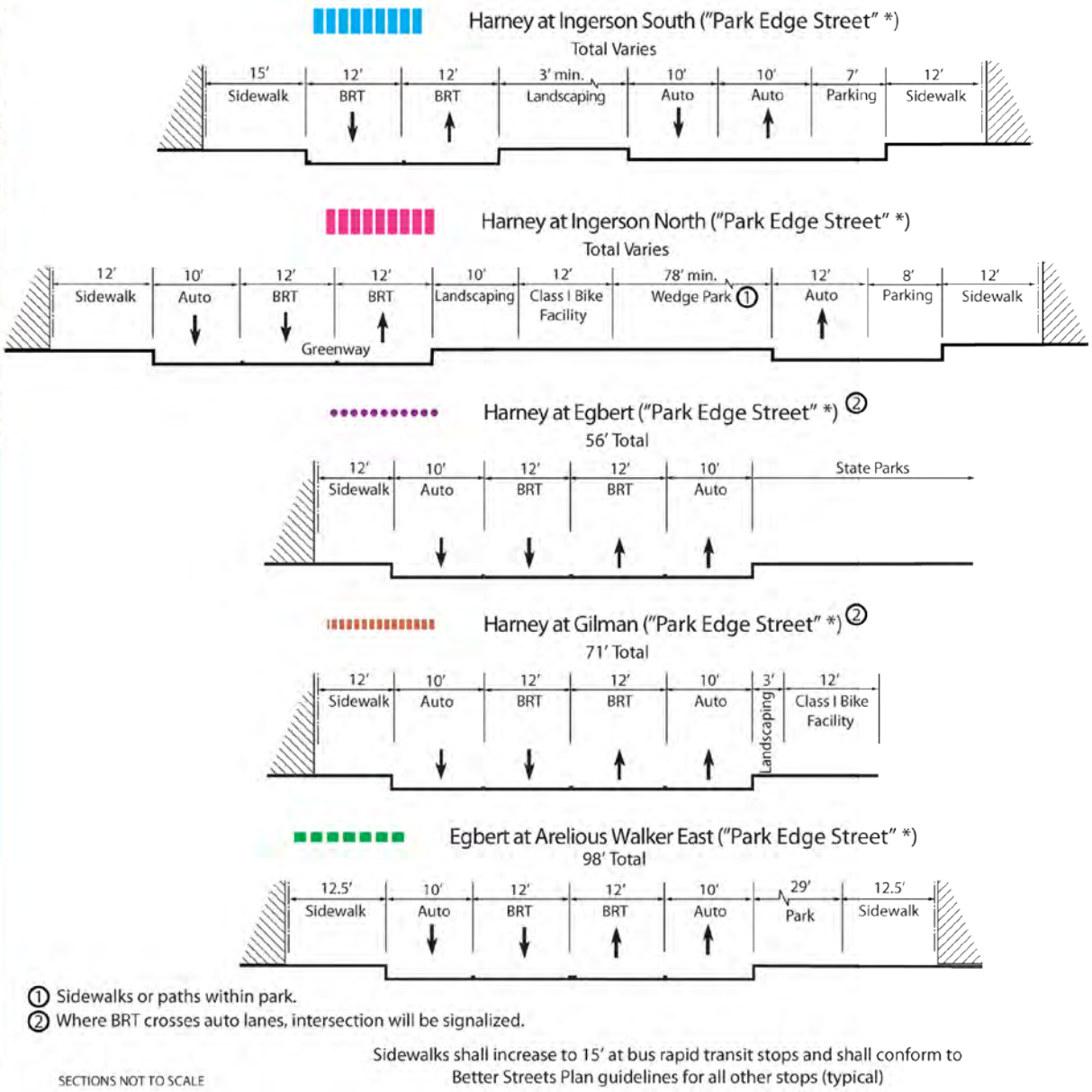


Figure 7F: **Park Edge Streets**



① Sidewalks or paths within park.
② Where BRT crosses auto lanes, intersection will be signalized.

Sidewalks shall increase to 15' at bus rapid transit stops and shall conform to Better Streets Plan guidelines for all other stops (typical)

SECTIONS NOT TO SCALE

Figure 7G: **Local Streets**

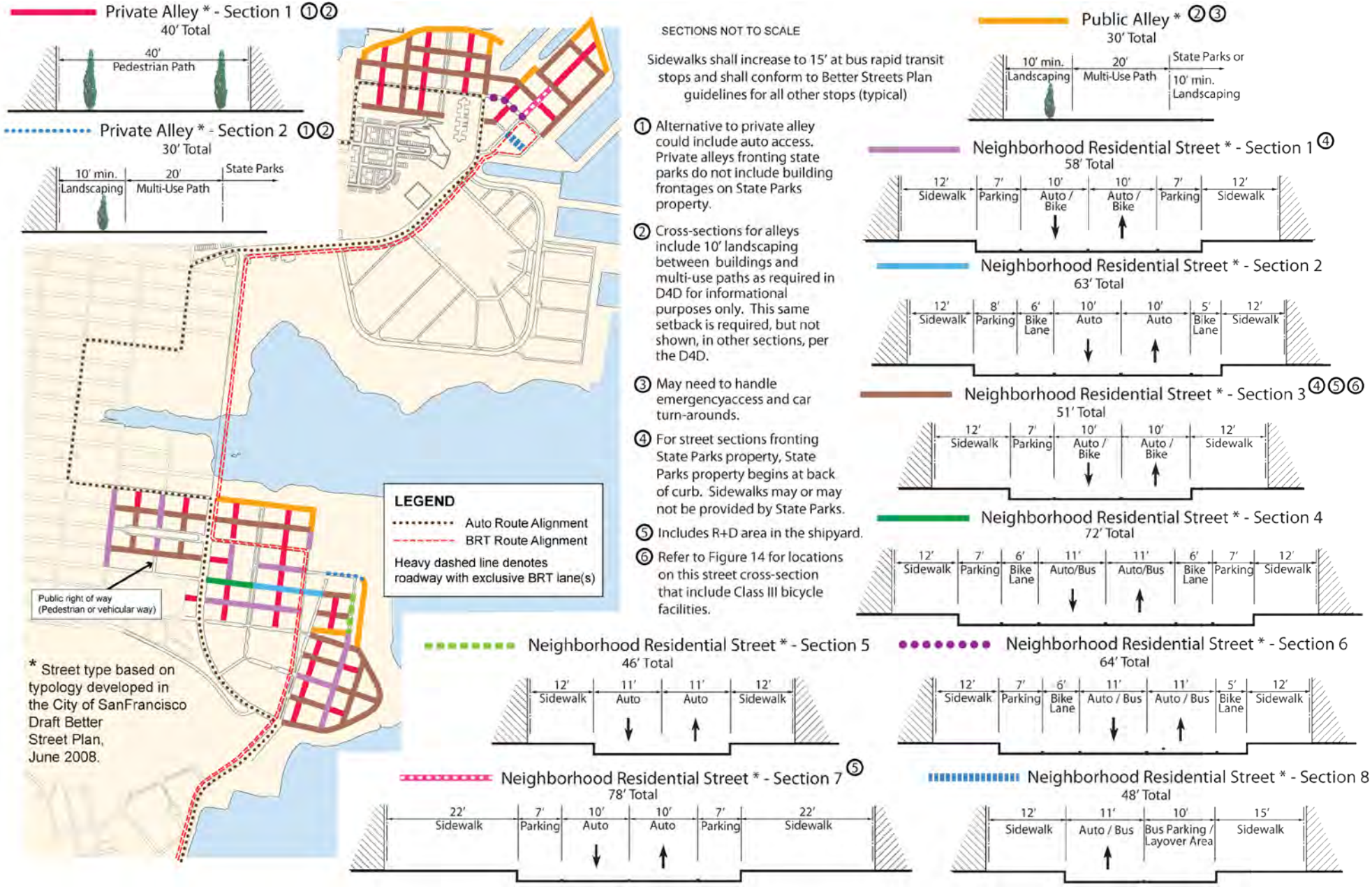


Figure 7H: **Stadium Roads**

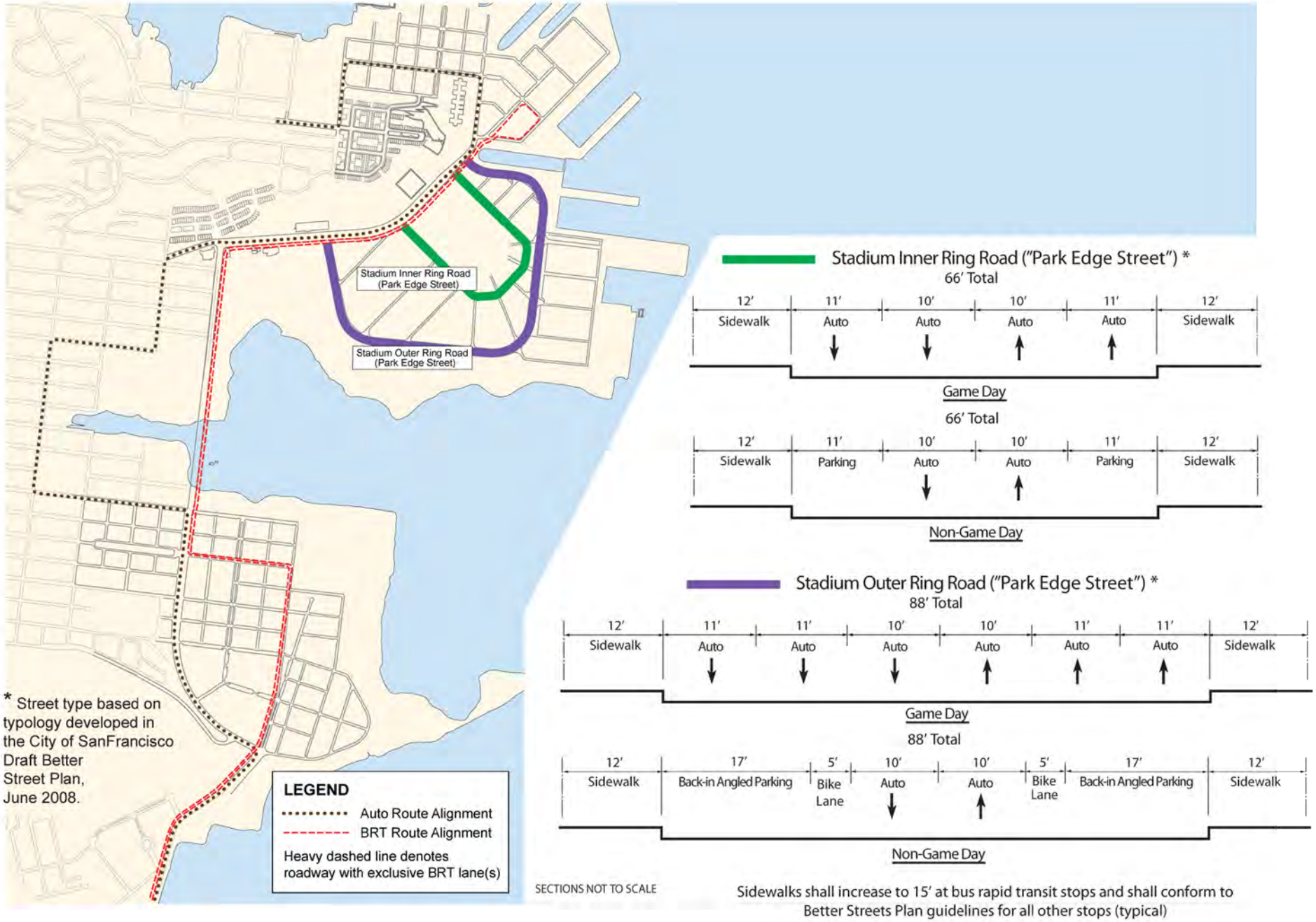
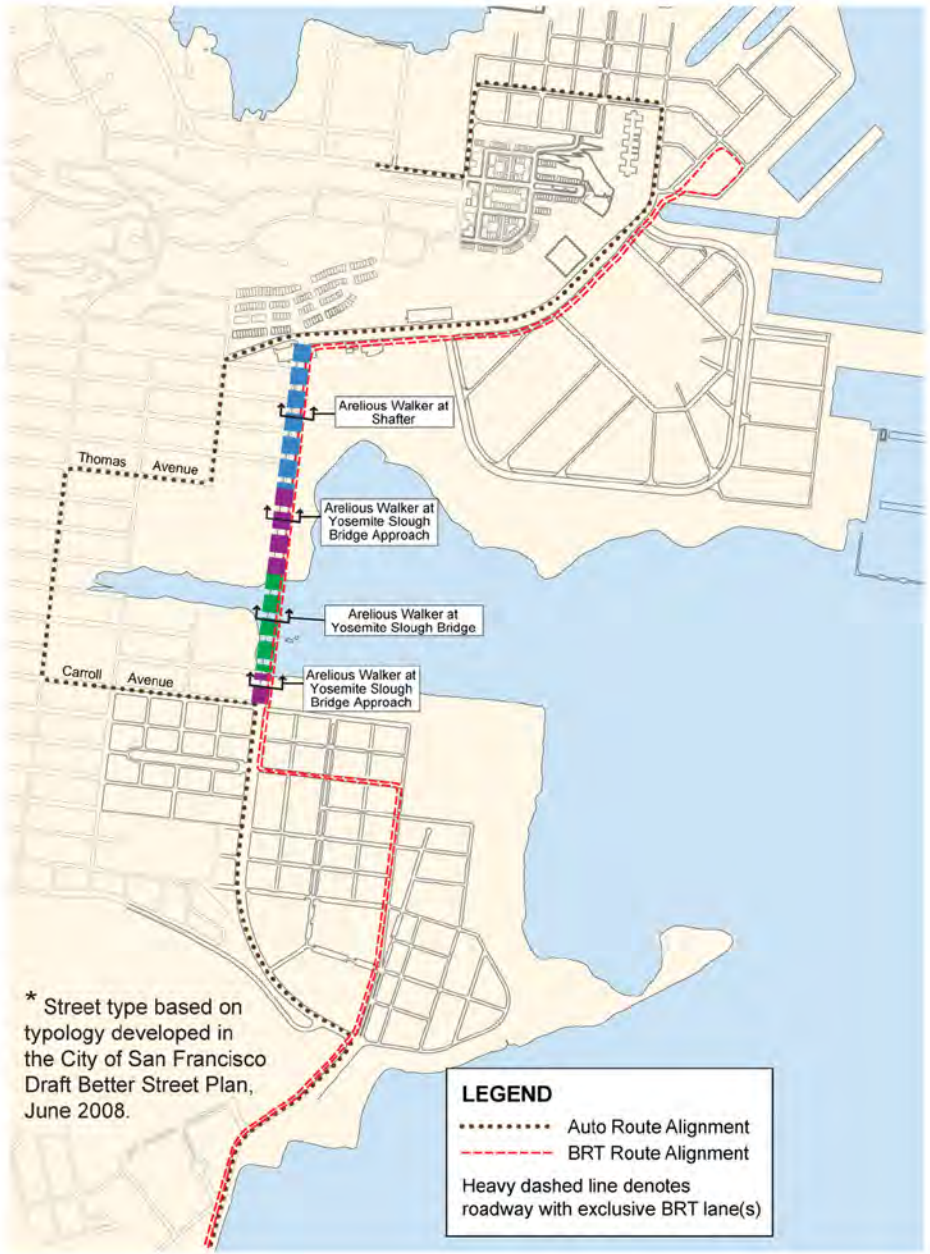


Figure 7I: **Yosemite Slough Bridge Concepts**



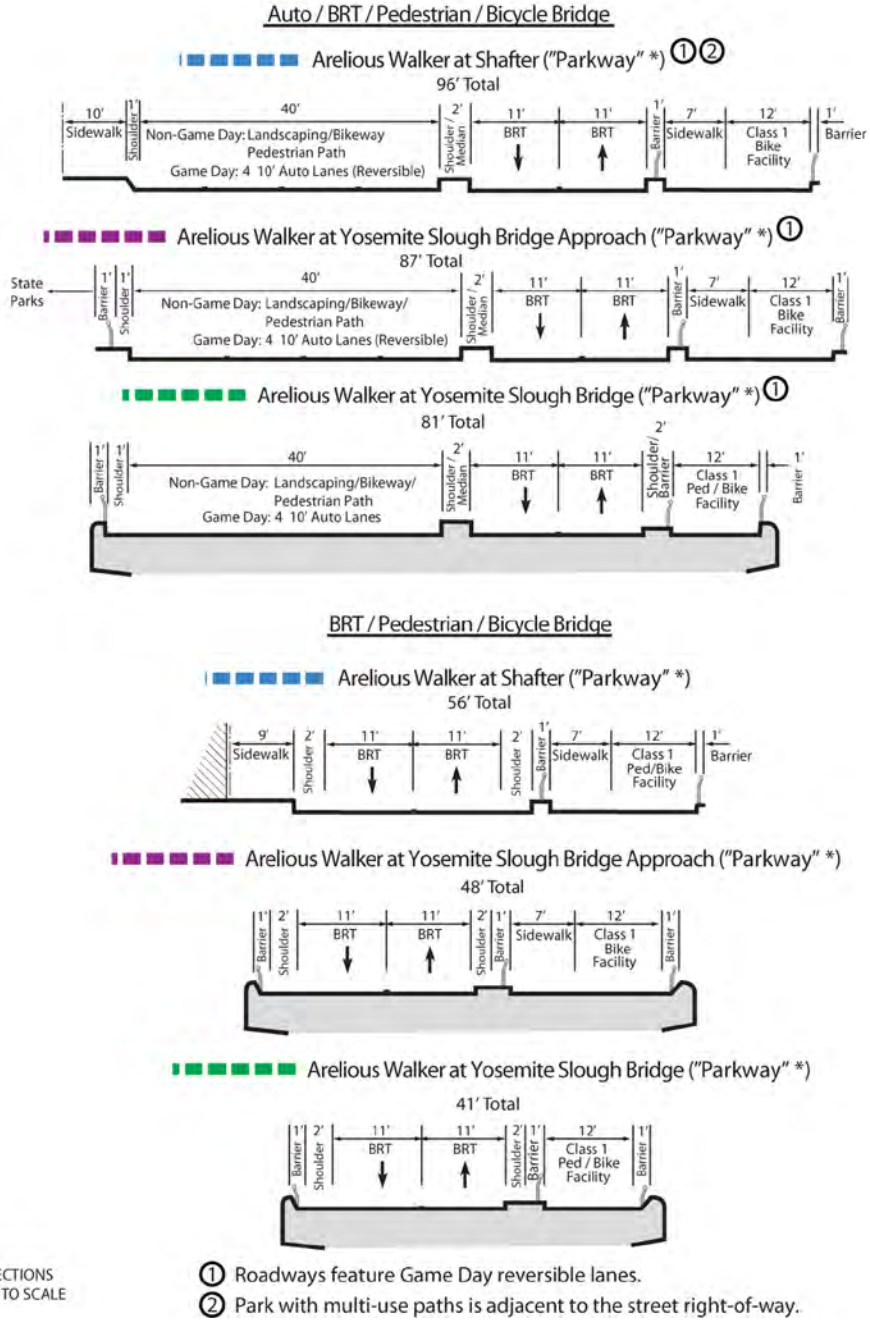


Figure 7J: **Post-Game Lane Configurations: Hunters Point Shipyard Arterials**

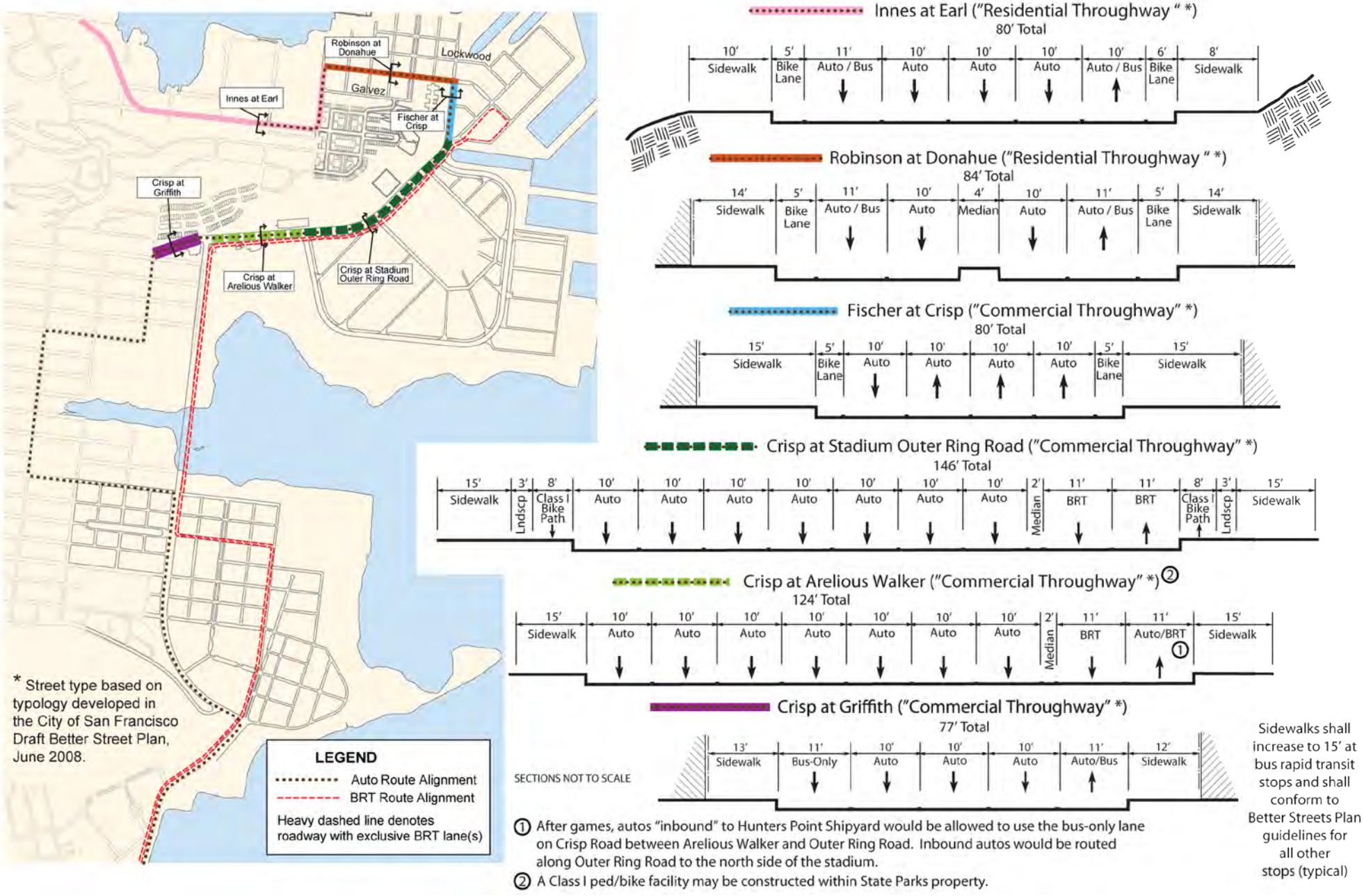
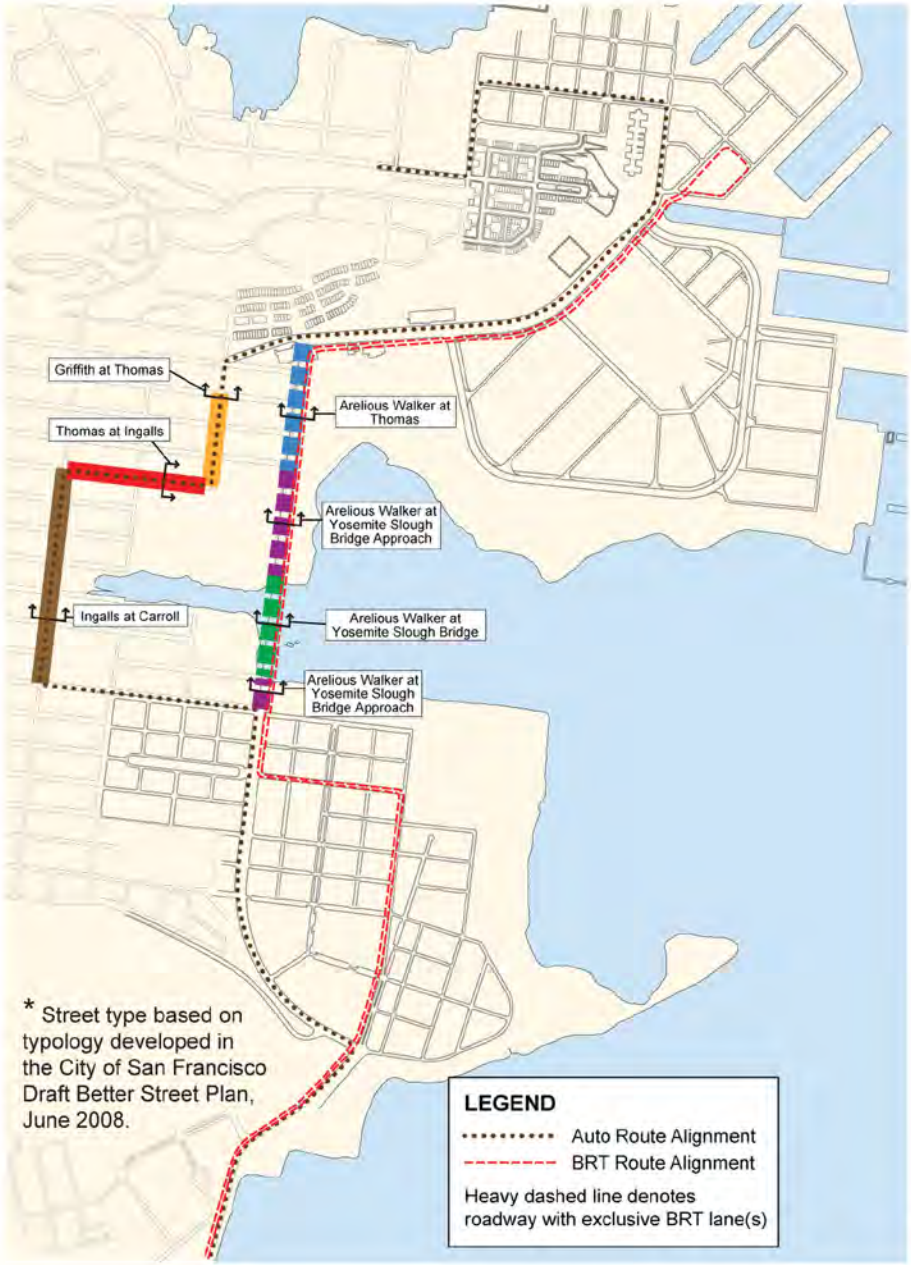


Figure 7K: **Post-Game Lane Configurations: Yosemite Slough Arterials**



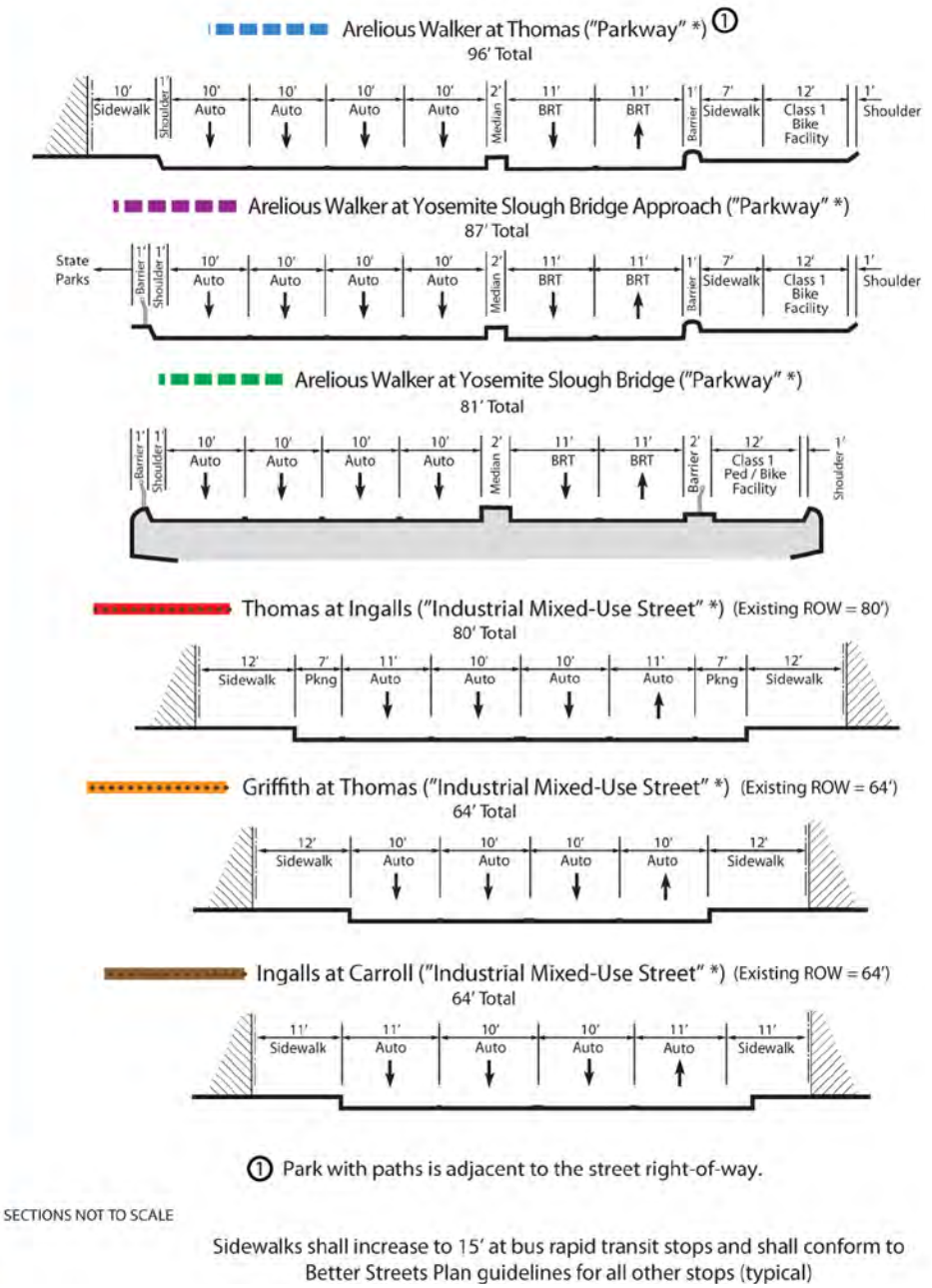
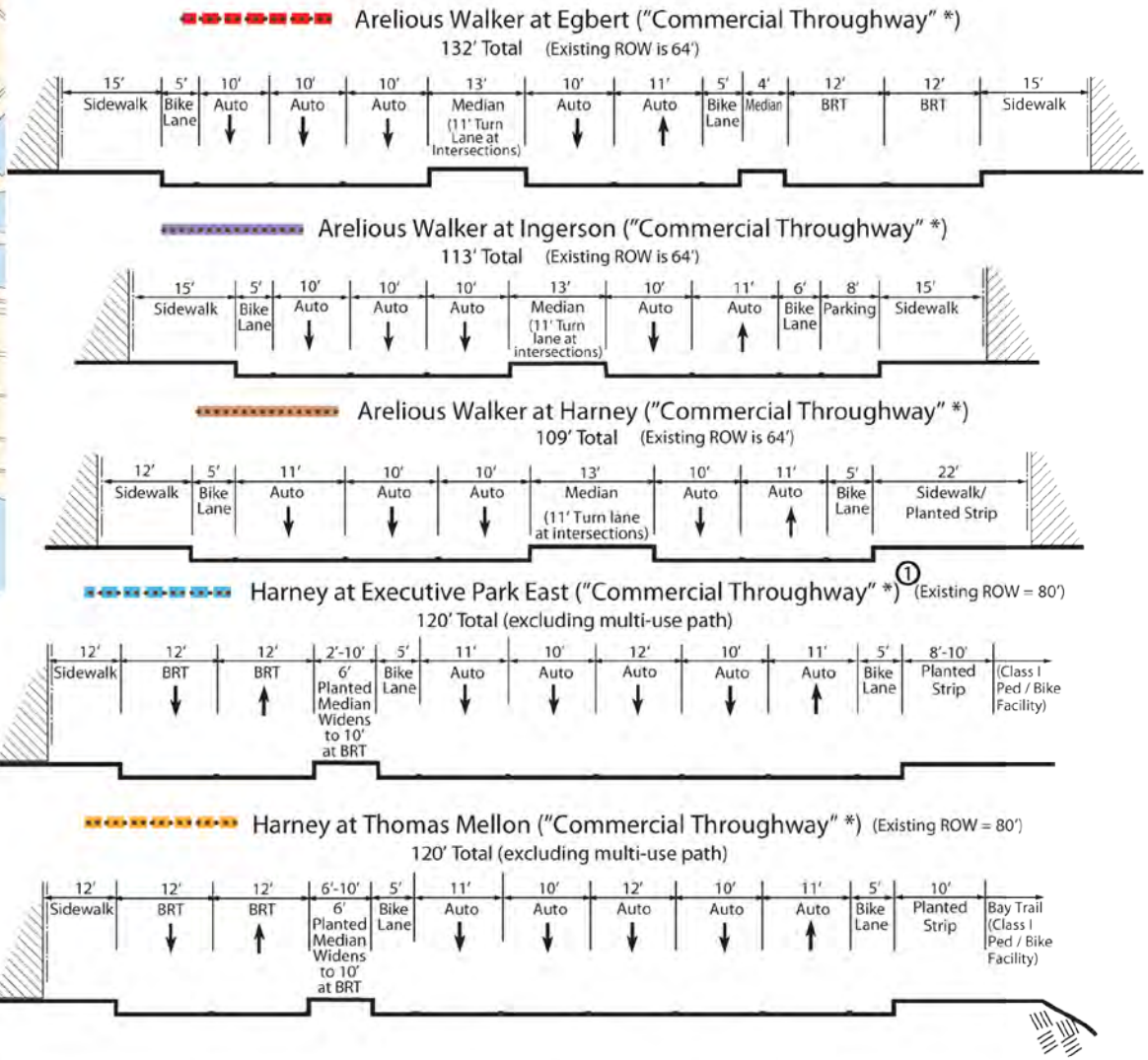


Figure 7L: **Post-Game Lane Configurations: Candlestick Point Shipyard Arterials**



① Median separating BRT lanes and westbound auto/bike travel lanes narrows to 2' and planted strip narrows to 8' to accommodate 10' max westbound right-turn lane at Executive Park Boulevard East.

SECTIONS NOT TO SCALE

Sidewalks shall increase to 15' at bus rapid transit stops and shall conform to Better Streets Plan guidelines for all other stops (typical)

Figure 7M: **Harney Way Potential Long-Term Configuration**

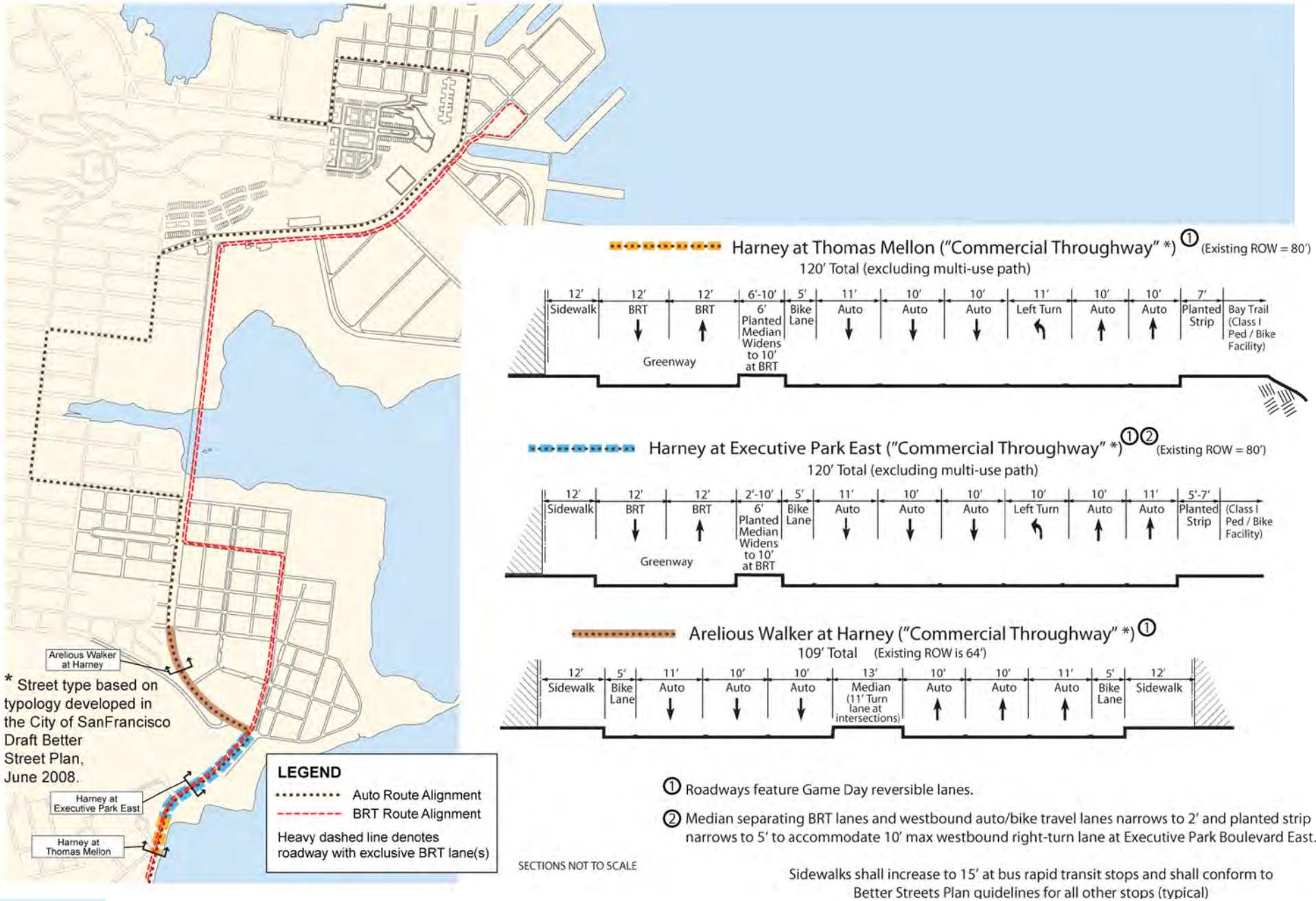
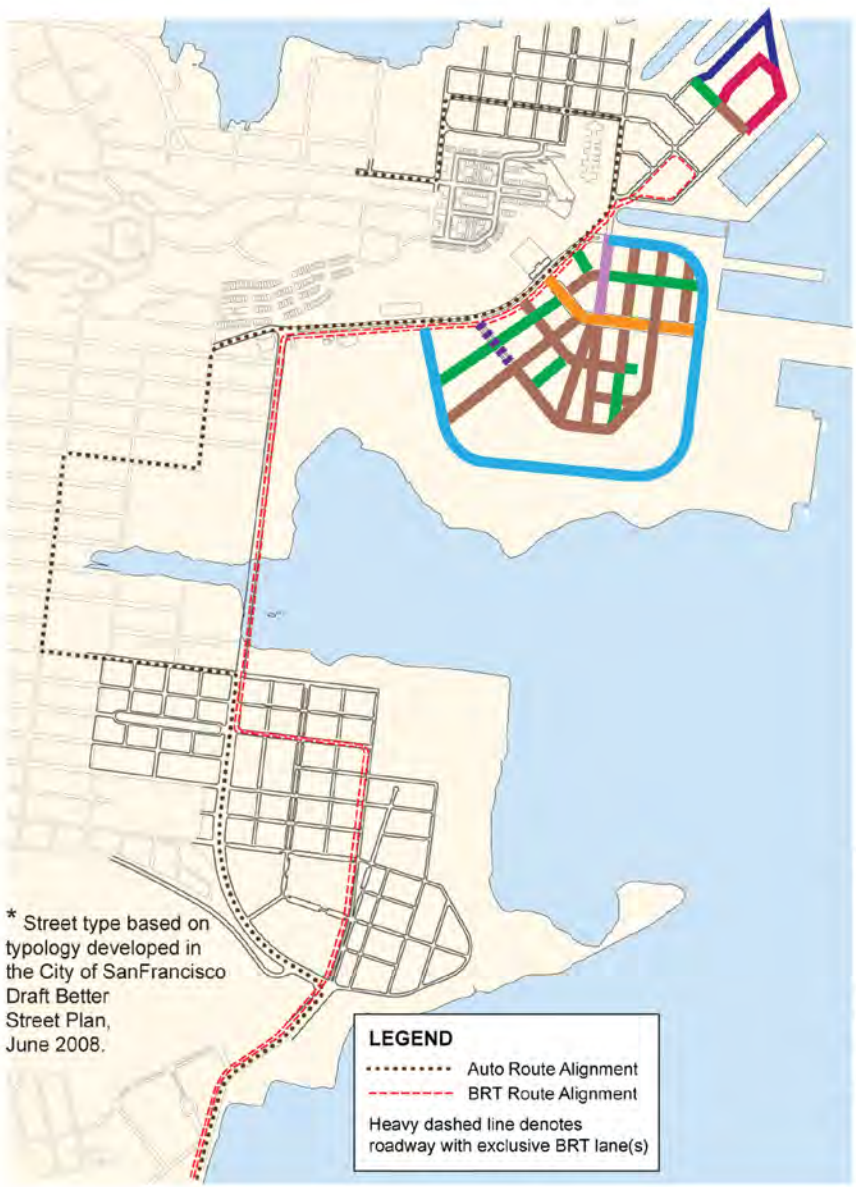


Figure 7N: **Non-Stadium Alternative: Hunters Point Shipyard Local Streets**



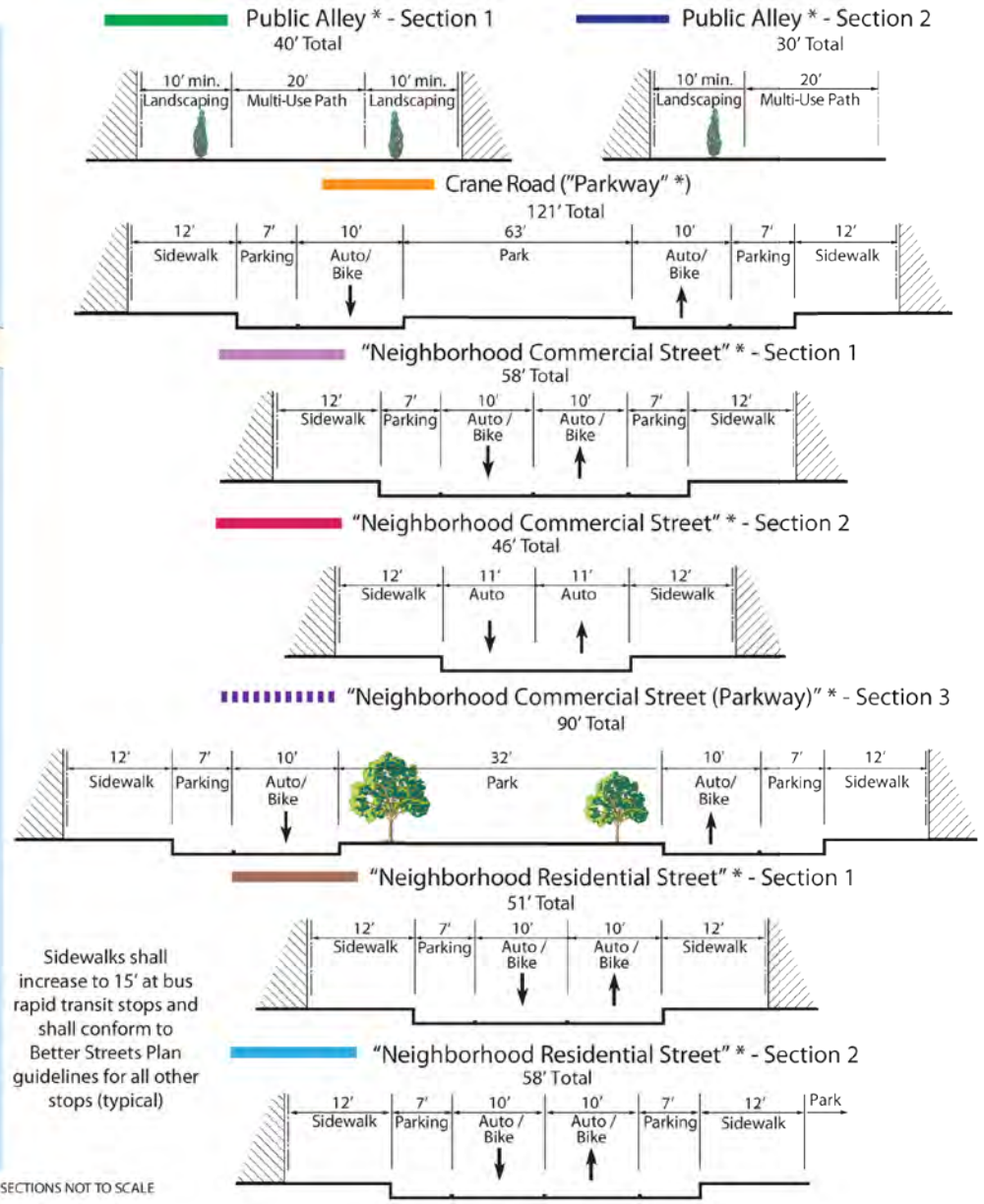
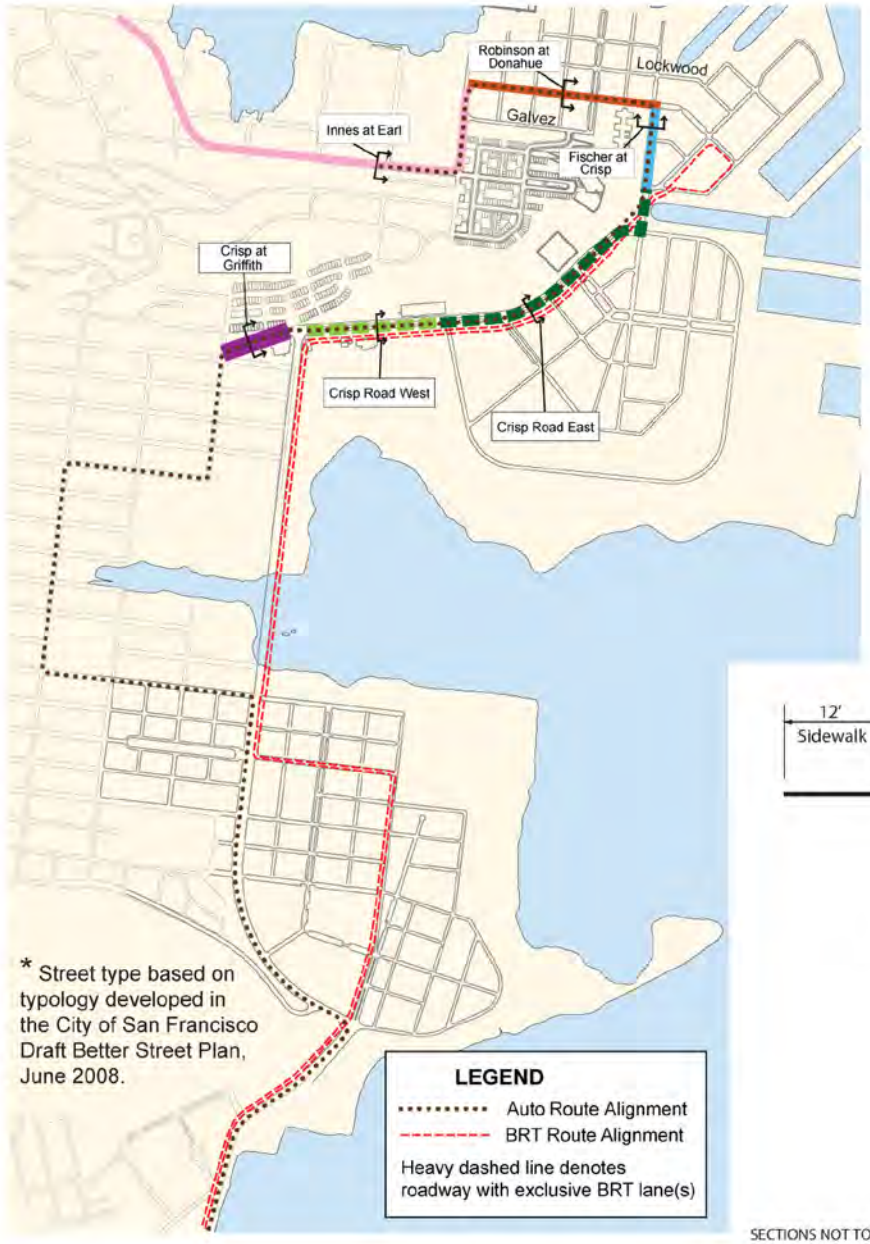


Figure 7O: **Non-Stadium Alternative: Hunters Point Shipyard Arterials**



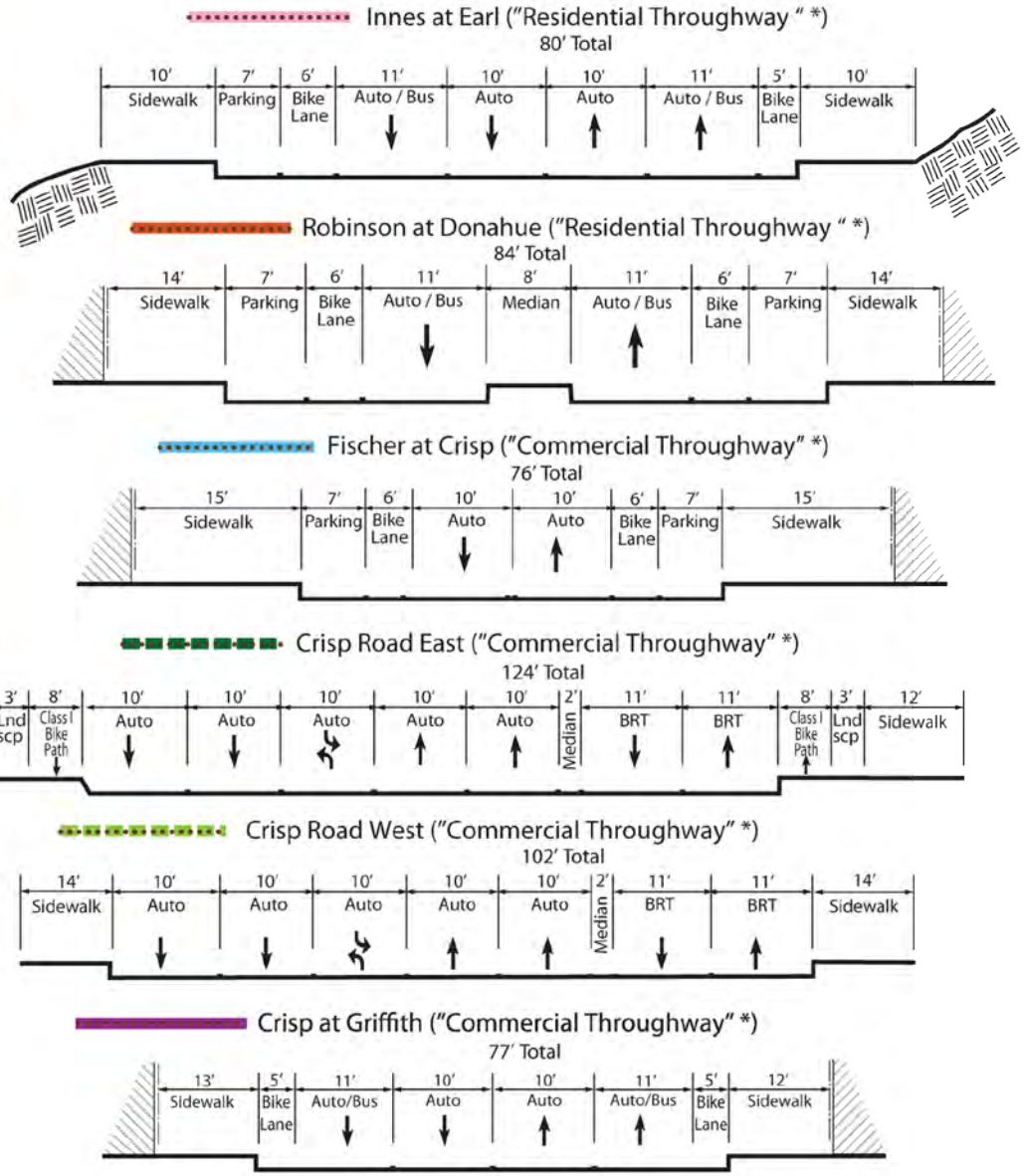
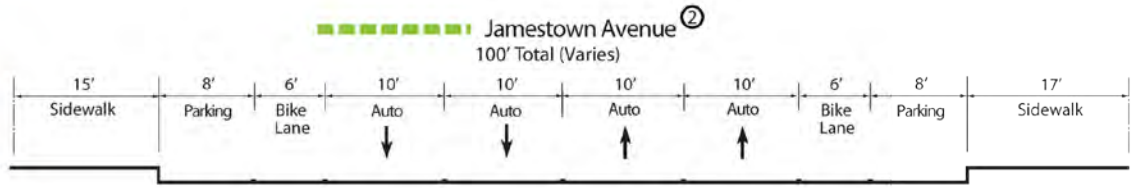
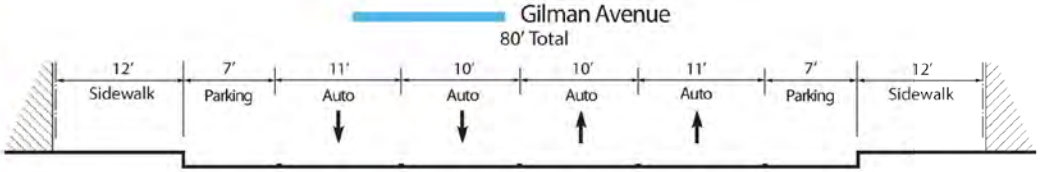
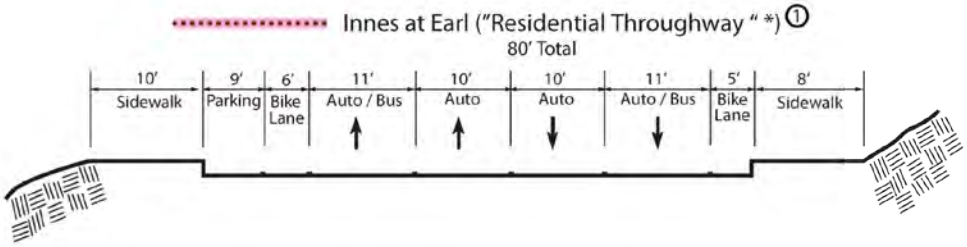


Figure 7P: **External Street Improvements**







① Roadways feature Game Day reversible lanes.

② Improvements east of 833-989 Jamestown project considered on-site. Improvements west of 833-989 Jamestown project considered external. Final design of on-site and external improvements to be coordinated with 833-989 Jamestown project. External improvements will retain existing street cross-section.

SECTIONS NOT TO SCALE

Sidewalks shall increase to 15' at bus rapid transit stops and shall conform to Better Streets Plan guidelines for all other stops (typical)

4.3 Proposed Roadway Improvements

Existing roadways will be expanded and new facilities built to serve Candlestick Point and Hunters Point Shipyard and the surrounding Bayview neighborhoods. This expansion will include a new special-access bridge, widening of existing streets, and other improvements, as shown in Figure 8 and described below.

1. Harney Way Widening

Harney Way, with its access to the US 101 Freeway, will function as the southern gateway to the project. The existing four-lane facility would be rebuilt as a new five-lane auto facility (Figure 9) with right-of-way reserved for an additional auto lane to be built in the future as needed to serve increased traffic levels (Figure 10). In addition, a left turn lane on eastbound Harney Way would be incorporated at both the Thomas Mellon Drive and Executive Park East Boulevard intersections to provide access to Executive Park. A westbound right turn lane will be provided at Executive Park East Boulevard to provide access to Executive Park. New traffic signals will be installed at Thomas Mellon Drive and Executive Park East Boulevard. In addition to the auto lanes, two lanes would be constructed adjacent to the roadway to accommodate exclusive BRT operations and Class I or Class II bicycle lanes would be provided on both sides of the roadway.

2. New Primary Roadway through Candlestick Point

Candlestick Point will be served by a new four- to five-lane roadway approximately following the current path of Giants Drive and Arelious Walker Drive. The roadway would also have a 13-foot median to accommodate left turn lanes at major intersections. Sidewalks, curb ramps, and streetlights would be upgraded. New traffic signals will be installed at the Harney Way/Arelious Walker Drive intersection and at the Ingerson, Gilman, and Carroll Avenue intersections. Portions of the roadway would accommodate exclusive BRT operations. Class II bicycle lanes would be provided on both sides of the roadway.

3. New Connecting Roadways

Roadway connections between Hunters Point Shipyard and Candlestick Point will be served by Ingalls Street, connecting to Crisp Road via Thomas Avenue and Griffith Street. Ingalls Street and Griffith Street would contain two travel lanes and on-street parking/loading on both sides of the roadway. Thomas Avenue will be converted from a two-lane to four-lane facility with on-street parking retained on both sides of the roadway. During the evening peak period, on-street parking would be prohibited on Griffith Street and Ingalls Street, such that there would be four travel lanes connecting the entire auto route around Yosemite Slough (Carroll Avenue, Ingalls Street, Thomas Avenue, Griffith Street, and Crisp Avenue). New signals will be installed at the intersections of Thomas Avenue/Ingalls Street and Palou Avenue/Crisp Road.

4. Streetscape Improvements

Streetscape improvements are planned for several key Bayview/Hunters Point roadways: Innes, Palou, Carroll and Gilman Avenues. These streets will serve as primary routes for pedestrians, bicyclists, transit riders, and drivers. They are proposed to enhance the safety and experience of road users and existing residents.

Enhanced streetscape design, including street trees, sidewalk plantings, furnishings, and paving treatments will be designed to visually tie together the proposed project with the greater Bayview neighborhood. Specific streetscape treatments will vary depending on existing right-of-way and traffic demands. Careful consideration will be given to improving visibility at all four-way stops.

5. Yosemite Slough Bridge

A new Yosemite Slough bridge would extend Arelious Walker Drive from Candlestick Point to Hunters Point Shipyard. The bridge would have an 81-foot wide right-of-way and would contain a 40-foot wide landscaped greenway, two 11-foot wide BRT lanes, and a Class I bicycle/pedestrian path. On 49ers game days, the 40-foot wide landscaped area would be converted to four peak direction travel lanes for game day auto traffic. The Yosemite Slough Bridge would not be used for vehicular traffic during secondary events.

The Class I bicycle/pedestrian path would provide the most direct connection between Candlestick Point and Hunters Point Shipyard for pedestrians and bicyclists and BRT service. During game days, the 40-foot wide landscaped median would serve as the primary and most direct route between the stadium parking areas and U.S. 101.

6. Transportation Management System

In conjunction with the roadway facilities and improvements described above, a transportation management system will be implemented. The system will allow for the coordination of signals at over 25 intersections in the Development Plan and vicinity using fiber-optic or equivalent technology. On game-days, some intersections would be controlled by Traffic Control Officers. Several variable message signs will be installed on roadways with reversible lanes. These signs will be able to convey messages for drivers, pedestrians and cyclists for game-day and emergency vehicle circulation. Software and hardware for a Transportation Management Center (TMC) on the stadium grounds will be developed. The TMC would be operated by the SFMTA on game days.

New Roadway Improvements Under Study

Additional roadway improvements have been identified that may serve the project site and surrounding development. These improvements, requiring approval by the City of Brisbane, will be studied through the environmental review process required by the California Environmental Quality Act (CEQA). The improvements are shown on Figure 8 and described below.

7. Geneva Avenue Extension

Geneva Avenue, which currently ends at Bayshore Boulevard, would be extended east to meet Harney Way, improving east-west access in the area. The Geneva Avenue Extension would have three eastbound and three westbound travel lanes between Bayshore Boulevard and a new interchange with U.S. 101. Currently, the nearest east-west access road is Blanken Avenue, which is designed as a neighborhood collector roadway and could not accommodate the additional east-west traffic generated by area projects. The lead agency for this project is the City of Brisbane, with the Caltrans Project Study Report (PSR) expected to be completed in 2010.

Existing roadways will be expanded and new facilities built to serve Candlestick Point & Hunters Point Shipyard

Figure 8: **Proposed Roadway Improvements**

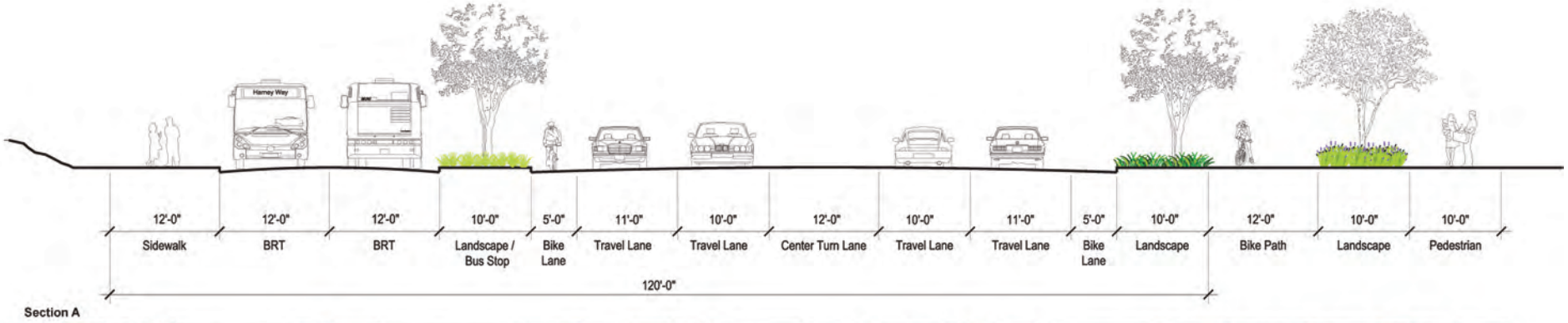
8. Geneva/Harney/US 101 Interchange

In conjunction with the extension of Geneva Avenue east, the existing Harney Way interchange would be redesigned as a typical diamond interchange. Caltrans and the City of Brisbane are the lead agencies for this project, and a PSR is currently being prepared. Two alternatives are currently being assessed; one with Geneva Avenue/Harney Way crossing under U.S. 101, and one with Geneva Avenue/Harney Way crossing over U.S. 101. A separate environmental review and approvals by Caltrans, the City of Brisbane, SFCTA, and the City of San Francisco will be required to implement this improvement, supported by analysis from the San Francisco County Transportation Authority's Bi-County study.

9. Geneva Avenue to Balboa Park BART

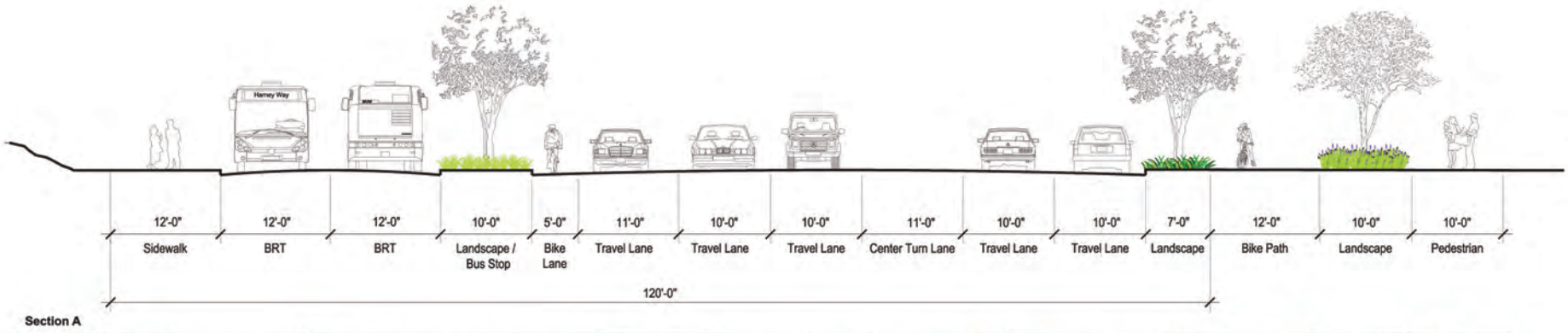
In conjunction with the projects above, specific transit-preferential treatments along Geneva Avenue and related roadway improvements (including signal work, street design, and safety improvements) would be implemented.

Figure 9: **Proposed Harney Way Initial Configuration**



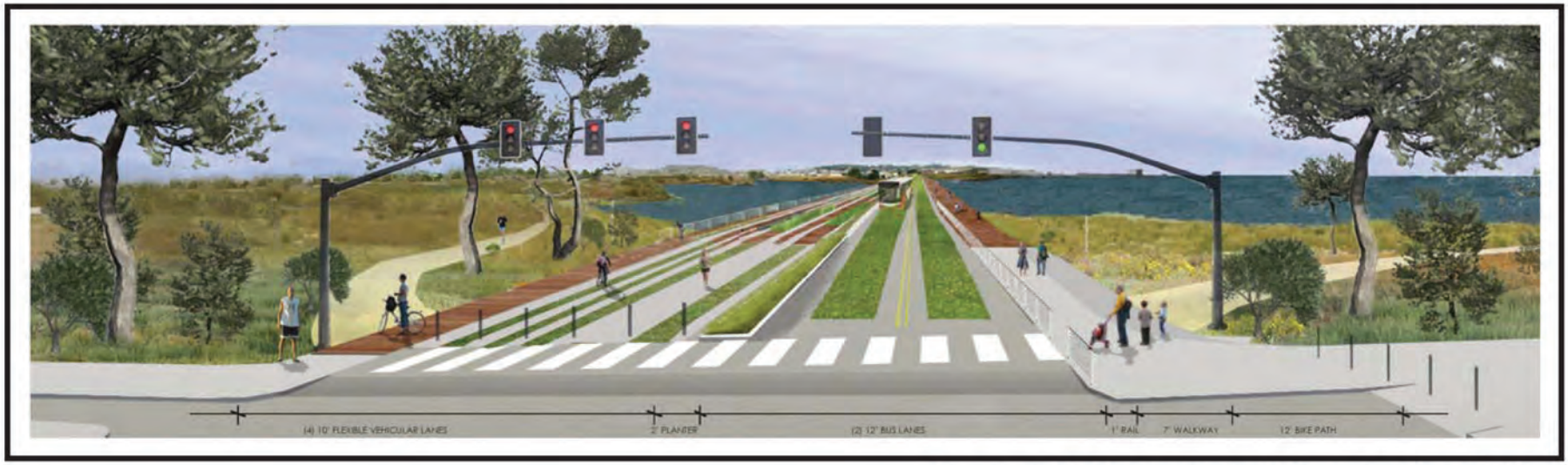
Section A

Figure 10: **Proposed Harney Way Potential Long-Term Configuration**



Section A

Figure 11: **Yosemite Slough Bridge Concept**



Candlestick Point approach to Yosemite Slough Bridge

Yosemite Slough Bridge

5 Transportation Program

5.1 Introduction

Currently, about two-thirds of all trips in the southeast quadrant of San Francisco are car trips. If the trips generated by the project exhibit this level of automobile use, the existing vehicular transportation facilities in this area would be insufficient to handle the projected demand. Thus, the policies and programs outlined in this chapter target a significant redistribution of trips from auto to transit and non-motorized modes. The following sections outline the specific means designed to encourage the use of modes other than private automobile, achieve the project mode split goal, as well as enhance alternatives to transportation in surrounding neighborhoods by developing a stronger transit, bicycle, and pedestrian network.

The Candlestick Point and Hunters Point Shipyard Phase II Development Plan Environmental Impact Report (EIR), has been prepared independently from this Plan, and models and evaluates the travel demand of this project.

Existing Travel Behavior

Within the City and County of San Francisco, travel behavior for new developments is typically estimated using the SF Guidelines[6], which contains detailed survey data used to estimate trip generation, mode split, and origins/destinations based on land use and trip type. The data is organized by superdistricts (SD), one in each quadrant of San Francisco.

Candlestick Point and Hunters Point Shipyard are located in SD-3, the southeastern quadrant of the City. According to historical data from the SF Guidelines, the modal split of travel demand for a new project located in SD-3 would be expected to exhibit the modal split shown in **Table 5**.

Table 5: SD-3 Calculated Mode Split – Weekday PM Peak Hour

Mode	SD-3 Mode Split[1] (Inbound and Outbound Trips)
Auto/Carpool	66%
Transit	16%
Walk	16%
Bike	2%
Total	100%

1 Estimates per AECOM – October 2008

The mode split above reflects data collected in the 1990s for land uses and transit service within a large area of San Francisco that has since undergone significant change. It is also based on much less dense development and a different mix of uses than what is proposed for the project area. Therefore, the data from the SF Guidelines alone is not a sufficient estimator for mode split for a project of this size and character.

Project Travel Behavior Goal

Although past travel behavior can be a useful tool to forecast future mode splits, many factors can result in changes to travel patterns. The Candlestick Point and Hunters Point Shipyard Phase II project aspires to a mode share of not more than 45 percent of person-trips by auto, and not less than 30 percent by transit, 20 percent on foot, and 5 percent as bike trips for work trips during the weekday PM peak hour. **Table 6** shows that to achieve this mode split goal, approximately 21 percent of peak hour work trips would need to shift from private auto to either transit, walk or bike based on historical travel behavior data. The project is also linked to surrounding neighborhoods by its strong transit, bicycle and pedestrian networks, and neighborhood services which should serve to reduce overall trips and vehicle miles traveled in the area.

Table 6: Project Mode Split Goal - Weekday PM Peak Hour

Mode	SD-3 Mode Split[1]	Project Travel Behavior Goal	Difference
Auto/Carpool	66%	45%	**-21%**
Transit	16%	30%	**+14%**
Walk	16%	20%	**+4%**
Bike	2%	5%	**+3%**
Total	100%	100%	

1 Estimates per Fehr & Peers – May 2009

6 2002 Transportation Impact Analysis Guidelines for Environmental Review. Planning Department, City and County of San Francisco. October, 2002.

5.2 Strategies

The strategies outlined in this section, which include new and improved transit options as well as a comprehensive package of TDM measures, would help achieve the desired mode shift.

Maximize Internal Trips

The Development Plan envisions mixed-use neighborhoods that will incorporate new office, retail, and entertainment centers. These will allow trips that might be otherwise attracted to external destinations to remain within the project area. Internal trips are shorter and are thus more likely to shift from auto to non-auto modes.

Internal trips will be maximized by the following strategies:

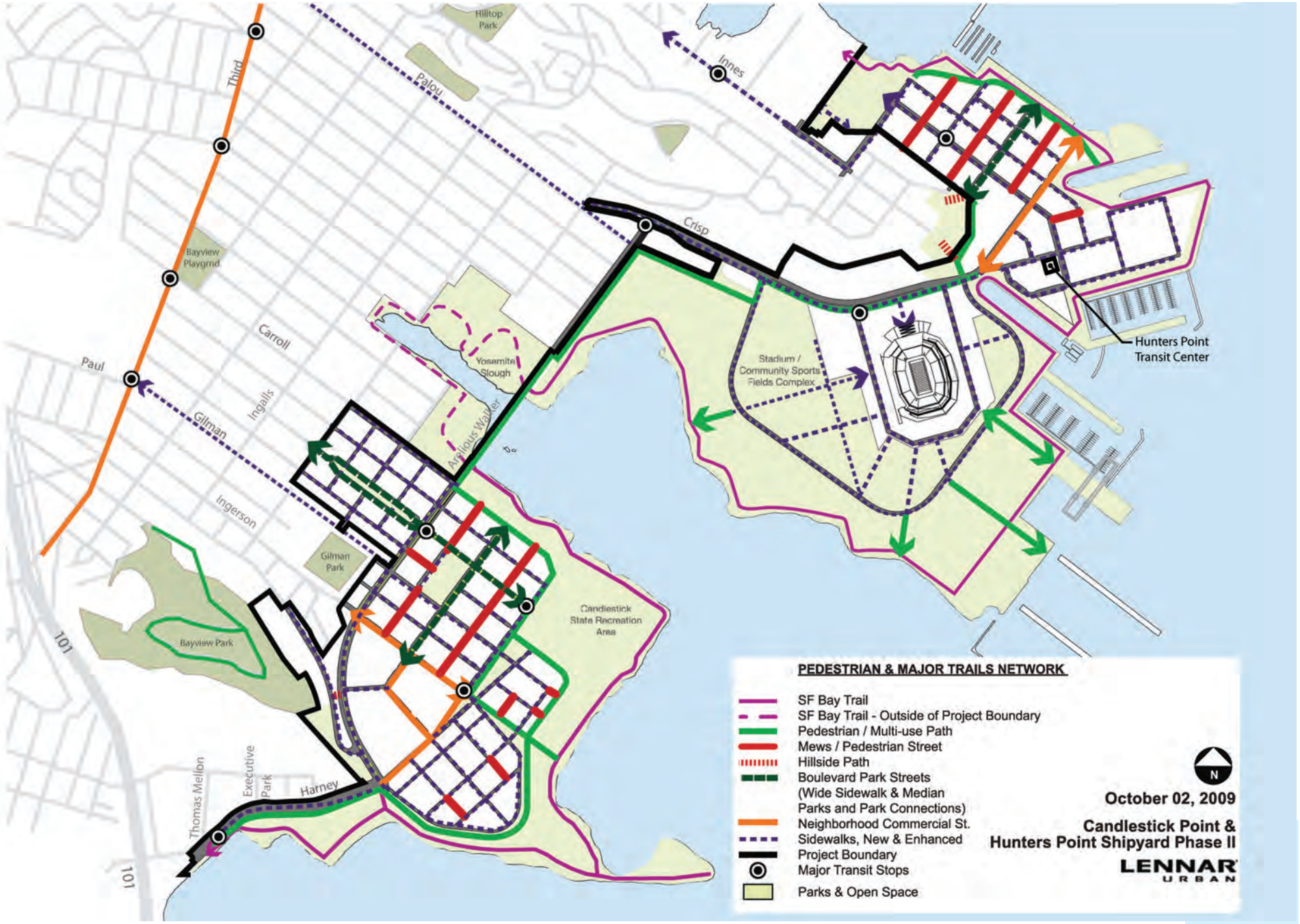
- Support services will be included in the commercial land use program. These uses will be designed and located in a manner that minimizes the need to use automobiles;
- Neighborhood-serving retail and a market will be located within a half mile of every household;
- Opportunities for residents to work within the project site will be encouraged; and
- Appropriate street design that accommodates pedestrian-friendly design speeds and levels of congestion.

Maximize Pedestrian Travel

The density and configuration of the project are designed to actively encourage the use of walking as a primary travel mode. The project will be served by a network of pedestrian routes as illustrated in **Figure 12**. The following concepts will encourage pedestrian travel:

- The proposed residential densities are consistent with other dense and walkable San Francisco neighborhoods, such as North Beach, the Mission and the Marina, and are comparable to successful walkable and transit-oriented communities elsewhere;
- The highest residential densities will be within a five-minute walk of the Hunters Point Shipyard Transit Center and the Candlestick Point BRT Stops, and all residences will be within a 15-minute walk;
- The community-oriented land uses – markets, schools, and other public facilities – are located within short walking distances of project residents;
- Site design elements such as the configuration and orientation of buildings, landscaping and streets will be designed to provide a comfortable walking environment;
- Sidewalks conforming as closely as possible to the Better Streets Plan will be provided on all streets;
- A comprehensive wayfinding signage program will support the network of walkways and shared-use paths;
- The project will be designed and built to be ADA-accessible to residents and visitors;
- Pathways will be provided between residential areas and to key entrances of parks and open space;

Figure 12: **Pedestrian Circulation Plan**



- Many residences in the adjacent neighborhoods of Bayview, Hunters View, India Basin, Executive Park, and the City of Brisbane will also be within a 15-minute walk of the improved transit facilities and new neighborhood services and retail; and
- Streets will be designed to be pedestrian-friendly and incorporate the following characteristics:
  - » Separate pedestrians from moving traffic through the use of wide sidewalks, on-street parking, and landscaping;
  - » Facilitate pedestrian circulation with continuous pedestrian paths of travel and short block distances;
  - » Enhance safety at crossings with shorter crossing distances, clearly marked crosswalks, and pedestrian crosswalk signals. Intersections should be designed with curb extensions where possible and tight corner radii (except on streets with delivery trucks or buses);
  - » Install vibrant streetscape elements including street trees, continuous "street wall", openings for activity and gathering space; and street furniture and lighting.

Maximize Bicycle Travel

The existing bicycle routes in the project vicinity, illustrated in **Figure 13,** are not sufficient to accommodate the level of bicycle activity expected in the area after the proposed project is built. To facilitate bicycle travel, the project will be served by an expanded network of bicycle routes, as proposed in **Figure 14**[7]. The following concepts have been developed to facilitate bicycle travel in a safe and convenient manner:

- Bicycle routes will be established within a quarter mile of all residences and employment, consistent with the City's current guidelines and bicycle plans;
- The development's roadways or adjacent roadways will incorporate Class II bicycle lanes for safe and efficient bike mobility through the project site. Appropriate signage and pavement markings (sharrows) will also be included for Class III bicycle routes;
- Shared-use paths will provide safe, direct, convenient and attractive routes between all of the development's major destinations. The project's bicycle route network will connect to the Bay Trail and to recreational paths on the project site;
- Internal streets will be designed to be low-speed (15-25mph), creating an environment that is attractive and safe for bicycling. Arterials will have a design speed of 35 mph;
- Directional signage along the bicycle routes and shared-use paths will point out key destinations;
- Bicycle routes will be designed to improve connectivity from within the project area to surrounding neighborhoods, and to increase bicycle access from outside the area to new destinations and regional transit hubs within;
- Safe and secure bicycle parking will be provided within each residential garage or within each residential building, with a minimum of 25 parking spaces for the first 50 dwelling units plus one space for every four dwelling units thereafter. Each commercial parking facility will provide bicycle parking at a minimum rate of 15 percent of car spaces;
- Supplemental bicycle parking racks will be provided near major destinations, and a bike parking station will be included at the Hunters Point Shipyard Transit Center;
- Showers and locker facilities will be provided within each new commercial building with greater than 10,000 square feet of uses; and
- Discounted space will be provided to encourage a bicycle station offering rentals, repairs, and storage to locate at Candlestick Point/Hunters Point Shipyard.

7 The proposed route improvements shown in Figure 14 and other local bike route revisions may be explored in the future per TDM, Bike Plan Revisions, or other programs.

Figure 13: **Existing Bicycle Routes**

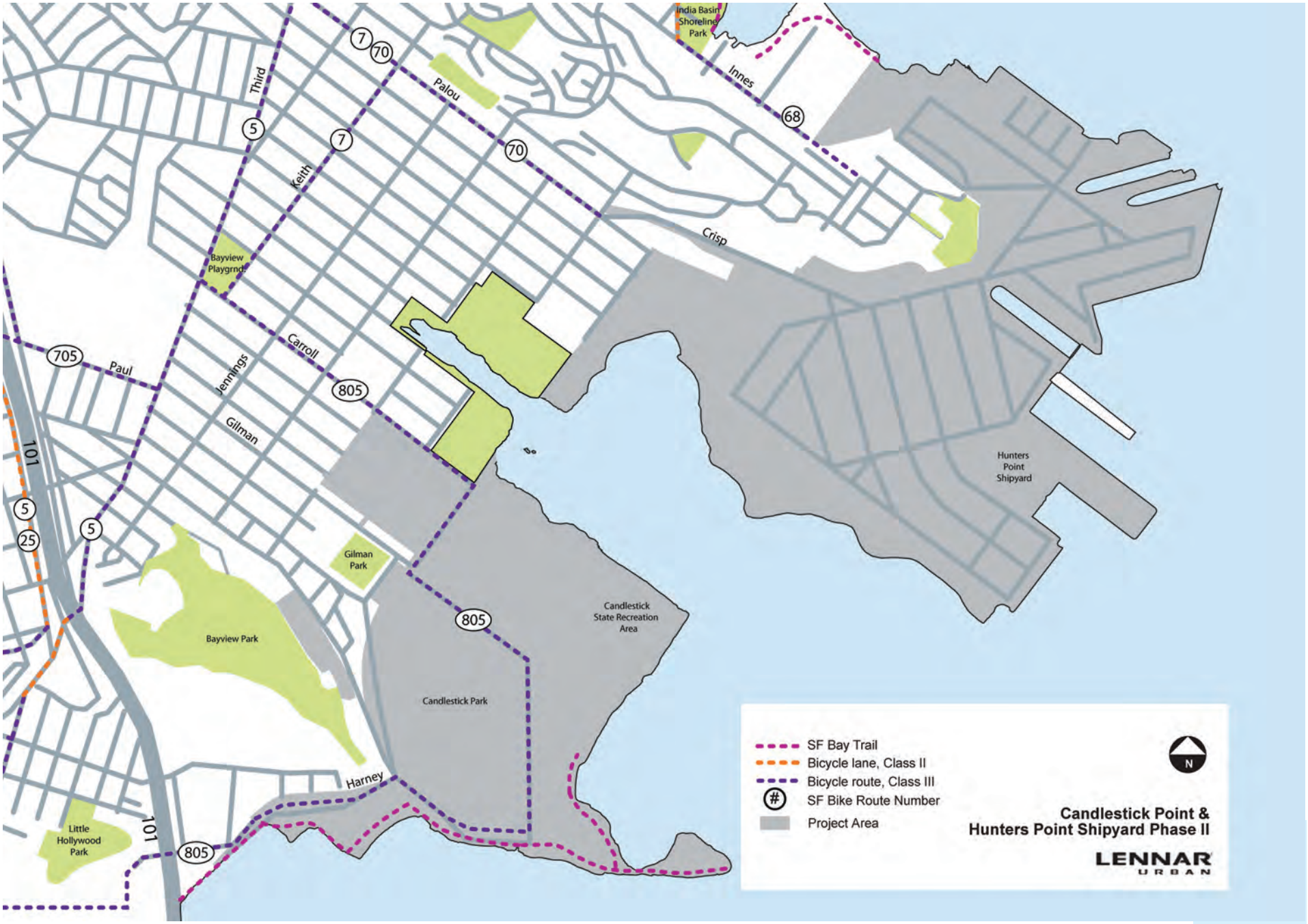
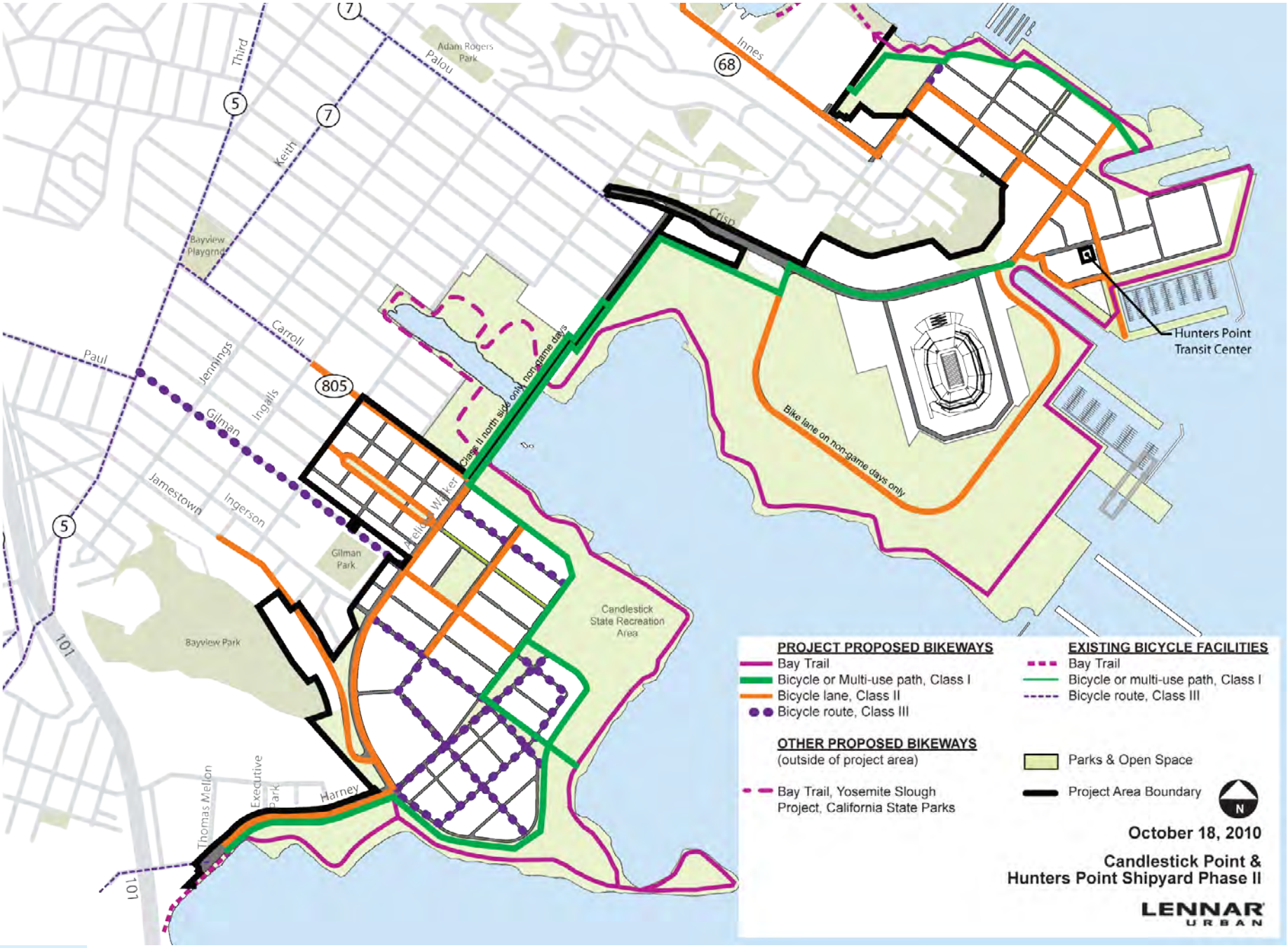


Figure 14: **Proposed Bicycle Routes**



Expand & Improve Transit Services

The Plan targets a near doubling of the current mode share of transit in the vicinity of Candlestick Point and Hunters Point Shipyard. Reaching this goal depends upon maximizing the effectiveness and convenience of transit service to and within the project site.

Ongoing dialogue with the San Francisco Municipal Transportation Agency (SFMTA) has identified new transit services to serve the project site. The ultimate network of new and improved transit services will be implemented by SFMTA. In addition, the City has initiated discussions to ensure complementary and mutually-reinforcing system connections with SamTrans and Caltrain.

In order to attain the project's transit usage goal, the strategies below have been developed. Rather than proposing a single major transportation facility, such as a new BRT, the strategies build upon the existing transit network and infrastructure. The following strategies will also benefit the surrounding Bayview and Hunters Point Shipyard neighborhoods:

- Extend existing Muni routes in coordination with phases of development to better serve the project area, with local and rapid transit service within a quarter or half mile of all residences and employment, respectively;
- Increase frequencies on existing routes to provide more capacity and increase the capacity of key routes, such as the T-Third;
- Complement these routes with new transit facilities and routes in coordination with phases of development in order to reduce transfers and better serve the project's proposed land use program and transit demand;
- Increase connections to the regional transit network (BART, Caltrain) to help reduce the current perception of the area's transit isolation;
- Specifically create a new BRT (Muni Line 28L) connecting Balboa BART Station, Bayshore Caltrain Station and T-Third Muni with several bus lines; and
- Ensure that new regional transit hubs within the project area are accessible by local transit, bicycle, pedestrians, shuttles, and taxis from adjacent neighborhoods on both sides of the City limits.

The need for new transit vehicles to serve the project presents an opportunity to introduce low- or zero-emission buses. SFMTA has targeted a reduction in greenhouse gas emissions from its vehicles to 30 percent below 1990 levels by 2012, and plans to become 100 percent emission-free by 2020.

Proposed Transit Improvements

New direct one-seat transit service is proposed to serve the high employment concentration of Downtown San Francisco. Fast and efficient connections to the regional transit network (BART, Caltrain, T-Third/Central Subway) also serve these destinations, as well as the employment centers of the Airport, the East Bay, the Peninsula, and the South Bay. BART and Caltrain stations south of the project site are generally well-served by local bus routes and shuttles that would provide connections to Peninsula workplaces.

The proposed transit improvements, illustrated in **Figure 15**, are described in the list to follow.

Figure 15: **Proposed Transit Improvements**

A. New and Expanded Bus Lines

Existing Muni lines 24-Divisadero, 44-O'Shaughnessy, and the 48-Quintara would be extended to Hunters Point Shipyard; line 29 would be extended into Candlestick Point. Service frequencies on these lines would be increased to accommodate greater demand. New Downtown Express routes would connect both Candlestick Point and Hunters Point Shipyard with the Transbay Terminal. As transit-preferential elements are implemented on Palou Avenue, as well as Harney Way to support BRT (Muni Line 28L) service, new lines would be introduced to serve these corridors as well (see D and E below). The proposed expansion is summarized in **Table 7**.

B. Harney/Geneva BRT/Transit Preferential Street

To facilitate access to the regional transit system, BRT and transit preferential improvements will be implemented in the Harney Way / Geneva Avenue corridor. Exclusive bus lanes and BRT elements will be installed along the route connecting Hunters Point Shipyard Transit Center and Bayshore Caltrain Station through Candlestick Point. These lanes will be designed to be "rail ready" in that they will be able to accommodate the geometric curves, grades, and widths that support light rail operation, although light rail is not proposed as part of this project. Transit preferential elements would be implemented along Geneva Avenue between Bayshore Caltrain Station and Naples Street, and BRT elements from Naples Street to Balboa Park BART Station. BRT service in this corridor would connect Hunters Point Shipyard and Candlestick Point to Caltrain, T-Third Metro, and BART service. In addition, transfers to SamTrans will be facilitated at the Bayshore Boulevard and Geneva Avenue intersection.

C. Hunters Point Shipyard Transit Center

The Hunters Point Shipyard Transit Center will serve the northern half of the project and would be located along two blocks adjacent to the Hunters Point Shipyard Village Center. Along with ten bus bays, the facility will include shelters, ticketing kiosks, real-time transit information technology and operator restrooms. Most of the bus lines serving Hunters Point Shipyard will stop at the transit center allowing quick and immediate transfers to other lines. The transit center will be located just one block away from the Hunters Point Shipyard Village Center retail street.

The intention of the Transit Center is to consolidate the terminus of all transit lines in one location to allow for convenient transfers and bus layovers. It is located at the nexus of residential, retail, and research and development land uses.

D. BRT Stops

BRT (Muni Line 28L) stops will be located at Hunters Point Shipyard Transit Center, three locations within Candlestick Point and at two intermediate locations. At the BRT stops, the roadway would be widened to allow for curbside bus loading zones or station platforms. The stops will include shelters, ticketing kiosks, real-time transit information and other amenities.

E. Palou Avenue Transit Preferential Street

One Muni line will be extended along Palou Avenue to serve the Hunters Point Shipyard Transit Center. In addition, two other lines will operate along Palou Avenue with service near the project. In order to provide efficient, attractive service on these lines, transit preferential treatments including transit-priority technology would be implemented, including installation of up to six new traffic signals along Palou Avenue. To improve pedestrian comfort and the accessibility of transit in this corridor, new bus shelters will be installed and the street will be upgraded with ADA ramps, bulbouts, and crosswalks.

Other Potential Transit System Improvements Under Study

A number of additional transit projects under study have been identified that would facilitate access to the project but are not part of this Plan.

F. Bayshore Transit Center

The Harney/Geneva bus rapid transit corridor intersects Caltrain at the Bayshore Station, which would allow for convenient intermodal connections between Candlestick Point, Hunters Point Shipyard, and Peninsula destinations. A vertical circulation connection would be introduced to seamlessly connect the two services. The connection would include elevators and stairs, and a potential extension of the station platform. Consideration will be given to include a bicycle station to facilitate Intermodal connections.

Table 7: Muni Service to the Project – Existing and TEP Equivalents		
Existing Muni Line	**Equivalent under TEP Proposals and Summary of Changes**	**Additional Proposed Service Enhancements**
23 – Monterey	**18 – 46th Ave:** would be combined with Line 23, providing direct service to the Outer Sunset and Outer Richmond	Same as proposed TEP service
24 – Divisadero	**24 – Divisadero:** would be modified to serve the Mission and the Marina Districts	Extension along Palou, Crisp and Spear Aves. to Hunters Point Shipyard Transit Center
28L – 19th Ave/ Geneva Limited (BRT)	**28L – 19th Ave Limited:** would be modified to serve Balboa Park BART. Service would extend to 9 PM.	Extension along Geneva Ave through Candlestick Point with terminus in Hunters Point Shipyard. Conversion to BRT in the project area, with enhancements along Geneva Ave as supported in the Bi-County Study
29 – Sunset	**29 – Sunset:** minor changes only	Extension along Gilman Ave to Harney Way
44 – O'Shaughnessy	**44 – O'Shaughnessy:** no changes	Extension along Innes Ave to Hunters Point Shipyard Transit Center
48 – Quintara to 24th St	**48 – Quintara to 24th St:** would cover portion of Line 19 on Evans and Innes	Extension to Hunters Point Shipyard Transit Center
54 – Felton	**54 – Felton:** minor changes only	Same as proposed TEP service
T – Third (light rail)	**T – Third:** increase frequency and capacity and extend into Chinatown via the Central Subway	Same as proposed TEP service
Candlestick Point Express (CPX)	Not proposed in TEP	Provide new express bus service between Candlestick Point and Downtown San Francisco
Hunters Point Express (HPX)	Not proposed in TEP	Provide new express bus service between Hunters Point Shipyard and Downtown San Francisco
Source: San Francisco Municipal Transportation Agency and Fehr & Peers – March 2009		

G. Oakdale Caltrain Station Improvements

Until 2005, the Bayview District was served by the Paul Avenue Station, which has since been closed. San Francisco County Transportation Authority (SFCTA) is considering a new station serving this area at Oakdale Avenue. If implemented, bus services on Palou Avenue would intersect Caltrain at this location, creating an intermodal station. This would forge a second connection from Hunters Point Shipyard and Candlestick Point to Caltrain, offering a fast, convenient connection to the South of Market District.

H. SamTrans

Facilitate new shared routes with SamTrans to directly serve South San Francisco employment centers.

Muni Transit Effectiveness Project

Muni has proposed changes to several of the lines that would serve Candlestick Point and Hunters Point Shipyard as part of its Transit Effectiveness Project (TEP). Service extensions and modifications beyond the TEP proposals would be required to serve the project site. **Table 7** presents each existing line proposed to serve Candlestick Point and Hunters Point Shipyard, the line's equivalent under the TEP proposals, and the modification to the existing or equivalent line that would be required to provide service to the project.

Regional Transit Efficiency

The new and stronger Muni links to local trunk lines and regional transit corridors helps provide multiple options for transit riders heading to Mission Bay and Downtown San Francisco via connections to the T-Third/Central Subway, BART, Caltrain, and the one-seat Muni express ride. Furthermore, the development of mixed uses in the project area will help to create "reverse commute" job and recreation destinations that take advantage of transit capacity in the regional networks in the serving the non-peak direction. This phenomenon will help balance the network and increase fare box revenue for corridors where capacity currently exists. These include BART to the Airport and Peninsula and Caltrain to the Peninsula and Silicon Valley.

Additional Transit Elements

In addition to the extension of Muni service to the project site, as described above, the following elements will support and encourage transit ridership:

- Real-time transit arrival information using NextBus technology and passenger waiting shelters will be provided at the transit center and key bus stops;
- All bus stops will be clearly marked on the pavement, and will include either bus bulbs or bus pull-outs if requested by Muni;
- Transit maps, schedules, on-line passes, real-time arrival information, and internet links will be provided on the Candlestick Point/Hunters Point Shipyard website for all nearby transit operators;
- A Guaranteed Ride Home program supported by employer participation would reimburse transit riders for return trip travel in the event of an emergency when an alternative means of travel is not available;
- Residents will be charged for and provided a transit pass as part of their homeowner's dues, which would be valid for use on the various transit systems that serve the site;
- Tickets for special events and cultural activities at the project site, including 49ers games, could be priced to include the cost of a roundtrip transit ride; and
- In addition to a pass for residents, opportunities to provide employees with an "EcoPass" will also be pursued, similar to the programs already underway at the University of California and the City of Berkeley. These passes would allow unlimited transit use and could be purchased on a monthly and/or annual basis, and then be made available to all employees who work on the project site.

Implement Transportation Demand Management Program

An effective Transportation Demand Management (TDM) Program will reduce the amount of auto use and encourage residents, employees, and visitors to use alternative modes of travel, such as transit, walking, and bicycling. In addition, a TDM program provides measures to reduce the demand for travel during peak times.

The TDM program for Candlestick Point and Hunters Point Shipyard project will be consistent with the policies of the various agencies within the City of San Francisco, and work seamlessly with the ongoing plans at nearby developments. The proposed TDM program will target residents, employees and visitors, and could include the strategies described in the following sections.

Transportation Coordinator and Website

An on-site Transportation Coordinator (TC) will provide residents, employers, employees and visitors with the information they need to make the best use of the transportation alternatives available to them.

The TC will implement and administer the various TDM elements, and will coordinate with the City, the various transit agencies, and other nearby uses. The TC will be in regular communication with the transit agencies and will work with them to monitor transit usage and make appropriate changes to services to match demand. In addition, the TC will be responsible for operating and maintaining a website for the Candlestick Point/Hunters Point Shipyard project, which will include transportation-related data and real-time transit information.

The TC will keep residents, employees, and employers apprised of travel incentives or changes to travel options, and will be responsible for coordinating with visitors and groups holding large events at Candlestick Point or Hunters Point Shipyard.

The TC will be responsible for coordinating the production and distribution of travel brochures and educational documentation to increase resident, employee and visitor awareness of the various available TDM elements and travel options. The TC will also be responsible for conducting new employee/ resident orientation and education programs and performing individualized marketing of transportation alternatives.

Employers will be required to participate in TDM programs

Other responsibilities of the TC include the following:

- Managing the carpooling/vanpooling database and Guaranteed Ride Home program;
- Coordinating carsharing organizations on the project site;
- Monitoring bicycle parking provision and usage; and
- Reporting maintenance issues.

Each year, the TC will be responsible for conducting surveys of residents, employees, and visitors to determine the current mode split (percentage of travelers who drive alone, carpool, ride transit, walk, or bike) and demographic information (such as location of work and commute time to and from work). This information will be used to improve the effectiveness of the TDM program if the project's modal split goals are not being met.

Employee TDM Elements

The TDM program will include elements designed to assist employers to encourage the use of transit and facilitate walking and bicycling among their employees. All project site employers would be required to participate in the TDM program, and the TC would work with employers to monitor progress and provide support. It is expected that the TDM program will be a single document, which will cover the program monitoring to be performed by the TC. The project's TDM program will detail what elements are required of employers of different sizes and each employer will be required to designate a single contact for transportation purposes.

In addition, employers will be expected to provide the following:

- Bicycle parking in a controlled access or secure area with showers and clothes lockers;

- Carpool and vanpool ridematching services, with allocated parking spaces and reduced parking charges;
- Guaranteed Ride Home program for registered carpool, vanpool and transit riders in emergency situations; and
- Information boards/kiosks displaying transit routes and schedules; carpooling and vanpooling information; bicycle lanes, routes, paths and facility information.

Furthermore, employers will be encouraged to offer programs to reduce auto use and support the use of alternative modes including the following:

- Alternative commute subsidies and/or parking cash-out, where employees are provided with a subsidy if they use transit or commute by alternative modes;
- Opportunities to purchase commuter checks;
- Opportunities to provide subsidized vanpool service;
- Marketing of alternative travel options, with employers encouraged to provide information to customers regarding alternative modes of travel;
- Compressed work week and flextime, where employees adjust their work schedule to reduce vehicle trips to the worksite; and
- Telecommuting options.

The TC will work with employers to ensure that employees are kept fully informed of the available programs and promotional activities, and will be available to assist with new employee orientation. In addition, the TC will be available to coordinate these services on behalf of the smaller employers.

Carpool/Vanpool Elements

Carpool and vanpool ridematching services would be offered through the TDM program, and designated spaces in parking facilities would be provided free to vanpools. A designated signed area near the transit centers would be reserved for casual carpooling.

Proposed implementation measures include the following:

- Within the commercial zone, preferential parking spaces will be reserved for carpoolers;
- A casual carpool pick-up point will be designated;
- All employees and residents who are registered carpool/vanpool users will be guaranteed a ride home when carpooling or vanpooling;
- A database of carpool/vanpool participants will be collected and maintained by the TC; and
- A real-time carpool match program will be provided on the Candlestick Point/Hunters Point Shipyard website.

Carshare Elements

The Transportation Coordinator will work with local carsharing organizations to provide a network of carshare vehicles parked in neighborhood “pods”, each within a half mile of all residences. Members will be allowed to use vehicles when needed, paying based on how much they drive, thus reducing the fixed costs associated with private automobile ownership.

It is expected that many residents would become members of the carsharing organizations, reserving a car by phone or online on an as-needed basis. At the carshare "pods", members would check in with a personalized key card to gain access to the car.

This program provides an effective incentive for residents and others to opt for transit as a primary mode of travel because they know that a car is readily available when they need one. The growth and success of these programs in the Bay Area and in other cities throughout the US has shown their effectiveness in reducing auto dependency.

The carshare operators would determine the appropriate number of cars to be located at the project site, based on market demand. Parking spaces for carshare vehicles would be provided at strategic locations throughout the project site. The number of car share parking spaces is determined on the number of users as outlined in **Table 8** below.

Table 8: Car Share Parking Space Requirements

Number of Residential Units	Number of Required Car Share Parking Spaces
0-49	0
50-200	1
201 or more	2, plus 1 for every 200 dwelling units over 200
Number of Parking Spaces Provided for Non-Residential Uses or in a Non-Accessory Parking Facility	**Number of Required Car Share Parking Spaces**
0-24	0
25-49	1
50 or more	1, plus 1 for every 50 parking spaces over 50

Proposed implementation measures include the following:

- The TC will coordinate with carshare providers to establish long-term carshare use. This will reduce the need for private vehicle ownership for vacations or weekend trips;
- The availability of carsharing and information on the various carshare operators will be included in all rental and leasing information and on the Candlestick Point/ Hunters Point Shipyard website;
- Within the commercial zones, free parking spaces will be reserved for short-term carshare parking;
- All carshare parking spaces and hub locations will be clearly identified and directional signage will be provided, and real-time availability of carshare vehicles will be provided on the Candlestick Point/Hunters Point Shipyard website (to supplement the information on the carshare operators' websites); and
- Carshare vehicle hubs will be established throughout the project site in coordination with the design of garages and parking facilities.

Additional Elements and Implementation Strategies

The following additional TDM strategies are best implemented in conjunction with complementary strategies among the previously-described TDM elements:

- A personalized commute plan will be offered for all new residents. The TC will meet with each resident and develop a customized transit, carpool, vanpool, or bicycle program. The TC will show residents their various commute options, comparing costs and travel times, and identifying any employer-based programs.

- The TC will coordinate with major employers in San Francisco and the Peninsula to develop employer-based TDM measures. Transit usage and carpool/vanpool need to be supported on both ends to be successful. There is a higher incentive to use transit if free parking is not provided at the workplace. Employers control the ability to institute alternative work hours and telecommuting. Housing at Candlestick Point/Hunters Point Shipyard could also be marketed to new employees at these workplaces.
- The TC will institute a TDM committee staffed by residents and employees. The committee will participate in setting TDM goals and developing programs, which would give residents and employees a greater stake in its success.
- Performance goals will be set upon occupancy of each phase. Goals could be established as a given decrease in single-occupant vehicle mode split or reduction in peak hour traffic volumes at driveways.
- All TDM information will be included in rental packets and home ownership documents as well as all office, R&D, and retail lease documents.
- Surveys of residents, employers, and employees will be conducted on an annual basis to document TDM effectiveness and to develop additional program measures.
- High-speed wireless internet will be provided to encourage telecommuting.
- All deliveries to the grocery store and other high-volume commercial uses will be scheduled to avoid peak commute periods.
- A bike sharing program will be considered as an alternative transportation program where bike kiosks are set up at intervals along major corridors and riders can pick up and drop off bicycles in seconds.

Parking

The parking program is designed to reduce the overall usage of private automobiles through pricing, supply, new technologies, and effective monitoring programs. The following sections outline some of the key elements of the parking plan.

Residential Parking

Residential parking will be unbundled from the units and each parking space will be sold or leased separately to individual units[8]. Residential parking rates will be set equivalent to fair market value and parking will be provided at a rate of one space per unit on average.

In areas outside of Downtown San Francisco, the *Planning Code* generally requires a minimum 1.0 parking ratio – one off-street parking space for each dwelling unit. However, minimum parking requirements have recently been removed for Downtown Residential (DTR) and C-3 districts – including Union Square, the Financial District, Rincon Hill, and portions of the South of Market Area (SOMA) surrounding the Transbay Terminal. Maximum parking ratios now apply in these areas, which in some cases are well below the otherwise 1.0 parking ratio minimum. The 1.0 parking ratio maximum proposed for this project would be similar.

The San Francisco General Plan discourages automobile use and encourages alternative means of travel in high-density, congested areas, and recognizes that not every resident needs parking provided with their unit. The policy of providing less than one parking space per residential unit has been incorporated in the Market and Octavia Neighborhood Plan, and is under consideration in the Eastern Neighborhoods Area Plans.

8 This arrangement would not apply to the 1,655 "Agency Affordable" units, which are limited by tax-credit financing requirements.

Unbundling takes this concept one step further and links parking requirements to auto ownership instead of home ownership. In typical units where parking is bundled, tenants pay for the unit and the parking space as a single cost. Unbundling removes the parking component from the cost of residential or commercial space and allows residents and tenants to buy or lease parking only if they need it.

There are two primary benefits to unbundling[9]:

Reduced housing costs and greater housing affordability. Tenants who do not intend to use off-street parking can save the expense of purchasing a parking space with their unit. Unbundling parking can thus increase the affordability of housing, which is an especially important issue in San Francisco, where the cost of housing can be beyond the means of many households.

Induced changes in travel behavior. Bundled off-street parking gives the impression that parking is "free", when in reality; the cost of the unit is greater than a unit without off-street parking. Unbundling parking reveals the actual cost of parking to the tenant and can affect the perception of the cost of owning a car compared to the cost of alternative modes of travel such as transit. By increasing awareness of the hidden costs of auto ownership, unbundling parking could ultimately help to induce changes in travel behavior, such as decreasing auto dependency and encouraging more sustainable travel patterns on transit, bicycles, and by foot.

Unbundled parking is currently required in the Transbay, Rincon Hill, Central Waterfront, and Eastern Neighborhoods, and is a standard condition for any housing projects needing approval of the Planning Commission.

Employee/Visitor Parking Elements

- Parking will be designed to serve all commercial land uses. Where shared parking opportunities exist (e.g., a facility provides parking for service uses during the day and a restaurant during the evening), the parking requirements will be reduced accordingly;
- All on- and off-street parking will be paid parking;
- Parking rates will ideally be set equivalent to fair market value and not subsidized by tenants or building operators;
- No discounts will be allowed for "early bird" or "in by/out by" long-term parking, and no discounted monthly parking passes will be allowed; and
- Preferred parking spaces will be reserved for carpool/vanpool/carshare vehicles.

In addition to the above elements, off-street parking will be priced according to the following principles:

- Free or discounted parking will be available for rideshare/vanpool users;
- Parking will be more expensive than transit options;
- Parking fee structures will encourage short-term retail trips and strongly discourage long-term parking/employee parking; and
- Assessment of parking fees would begin before the morning commute period and end after the evening commute period to discourage use of automobiles for home-based work trips among project residents.

9 Klipp, Luke. "The Real Costs of San Francisco's Off-Street Residential Parking Requirements: An analysis of parking's impact on housing finance ability and affordability." (2004).

Retail and Hotel Parking

- Shoppers and hotel guests will not receive validation for parking;
- Parking will be more expensive than transit options;
- Hotel room rates will include a transit pass surcharge to encourage transit use among hotel guests;
- TDM programs will be instituted for retail and hotel employees; and
- TDM programs will be instituted for special events which would be expected to draw large numbers of visitors to project retail uses and hotels.

Parking Requirements

Table 9 summarizes parking requirements calculated for the project land use program. These numbers represent maximum off-street parking spaces for uses within the project area. The Planning Department may require that parking be shared across uses. The development plan anticipates utilizing the Design for Development (D4D) process for development controls, and thus the parking and loading requirements will be tailored to this development. Stadium parking needs are discussed separately in Section 6.4.

Table 9: Parking Requirements

Land Use	Rate	Number of Spaces		
		Candlestick Point	Hunters Point Shipyard	Total
Residential	1 per unit	7,850	2,650	10,500
Commercial				
Regional Retail	2.7 per 1,000 sq.ft.	1,570	-	1,570
Neighborhood Retail	1 per 1,000 sq.ft. (CP) 3 per 1,000 sq.ft.(HP)	125	375	500
Office	1 per 1,000 sq.ft.	150	-	150
Research and Development[1]	1.3 per 1,000 sq.ft.	-	2,600-3,500	2,600-3,500
Hotel	0.25 per room	55	-	55
Arena	1 per 23.5 seats	425	-	425
Artists' Space	1 per 2,000 sq.ft.	-	130	130
Community Uses	1 per 2,000 sq.ft.	25	25	50
Total		**10,200**	**5,780-6,670**	**15,980-16,800**

Source: Fehr & Peers 2009 based on San Francisco Planning Code and discussions with San Francisco Redevelopment Authority.

1 To achieve game day parking requirements if the 49ers stadium is constructed at Hunters Point Shipyard, parking requirements for R&D on Crisp Road only will be increased to 1.8.

These requirements present the base number for the proposed project required spaces, although it does not include the Stadium site. It should be noted that different requirements may apply based on the type of office and research and development tenants. The project parking supply for residential uses meets requirements. The parking supply for commercial uses falls within the low and high code requirements for Hunters Point Shipyard, but would not meet requirements for Candlestick Point, providing only two-thirds of the required number of spaces. This reflects the project's commitment to reduce automobile use and encourage the use of alternative travel modes.

Parking Supply

The proposed parking supply program is summarized in **Table 10**. On average, residential uses are provided up to one space per dwelling unit, although some residents may not require parking spaces due to use of alternative modes. The majority of commercial parking spaces would be located in structures. Parking by location and type is illustrated in **Figure 16**.

Table 10: Proposed Parking Supply

Parcel	Number of Spaces					
	Residential	Commercial[1]		General On-Street	Stadium Only[2]	Total
		Structure	On-Street			
Candlestick Point						
Alice Griffith/ Jamestown	1,535	0	0	450	0	1,985
North	3,070	0	25	450	0	3,545
Center	275	2,321	0	170	0	2,766
South	2,970	0	0	290	0	3,260
Subtotal	7,850	2,321	25	1,360	0	11,556
Hunters Point Shipyard						
Hunters Point Shipyard	2,085	75	0	319	0	2,479
Village Center	125	89	0	47	0	261
Research and Development	440	2,939	0	317	0	3,696
Stadium Site	0	925	0	0	12,665	13,590
Subtotal	2,650	4,028	0	683	12,665	20,026
Total	10,500	**6,349**	**25**	**2,043**	**12,665**	**31,582**

Source: Lennar Urban – May 2009

1 Includes regional retail, neighborhood retail, office, hotel, and arena uses for Candlestick Point and neighborhood retail, artists' space, and research and development for Hunters Point Shipyard.

2 Additional game day parking will be available in commercial structured parking in the Research & Development area of Hunters Point Shipyard.

Bicycle Parking Supply

The proposed bicycle parking program is summarized in **Table 11**. Hotels, Residential Buildings and Live/Work Units are excluded from shower/locker requirements.

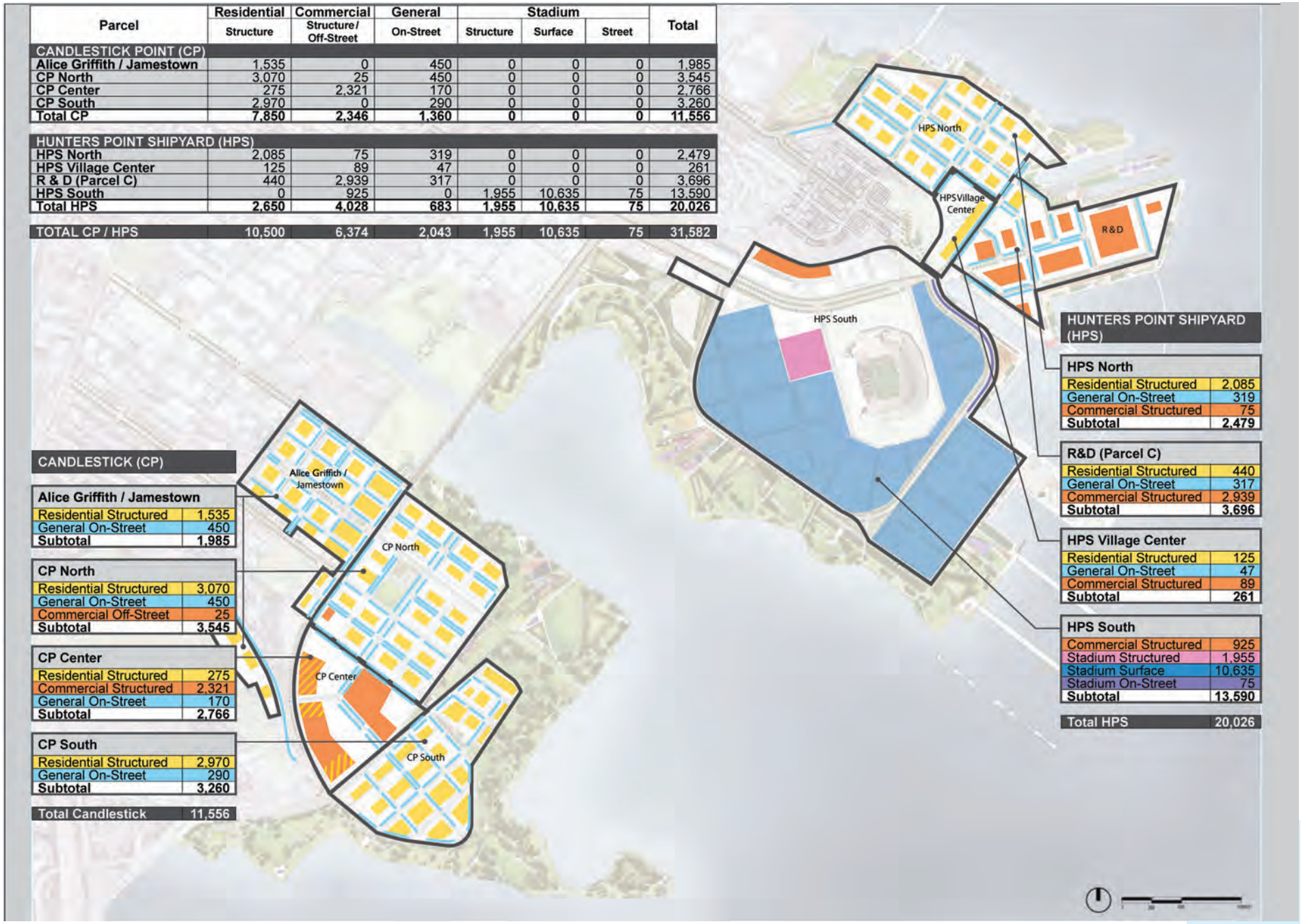
Table 11: Proposed Bicycle Parking Supply and Facilities

Land Use	Size of Use	Number of Bicycle Spaces Required	Showers	Lockers
Residential	0 - 50 dwelling units	1 per 2 units	n/a	n/a
	> 50 dwelling units	25 spaces plus 1 for every 4 units over 50		
Medical, Office, Institutional, R&D, Theater, Hotel, Artist Space, & Community Uses	10,000 – 20,000 sq.ft.	3	1	2
	20,000 – 50,000 sq.ft.	6	2	4
	> 50,000 sf	12	4	8
Retail and Eating/ Drinking Uses	25,000 – 50,000 sq.ft.	3	1	2
	50,000 – 100,000 sq.ft.	6	2	4
	> 100,000 sf	12	4	8
Structured Parking	< 500 automobile spaces	1 per 20 auto spaces	n/a	n/a
	> 500 automobile spaces	25 spaces plus 1 for every 20 auto spaces over 500, maximum of 100		

Source: Fehr & Peers – October 2009

Figure 16: **Proposed Project Parking**

Parcel	Residential	Commercial	General	Stadium			Total
	Structure	Structure / Off-Street	On-Street	Structure	Surface	Street	
CANDLESTICK POINT (CP)							
Alice Griffith / Jamestown	1,535	0	450	0	0	0	1,985
CP North	3,070	25	450	0	0	0	3,545
CP Center	275	2,321	170	0	0	0	2,766
CP South	2,970	0	290	0	0	0	3,260
Total CP	7,850	2,346	1,360	0	0	0	11,556
HUNTERS POINT SHIPYARD (HPS)							
HPS North	2,085	75	319	0	0	0	2,479
HPS Village Center	125	89	47	0	0	0	261
R & D (Parcel C)	440	2,939	317	0	0	0	3,696
HPS South	0	925	0	1,955	10,635	75	13,590
Total HPS	2,650	4,028	683	1,955	10,635	75	20,026
TOTAL CP / HPS	10,500	6,374	2,043	1,955	10,635	75	31,582



Non-Stadium Variants

The non-stadium variants assume either an additional 2,500,000 sq.ft. of research and development space in place of the stadium (Variant 1) or an additional 500,000 sq. ft. of research and development space plus a shift of 1,625 dwelling units from the Candlestick Point site to the Hunters Point Shipyard site (Variant 2A). These alternatives would remove the 12,665 parking spaces associated with the stadium and replace them with structured and on-street parking consistent with the Design for Development guidelines. The Non-Stadium parking supply is discussed in Chapter 7.

Loading

The loading program is designed to facilitate access required by freight vehicles (commercial delivery and moving trucks) and passenger vehicles (private vehicles, vans, and shuttles), while mitigating the negative impacts that loading and unloading activities might have on other traffic modes, particularly the pedestrian environment. The program must be managed effectively in order to prioritize pedestrians and enhance safety. The following sections outline the key elements of the loading plan.

On-street Loading

On-street loading spaces are designed to facilitate short-term parking near building entrances to meet the needs of disabled individuals and as a general convenience. They also allow package and other commercial deliveries to be made. Loading spaces also facilitate traffic flow by reducing the incidence of double-parking. However, even the frequent movements of vehicles in and out of loading spaces can hinder traffic, including bikes and transit service. The following guidelines will apply to the location and management of on-street loading spaces:

- The prime street frontage directly in front of building entrances will not be designated for parking but reserved for use as short-term loading zones;
- The sizes of loading zones will be tailored to the specific uses of the adjacent properties;
- Retail streets featuring angled parking on one street face will have loading spaces on the opposite street face, and include additional spaces to accommodate the needs of both sides of the street; and
- Loading spaces will not be designated on BRT streets. The loading needs of blocks adjacent to BRT streets will be accommodated on other block faces.

Off-street Loading

To provide access from the street, off-street loading spaces require curb cuts and driveways, which can be intrusive to the bicycling and pedestrian environment. In addition, the turning movements of vehicles leaving or entering the street can impede the flow of traffic, which is of particular concern with regard to transit vehicles. The following guidelines will apply to the location and design of off-street loading spaces:

- Where possible, curb cuts and driveways providing access to off-street loading spaces should be consolidated into a single location on any block face to minimize their impact;
- No curb cuts accessing off-street loading will be created on the BRT streets or on the local streets with bike lanes, where alternative frontages are available;
- Individual buildings will be limited to one opening of up to 22 feet in width to provide access to off-street loading. Shared openings for parking and loading will be encouraged, with a maximum width of 27 feet;

- Loading spaces will be designed to serve all commercial land uses. Where opportunities to share loading spaces exist (e.g., loading area for a supermarket with a peak of morning deliveries and restaurants with afternoon deliveries), the off-street loading requirements will be reduced accordingly; and
- The Redevelopment Agency may regulate truck access from arterial streets to loading docks based on development-specific loading needs.

Tables 12 and **13** present permitted and required off-street freight loading space for various project uses, based on Section 152 of the San Francisco Planning Code. The Code stipulates off-street loading space requirements that apply generally outside of the downtown commercial core and the South of Market District, but includes special conditions for Downtown Residential (DTR) districts. DTR districts are transit-oriented, high-density, mixed-use residential neighborhoods in and around downtown. Reflecting the greater pedestrian activity in such districts, off-street loading is limited to a certain number of permitted spaces, rather than a prescribed number of spaces.

The off-street loading limits of DTR districts, shown in **Table 12**, are proposed for the medium-density residential and high-density residential blocks, as shown in the Land Use Program presented in **Figure 6**. In all other areas of the project, the City's general requirements for off-street loading spaces will apply, as presented in **Table 13**.

Table 12: Proposed Off-Street Freight Loading Space Limits Medium- and High-Density Residential Blocks

Land Use	Size of Use	Number of Spaces Permitted (per block)
Non-Residential Uses	0 - 50,000 sq. ft.	1
	> 50,000 sq. ft.	1 space per 50,000 sq. ft.
Residential – low density	0 - 100 units	1
Residential – high density	> 100 units	1, plus 1 additional loading space for every 200 additional units
Total Number of Loading Spaces Allowed for Any Single Building (all uses)		4

Source: Fehr & Peers – October 2008

Table 13: Proposed Off-Street Freight Loading Space Requirements Outside of Medium- and High-Density Residential Blocks

Land Use	Size of Use	Number of Spaces Required (per block)
Retail, Wholesale, Manufacturing, Live/Work	0 - 10,000 sq. ft.	0
	10,000 - 60,000 sq. ft.	1
	60,000 - 100,000 sq. ft.	2
	> 100,000 sq. ft.	3, plus 1 for each additional 80,000 sq. ft.
Offices, Hotels, Residential, and all other uses	0 - 100,000 sq. ft.	0
	100,000 - 200,000 sq. ft.	1
	200,000 - 500,000 sq. ft.	2
	> 500,000 sq. ft.	3, plus 1 for each additional 400,000 sq. ft.

Source: Fehr & Peers – October 2008

5.3 Phasing

The Plan calls for a comprehensive set of transportation solutions to serve the travel demands of residents, employees and visitors and to meet the project goals of sustainability and livability. Because of their cost and complexity, these improvements to the transit and roadway networks will be phased during the development of the project. Because the project is expected to be constructed over a relatively long period (full buildout expected by 2032), it is crucial that transportation improvements be timed to provide the optimal level of mobility relative to the amount of development throughout the buildout process.

Development of the project has been grouped into three major development phases. **Table 14** presents the anticipated land development phasing.

Table 14: Land Development Phasing

Land Use	Phase 1	Phase 2	Phase 3
Hunters Point Shipyard			
Residential Units	2,650 homes	0	0
Neighborhood-Serving Retail	125,000 sq. ft.	0	0
Research & Development	722,000 sq. ft.	1,778,000 sq. ft.	0
Stadium	69,000 seats	0	0
Artists Studios	225,000 sq. ft.	0	0
Candlestick Point			
Residential Units	1,253 homes	3,835 homes	2,762 homes
Regional-Serving Retail	0	635,000 sq. ft.	0
Neighborhood-Serving Retail	0	125,000 sq. ft.	0
Office	0	150,000 sq. ft.	0
Hotel	0	220 Rooms	0
Arena	0	10,000 seats	0

Source: Lennar Urban, February 2010

These development assumptions anticipate construction of the majority of the Hunters Point Shipyard site in Phase 1 (including a new NFL stadium) and the majority of the Candlestick Point site (including a new arena seating up to 10,000 spectators) in Phase 2. Additional residential development in the Candlestick Point site will occur in Phase 3.

Tables 15 and 16 summarize the programmed roadway and transit improvements, respectively. Roadway improvements are identified by the numbers corresponding to **Figure 8** and transit improvements are keyed by the letter they are identified with in **Figure 15**. Phase 1 improvements are generally expected to be built and operational to coincide with the first stage of residential development and to meet the needs of the new NFL stadium. Subsequent improvements are expected to be built and operational to coincide with project build-out.

Table 15: Roadway Improvement Phasing

Roadway Improvement	Phase 1	Phase 2	Phase 3
1A. Harney Way Widening (Initial Configuration)	◆		
1B. Harney Way Widening (Ultimate Configuration)		◆	
2. New Roadway through Candlestick Point		◆	
3. Ingalls Avenue/Thomas Avenue/Carroll Avenue/Griffith Street Improvements	◆		
4A. Innes Avenue Streetscape Improvements	◆		
4B. Palou Avenue Transit Preferential St Treatments and Streetscape Improvements	◆		
4C. Carroll Avenue Streetscape Improvements	◆		
4D. Gilman Avenue Streetscape Improvements	◆		
4E. Ingerson Avenue Repaving	◆		
4F. Jamestown Avenue Improvements	◆		
5. Yosemite Slough Bridge	◆		
6. Transportation Management System	◆		
7. Geneva Avenue Extension[1]		◆	
8. Harney Way / US 101 Interchange Reconstruction[1]		◆	

Source: Fehr & Peers– March 2010

1 Included to indicate anticipated infrastructure development timeline; under study.

Generally, improvements to roadways that are expected to carry traffic to and from the new NFL stadium will be constructed in Phase 1. (See Chapter 6 for a more detailed discussion of gameday traffic conditions). These include Harney Way, the Yosemite Slough Bridge, and improvements to Ingalls Avenue, Thomas Avenue, Carroll Avenue, and Griffith Street (the auto route around Yosemite Slough). If the stadium is not constructed, some of these improvements may be delayed until typical traffic volumes associated with the development reach levels that warrant the improvements. A more detailed discussion of the development-related "triggers" for roadway improvements is included in the project's Infrastructure Plan.

A similar concept has been developed for the transit improvements, as shown in Table 16. Transit routes serving the Hunters Point Shipyard (Hunters Point Express (HPX), 23-Monterey/24-Divisadero, 44-O'Shaughnessy, and 48-Quintara) would be extended to serve the site in the early stages of Phase 1, at somewhat lower frequencies than expected with full buildout. Gradually, as development in the Hunters Point Shipyard occurs, frequencies of these routes will be increased to correspond to the level of development.

Similarly, routes serving Candlestick Point (Candlestick Point Express (CPX) and 29-Sunset) will be extended into the site in the relatively early stages of Phase 2, when the bulk of the Candlestick Point development is scheduled to occur. The 1,253 homes in Candlestick Point associated with Phase 1 would be served by the existing 29-Sunset route, and no modifications are necessary in this phase.

The Muni Line 28L/BRT route would be implemented and extended in Phase 2, with completion of the Geneva Avenue extension and US 101/Harney Way interchange reconstruction and with the beginning of substantial development of the Candlestick Point site.

Table 16: Transit Improvement Phasing

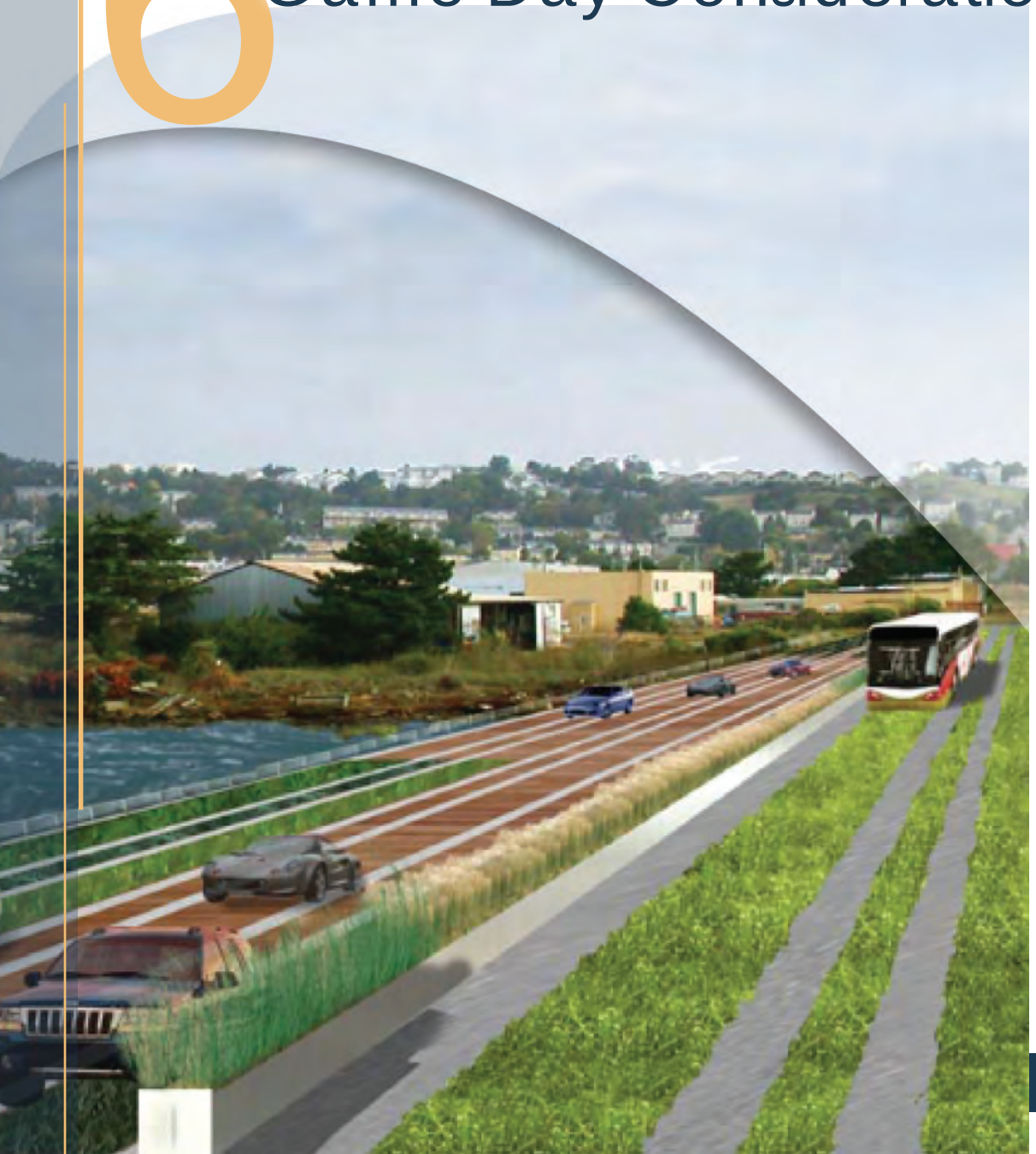
Transit Improvement	Phase 1	Phase 2	Phase 3
A. New and Expanded Bus Lines			
Route	Frequency (Minutes)		
Hunters Point Express (HPX)	20	12	12
Candlestick Point Express (CPX)		15 - 20	10
Extension of 23-Monterey (Temporary)	15		
Extension of 24-Divisadero (23-Monterey Returns to Existing Route)		10	7.5
Extension of 28L/BRT [1]		8	5
Extension of 29-Sunset		10	5
Extension of 44-O'Shaughnessy	7.5	6.5	6.5
Extension of 48-Quintara	15	10	10
Increased service on T-Third light rail	*8-10*	*6* [2]	*5* [2]
B. Harney / Geneva BRT / Transit Preferential Street [3]		♦	♦
C. Hunters Point Shipyard Transit Center	♦	♦	♦
D. BRT Stops		♦	♦
E. Palou Avenue Transit Preferential Street	♦	♦	♦
F. Bayshore Transit Center	Unknown – Currently Under Study		
G. Oakdale Caltrain Station Improvements	Unknown – Currently Under Study		
H. Connections to SamTrans	♦	♦	♦

1 Until construction of the Geneva Avenue extension, the BRT service may operate independently from the 28L – 19th Avenue/Geneva Avenue limited between the Hunters Point Transit Center and the Bayshore Caltrain Station via Alana Way and Beatty Avenue.

2 Increased capacity on the T-Third shown here is accommodated within the overall implementation of the Central Subway service capacity and frequency enhancements. Extension to the Bayshore Caltrain station is also proposed as part of the overall Bi-County study. In Phase 3, service will likely be provided by two-car trains.

3 Improvement currently under study – phasing shown is anticipated but subject to change.

6 Game Day Considerations



As part of the redevelopment of Hunters Point Shipyard, a new stadium for the San Francisco 49ers is proposed. The facility would have a capacity of 69,000 seated patrons and provide parking and loading spaces for about 16,400 cars and buses near the stadium, with an additional 1,000 spaces at the Candlestick Point retail center. This chapter considers the travel demand generated by a capacity crowd at football games in the proposed stadium. The facility is expected to host other events, such as concerts, that would have a comparable or lower level of attendance. Thus, the travel demand associated with these events would also be accommodated by the parking and roadway capacities outlined below.

6.1 Game Day Travel Demand

Historical data provided by the 49ers franchise found that travel to games occurs predominantly by private auto (81 percent) while the remaining trips utilize transit (19 percent), consisting of publicly-operated buses and private charter buses. Existing data also indicates average vehicle occupancy of about three people per vehicle. With the proposed new stadium at Hunters Point Shipyard, more efficient transit connections to regional transit are proposed, including Harney BRT and Palou Transit Priority Treatment. These service improvements will provide better accessibility via new game day transit configurations. As a result, it is expected that the mode split for the new stadium would shift to approximately 75 percent private auto and 25 percent transit. **Table 17** summarizes the expected travel demand patterns for the new stadium.

The expected mode split could be achieved in part through incentives for transit riders. The 49ers could explore the inclusion of a transit ride to and from a game with admission, or providing discounted passes for game-day use.

6.2 Game Day Modes of Travel

During a typical football game day, there will be numerous types of trips, including visitors to the stadium and residents/visitors to the project site and surrounding neighborhoods. The following modes and trip types would be expected to operate on a typical game day:

Regularly Scheduled Muni Service

During game days, regularly scheduled Muni service to and from Hunters Point Shipyard would continue to operate, although frequencies may increase prior to and following games. **Figure 15** illustrates the proposed modifications to Muni routes and other transit improvements designed to serve the project.

Table 17: Proposed Game Day Mode Split

Mode	Mode Split	Number of Patrons	Number of Vehicles	Patrons per Vehicle
Auto				
Private Automobile (Spectator)	70.9%	48,892	18,073	2.7
Private Automobile (Staff)	3.9%	2,683	2,000	1.3
Limousine	0.1%	50	17	3
Recreational Vehicles	0.3%	220	44	5
Auto Subtotal	75.2%	51,845	20,134	2.6
Bus				
Chartered Buses	5.3%	3,656		
Transit Buses[1] *(Spectator)*	18.5%	12,732		
Transit Buses[1] *(Staff)*	1.0%	725		
Transit Subtotal	24.8%	17,113		
Total	100.0%	68,958[2]	20,134[3]	

Source: San Francisco 49ers, Fehr & Peers – May 2009

1 Operated by Muni, Silverado Stages, Golden Gate Transit, Eastern Contra Costa County Transit and Valley Transportation Authority.

2 Includes 5% reduction for spectator "no shows."

3 Excludes transit vehicles.

Game Day Transit Service

In order to serve the game day transit demand and to achieve the 25 percent transit mode share as shown in **Table 17**, accommodations for transit loading/unloading and parking are necessary to facilitate safe and efficient transit connections. The following types of game day service have been identified based on current stadium operations as well as an estimate of the types of transit services that could reasonably be implemented to increase game day transit service to the site. Specifically, the types of transit service that would be provided on game days may include:

Shuttles to Regional Transit Connections – these buses would provide service to and from the Bayshore Caltrain and/or Balboa Park BART station in a continuous loop before and after the game. Typically, Muni would operate this service, but other Bay Area transit providers may provide buses and/or drivers since there is generally available fleet on Sundays;

Long-Haul San Francisco Service – Muni typically operates some game day express services that provide service to the outlying areas of San Francisco such as the Geary Corridor, the Marina District, and San Francisco State University;

Regional Bus Service – other buses operated by Golden Gate Transit, AC Transit and/or Silverado Stages may provide regional bus service to the North, East and South Bay. These buses would be expected to make only one trip to and from the stadium due to the extended run time to the regional destination;

Charter Buses – privately-operated buses that arrive before the game, park in a specific parking area dedicated to these buses, and leave shortly after the game (depending on the group).

Emergency Vehicles

Emergency vehicle trips must also be accommodated on game days. During the pre- and post-game condition, an adequate route will be provided at all times that allows emergency vehicles to and from the site to respond to an emergency situation.

Private Auto

As shown in **Table 17**, the majority of visitors to events at the stadium are expected to arrive via private auto. A sufficient supply of game day parking is an integral part of the planning of the stadium area, as is discussed in detail in Section 6.4. There would also be auto traffic in the project area for other non-stadium uses, which would need to be accommodated during a typical game day through proper traffic control in the project area and surrounding streets.

6.3 Game Day Applications of Improvements

The roadway and transit improvements described in Chapters 4 and 5 would substantially enhance game day access and operations for pre- and post-game conditions. In addition, the following improvements would be incorporated into the transportation program to increase capacity and facilitate stadium access on game days.

Transportation Management System (TMS)

A TMS Center located at the proposed stadium would control traffic signals, overhead lane use control signals and changeable message signs to react to pre- and post-game lane closures and game traffic-related congestion on a real-time basis. The TMS would be operated by SFMTA staff and would only be active on game days.

Overhead lane use control signals and changeable message signs controlled by the TMS will be installed on the following exit routes:

- Arelious Walker to Harney Way
- Harney Way and Executive Park Boulevard
- Griffith Street to Thomas Avenue to Ingalls Street
- Innes Avenue to Hunters Point Boulevard to Evans Avenue
- Jennings Street to Cargo Way to Illinois Street

Palou Avenue Transit Preferential Street (TPS)

On game days, Palou Avenue would be a dedicated transit-only street for use by charter and public buses, although residents would still be allowed to access their homes. Most of the signals along Palou Avenue would likely be manually controlled to provide long segments of free-flow bus travel, and enable local access at some intersections.

Harney Bus Rapid Transit (BRT)

In addition to BRT operated by SFMTA, other public and charter buses providing game-day express service from around the Bay Area would use the exclusive BRT lanes through Candlestick Point and over the Yosemite Slough Bridge.

Yosemite Slough Bridge

On game days, the bridge would accommodate four lanes of auto traffic in addition to the two dedicated BRT lanes. These lanes would be configured to provide four auto lanes to the stadium during pre-game conditions and four auto lanes away from the stadium during post-game conditions. The two BRT lanes would remain configured with one lane in each direction for all types of buses (charter and public).

6.4 Stadium Parking Supply

Candlestick Park has approximately 17,500 parking stalls in its immediate vicinity. Additional parking is provided in remote lots to the north and west of the stadium. The proposed Hunters Point stadium offers approximately 16,400 on-site stalls at the stadium and adjacent R&D campus, plus 1,000 spaces at the Candlestick Point retail center. Additional parking is expected to be accommodated in a number of nearby off-site parking facilities. **Figure 17** summarizes the proposed Game Day parking supply.

Approximately 50 percent of the parking stalls would be accommodated in dual-use sports fields and unpaved open space. When events are not taking place at the stadium, these parking areas would be used as baseball and football/soccer fields. Approximately 15 percent of the supply would be at the research and development campus immediately north of the stadium that would be made available for stadium events. The remainder will be housed in parking structures and lots immediately adjacent to the stadium.

6.5 Game Day Operations

Overview of Existing Game Day Operations

The existing Candlestick Park operates with reversible lanes and traffic control officers at many key intersections before and after events. Ingerson Avenue is used as a transit-only street, allowing for efficient bus travel during post-game conditions. Game day operations are focused on the post-game condition since typically the travel demand surges once the event is over, while patrons tend to arrive over a longer period of time prior to a game. **Table 18** summarizes the number of lanes in each direction during the post-game condition for the existing stadium.

Table 18: Post-Game Lane Configuration – Existing Stadium		
Route	Inbound	Outbound
Auto Traffic		
Via Carroll Avenue	1	1[1]
Via Gilman Avenue	1	3
Via Jamestown Avenue	1	2
Via Harney Way	0	4
Auto Subtotal	3	10
Transit Vehicles		
Via Ingerson Avenue	1	1
Transit Subtotal	1	1
Total	4	11
Source: AECOM – October 2008		

1 Carroll Avenue has three outbound lanes, but they merge into one right turn lane at Third Street.

Game Day Transit

To improve transit service to the new stadium at Hunters Point Shipyard, the Palou TPS treatment and Harney BRT route are expected to serve game day transit service in addition to the regularly-scheduled Muni bus service during game days. The proposed game day transit service is illustrated in **Figure 18**. A brief description of the operation of each transit facility is provided below:

Palou TPS

Palou Avenue between Griffith and Third Streets would be closed to auto traffic and be available for bus traffic only. Buses that would be using this stretch of Palou would be the regularly-scheduled Muni buses, charter buses, and regional buses. Muni buses would operate in both directions as part of the Muni schedule for game days. The other two types of buses that serve the stadium would only operate in one direction (to the stadium pre-game and from the stadium post-game) to eliminate unnecessary conflicts at the intersections of Palou/Crisp Road and Palou/Arelious Walker Drive where these buses would be potentially conflicting with peak game day auto traffic, as is illustrated later in this section.

Harney BRT

During game days, the two lanes for the exclusive use of the Harney BRT would also be made available for other game day transit service. Since there are two exclusive lanes (one in each direction), buses on this route would have no conflicts in either direction (except at intersections where the BRT alignment crosses auto traffic). Therefore, shuttles to and from the Bayshore Caltrain station and Balboa Park BART station could operate on this route efficiently to complement BRT service on gamedays. This BRT route is also a designated emergency vehicle access route.

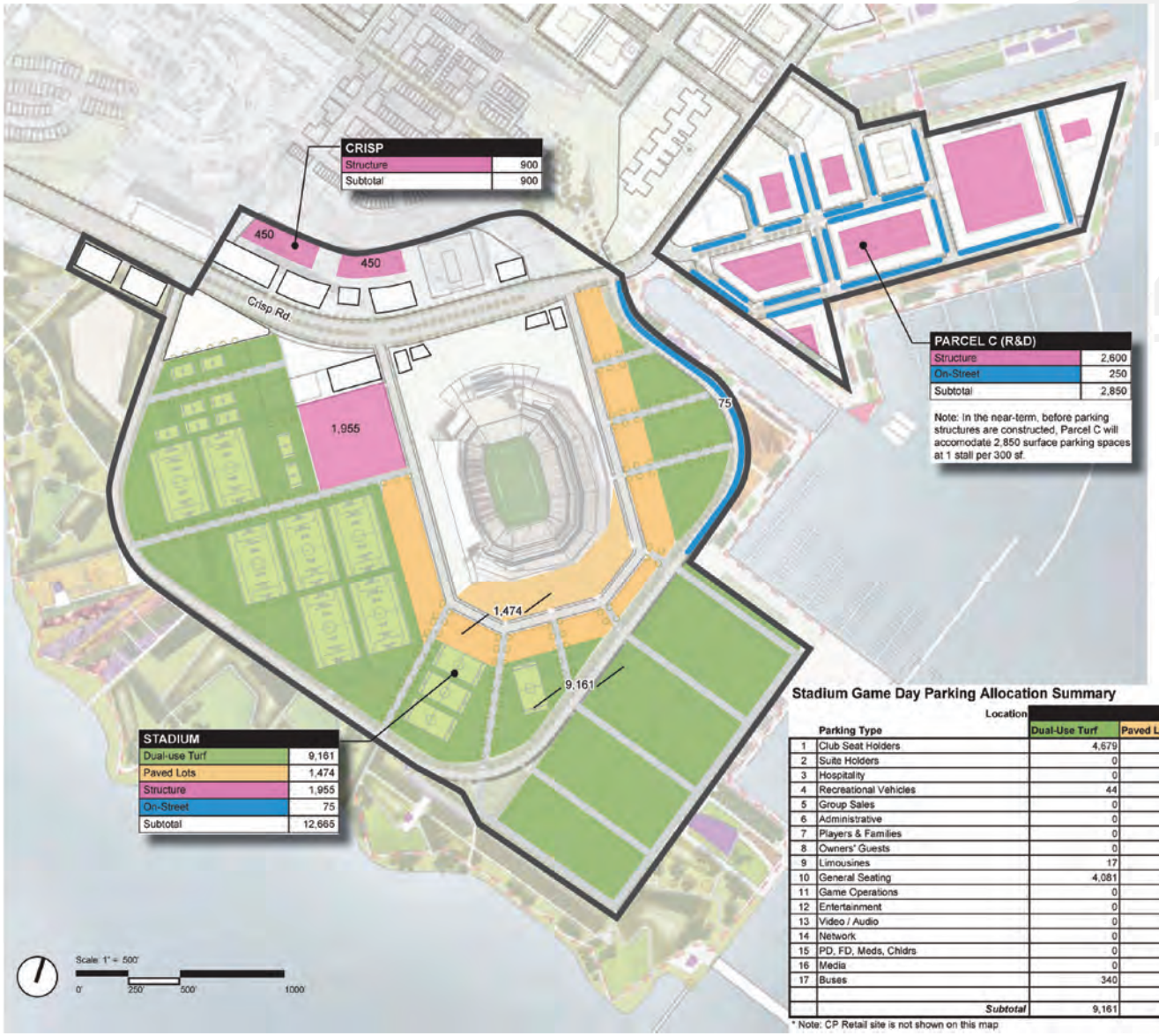
Game Day Bicycles

To promote bicycling, secured valet parking should be provided for a minimum of 1% of all expected participants (approximately 690 patrons). Bicycle regulations approved by the San Francisco Board of Supervisors require monitored bicycle parking for events with an anticipated number of participants greater than 2,000. The parking facilities should be located within a one block radius of a regular entrance to the event.

All event publicity should include information on the availability and location of the Secured Valet Bike Parking in the same format, with equal amount of space, as other transportation information. All event personnel should be aware of the Secure Valet Bike Parking location and event maps must indicate the location as well.

Bicycle parking will be open for two hours before the game and remain open until 60 minutes after the game.

Figure 17: **Proposed Stadium Game Day Parking**



Stadium Game Day Parking Allocation Summary

	Location	STADIUM					CRISP	PARCEL C			CP RETAIL*	TOTAL
	Parking Type	Dual-Use Turf	Paved Lots	Structure	On-Street	Subtotal	Structures	Structures	On-Street	Subtotal	Structures	
1	Club Seat Holders	4,679	0	0	0	4,679	0	0	0	0	0	4,679
2	Suite Holders	0	0	1,202	0	1,202	0	0	0	0	0	1,202
3	Hospitality	0	44	0	0	44	0	0	0	0	0	44
4	Recreational Vehicles	44	0	0	0	44	0	0	0	0	0	44
5	Group Sales	0	0	20	0	20	0	0	0	0	0	20
6	Administrative	0	0	25	0	25	0	0	0	0	0	25
7	Players & Families	0	220	0	0	220	0	0	0	0	0	220
8	Owners' Guests	0	60	0	0	60	0	0	0	0	0	60
9	Limousines	17	0	0	0	17	0	0	0	0	0	17
10	General Seating	4,081	680	483	75	5,319	900	2,600	250	2,850	1,000	10,069
11	Game Operations	0	0	225	0	225	0	0	0	0	0	225
12	Entertainment	0	30	0	0	30	0	0	0	0	0	30
13	Video / Audio	0	30	0	0	30	0	0	0	0	0	30
14	Network	0	60	0	0	60	0	0	0	0	0	60
15	PD, FD, Meds, Chldrs	0	200	0	0	200	0	0	0	0	0	200
16	Media	0	150	0	0	150	0	0	0	0	0	150
17	Buses	340	0	0	0	340	0	0	0	0	0	340
	Subtotal	9,161	1,474	1,955	75	12,665	900	2,600	250	2,850	1,000	17,415

* Note: CP Retail site is not shown on this map

Figure 18: **Game Day Transit**

Game Day Auto

As part of the proposed new stadium, reversible lanes and Traffic Control Officers would be available to promote better access. In addition, real-time traffic signal coordination, overhead lane control signs, and changeable message signs would also be built to control traffic before and after major events.

During game days, several roadways in the project area would be reconfigured to promote easier access to the stadium. Sections of Evans Avenue, Innes Avenue, Griffith Street, Thomas Avenue, Ingalls Street, and Harney Way would be reconfigured to provide additional lanes in the peak direction of travel (pre-game to the stadium, post-game away from the stadium). **Table 19** summarizes the number of lanes in each direction for the proposed new stadium on Hunters Point Shipyard.

Table 19: Post-Game Lane Configuration – Proposed Stadium

Route	Inbound	Outbound
Auto Traffic		
Via Innes Avenue / Cargo Way	0	2
Via Innes Avenue / Evans Avenue	1	2
Via Griffith Street / Ingalls Street	1	3
Via Yosemite Slough Bridge	0	4
Auto Subtotal	2	11
Transit Vehicles		
Via Yosemite Slough Bridge	1	1
Transit Subtotal	1	1
Total	3	12

Source: AECOM – October 2008

Post-Game Auto Exit Capacity

One of the factors used to evaluate the accessibility of the proposed stadium is to determine how the surrounding roadway network would serve the post-game travel demand. Specifically, this is determined using a hypothetical stadium clearance time (i.e., the amount of time it takes all patrons to leave the stadium vicinity). The critical mode is the clearance of the private auto facilities (parking lots for general admission guests). The game day lane configurations and transportation improvements presented above are key elements that directly relate to post-game roadway capacity. **Table 20** summarizes the current roadway exit capacity (in vehicles per hour) of the existing 49ers stadium.

Table 20: Peak Direction Exit Capacity – Existing Stadium

Route	Existing Exist Capacity (vehicles per hour)
Exiting North of Stadium (destinations North & South)	
Via Carroll Avenue	900
Via Gilman Avenue	1,800
Via Jamestown Avenue	900
North Subtotal	3,600
Exiting South of Stadium (destinations North & South)	
Via Harney Way	4,100
South Subtotal	4,100
Total	7,700

Source: AECOM – October 2008

A key consideration in constructing a new stadium is providing improved accessibility for a better fan experience, including an increase in post-game exit efficiency. **Table 21** summarizes the roadway exit capacity (in vehicles per hour) of the proposed new stadium. The only difference between the exit capacity between opening day and build-out conditions is related to the new US 101/Harney/Geneva interchange, as it would increase the south gate capacity. The exit capacity was calculated for Opening Day Conditions and project build-out conditions. The proposed project exit capacities for the two conditions are illustrated in **Figures 19** and **20**, respectively.

Table 21 is based on several assumptions:

- The local street network, with the help of advanced traffic signal technology and traffic control officers, would be able to process approximately 800 vehicles per hour per lane;
- Where the exit routes interface with Third Street, a major transit corridor, a lower capacity was assumed;
- Freeway ramps could process up to 1,600 vehicles per hour per lane (a total of 3,200 vehicles per hour at the existing Harney Way interchange); and
- Stadium exit gates can process up to 1,000 vehicles per hour per lane.

Table 21: Peak Direction Exit Capacity – Proposed Stadium		
Route	Exit Capacity: Opening Day Conditions	Exit Capacity: Project Build-Out Conditions
To the North		
Via Innes Ave. / Evans Ave. / Mendell St.	400	400
Via Innes Ave. / Evans Ave. / Cesar Chavez St.	900	900
Via Innes Ave. / Evans Ave. / Third St.	900	900
Via Innes Ave. / Illinois St. / 25th St.	1800	1800
North Subtotal	4,000	4,000
To the South		
Via Griffith St. / Ingalls Ave. / Third St.	2,700	2,700
Via Yosemite Slough Bridge / Harney Way	*3,200*	*4,300*
South Subtotal	5,900	7,000
Total	9,900	11,000
Source: AECOM – October 2008		

Post-Game Event Clearance Time

Based on the theoretical lane capacities presented in the above tables, an approximation of stadium clearance time was calculated for the existing stadium and compared to the proposed project stadium configuration.

Approximately 16,400 vehicles (autos, buses and RVs) are expected to park at the stadium during an event. For stadium clearance time calculations, the buses were removed from the total post-game demand since they would be exiting the stadium by transit-only routes. Therefore, only 16,000 vehicles (autos and RVs) would be using the auto routes during post-game operations.

Existing 49ers Stadium

At the existing stadium, it would take approximately two hours and ten minutes to serve the 16,500 vehicles (excludes buses) expected during game days at the new stadium, based on the existing roadway capacity of 7,700 vehicles per hour.

In making this comparison, it should be noted that the existing stadium has a lower transit mode share compared to what is expected at the proposed new stadium; therefore, the existing stadium has a larger theoretical post-game exit demand than 16,500 vehicles.

Proposed Stadium

The proposed exit capacity for the new stadium under Opening Day Conditions was calculated at 9,900 vehicles per hour. It would take approximately one hour and 40 minutes to serve 16,000 (autos and RVs) vehicles.

The proposed capacity for the new stadium under build-out conditions was calculated at 11,000 vehicles per hour. It would take approximately one hour and 30 minutes to serve 16,000 vehicles.

The above calculations were made using the most conservative assumptions. In reality, some vehicles would likely leave early, and a portion would also stay in the area after the event. Therefore, a more qualitative look at this analysis is summarized as follows:

- The Opening Day Condition would result in a 29 percent faster clearance time when compared to the existing stadium. The Build-Out Condition would result in a 43 percent faster clearance time when compared to the existing stadium;
- The on-site amenities and additional land uses developed as a part of the project would likely affect post-game travel behavior (some patrons may choose to stay after the game to visit the nearby retail or open space uses);
- The transit improvements proposed as a part of the project would likely make transit a more convenient and efficient option for game day travel compared to private autos. The above calculations assume that 25 percent of all game day attendees would travel by transit. The robust package of post-game transit services proposed as a part of the project have the potential to serve a much larger patronage compared to the existing transit service; and
- The 49ers and the City may explore additional opportunities to delay vehicle departures following games, which could include such measures as preferred parking areas, promotion of post-game tailgating, and music performances.

Figure 19: **Post-Game Auto Exit Capacity – Opening Day Conditions**

Figure 20: **Post-Game Auto Exit Capacity – Project Build Out Conditions**

Game Day Traffic Routes

Figure 21 illustrates the auto and transit routes that would operate on a typical game day during the post-game condition. In an effort to maintain effective and safe traffic flow after a typical event, many of the intersections require traffic control officers while others can be controlled effectively via traffic signals and the Transportation Management System.

In addition to intersection control, many of the roadway segments would serve stadium traffic via reversible lane control similar to how the existing stadium operates.

During game days, the following roadways outside the project site would have reversible lanes to promote more efficient access to and from the stadium (see **Figure 7J-L** for cross-sections):

North Gate:

- Innes Avenue between the project site and Evans Avenue; and
- Evans Avenue between Innes Avenue and Mendell Street.

South Gate:

- Crisp Road between the project site and Griffith Street/ Palou Avenue;
- Griffith Street between Palou Avenue/Crisp Road and Thomas Avenue;
- Thomas Avenue between Griffith Street and Ingalls Street;
- Ingalls Street between Carroll Avenue and Underwood Avenue;
- Arelious Walker Drive between Crisp Road and Harney Way (including over Yosemite Slough Bridge); and
- Harney Way between the project site and the US 101/ Harney Interchange.

Game Day Traffic Control

Inside the project site, the Hunters Point Shipyard Arterials and the Candlestick Point Arterials would have reversible lanes on game days.

The following intersections will be under control by the TMS center or a Traffic Control Officer as shown on **Figure 22**:

- 25th Street and Pennsylvania Avenue
- 25th Street and 3rd Street
- Illinois Street and Cesar Chavez Street
- Oakdale Avenue and Barneveld Avenue
- Industrial Street and Palou Avenue
- Industrial Street and Oakdale Avenue
- Oakdale Avenue and Phelps Street
- Phelps Street and Jerrold Avenue
- Evans Avenue and Mendell Street
- Hunters Point Boulevard and Galvez Avenue
- Hunters Point Boulevard and Innes Avenue
- Jennings Street and Evans Avenue
- Robinson Street and Donahue Street
- Crisp Road and Fischer Avenue
- Crisp Road and Arelious Walker Drive
- Palou Avenue and Griffith Street
- Palou Avenue and Hawes Street
- Palou Avenue and Ingalls Street
- Palou Avenue and Jennings Street

Figure 21: **Game Day Routes**

Figure 22: **Game Day Traffic Control**

- Palou Avenue and Keith Street
- Palou Avenue and Lane Street
- Carroll Avenue and Ingalls Street
- Arelious Walker Drive and Carroll Avenue
- Arelious Walker Drive and Gilman Avenue
- Arelious Walker Drive and Ingerson Avenue
- Arelious Walker Drive and Harney Way
- Harney Way and Executive Park Boulevard

7 Non-Stadium Variants

The proposed project includes a new stadium for the San Francisco 49ers at Hunters Point Shipyard. However, should the 49ers franchise choose to build a new stadium elsewhere, alternative development plans for Parcels D and E have been considered. Two of those variants are described in this Chapter. One variant, known as Variant 1, includes an expanded research and development campus. The other variant, known as Variant 2A, includes a mix of additional housing and research and development instead of a new stadium.

The roadway improvements, transit improvements and TDM programs introduced in Chapters 4 and 5 would all be implemented as part of the non-stadium alternatives. Under the alternatives, the same project goals of reducing auto use to approximately 45 percent, and increasing transit ridership, walk and bike trips to 30, 20, and 5 percent, respectively, would apply.

7.1 Variant 1 – Research & Development

One of the two non-stadium variants is known as Variant 1. It includes a more extensive research and development campus in the Hunters Point Shipyard site.

Land Use Program

Current plans for this variant would include an additional two and a half million square feet of research and development space in a "green-technology" campus, creating a substantial new employment center. This would create more opportunities for residents of the proposed project to work on-site without requiring private autos for off-site work trips. The land use program for Variant 1 is summarized in **Table 22** and illustrated in **Figure 23**. In this variant, all other uses outside of the stadium site in both Candlestick Point and Hunters Point Shipyard would remain the same.

Table 22: Land Use Program (Variant 1 - Research & Development)

Land Use	Candlestick Point	Hunters Point Shipyard	Project Total
Residential	7,850 homes	2,650 homes	10,500 homes
Regional-Serving Retail	635,000 sq. ft.	-	635,000 sq. ft.
Neighborhood-Serving Retail	125,000 sq. ft.	125,000 sq. ft.	250,000 sq. ft.
Office	150,000 sq. ft.	-	150,000 sq. ft.
Research & Development	-	5,000,000 sq. ft.	5,000,000 sq. ft.
Hotel	220 rooms	-	220 rooms
Arena	10,000 seats	-	10,000 seats
Parks & Open Space	105 acres	222 acres	327 acres
Artists Studios	-	255,000 sq. ft[1]	255,000 sq. ft
Community Services	50,000 sq. ft.	50,000 sq. ft.	100,000 sq. ft.

Source: Lennar Urban – October 2009

1 Carroll Avenue has three outbound lanes, but they merge into one right turn lane at Third Street.

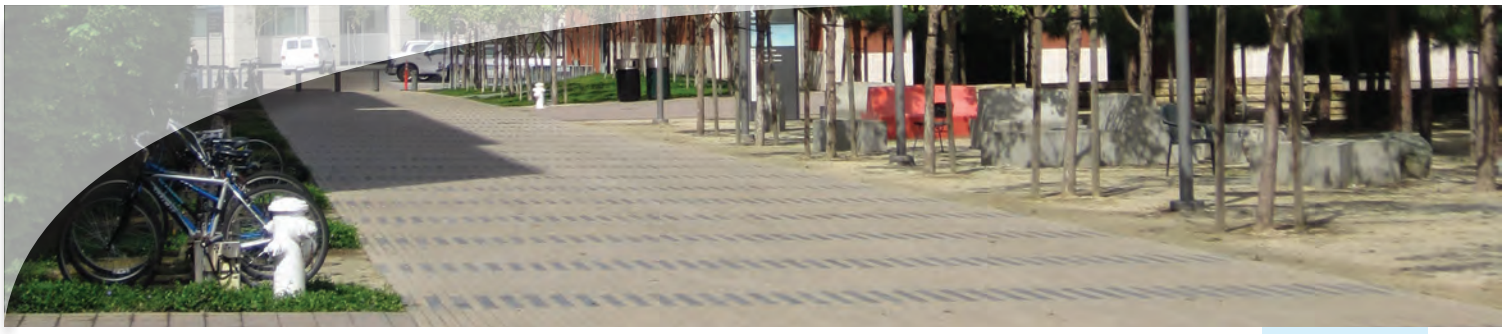
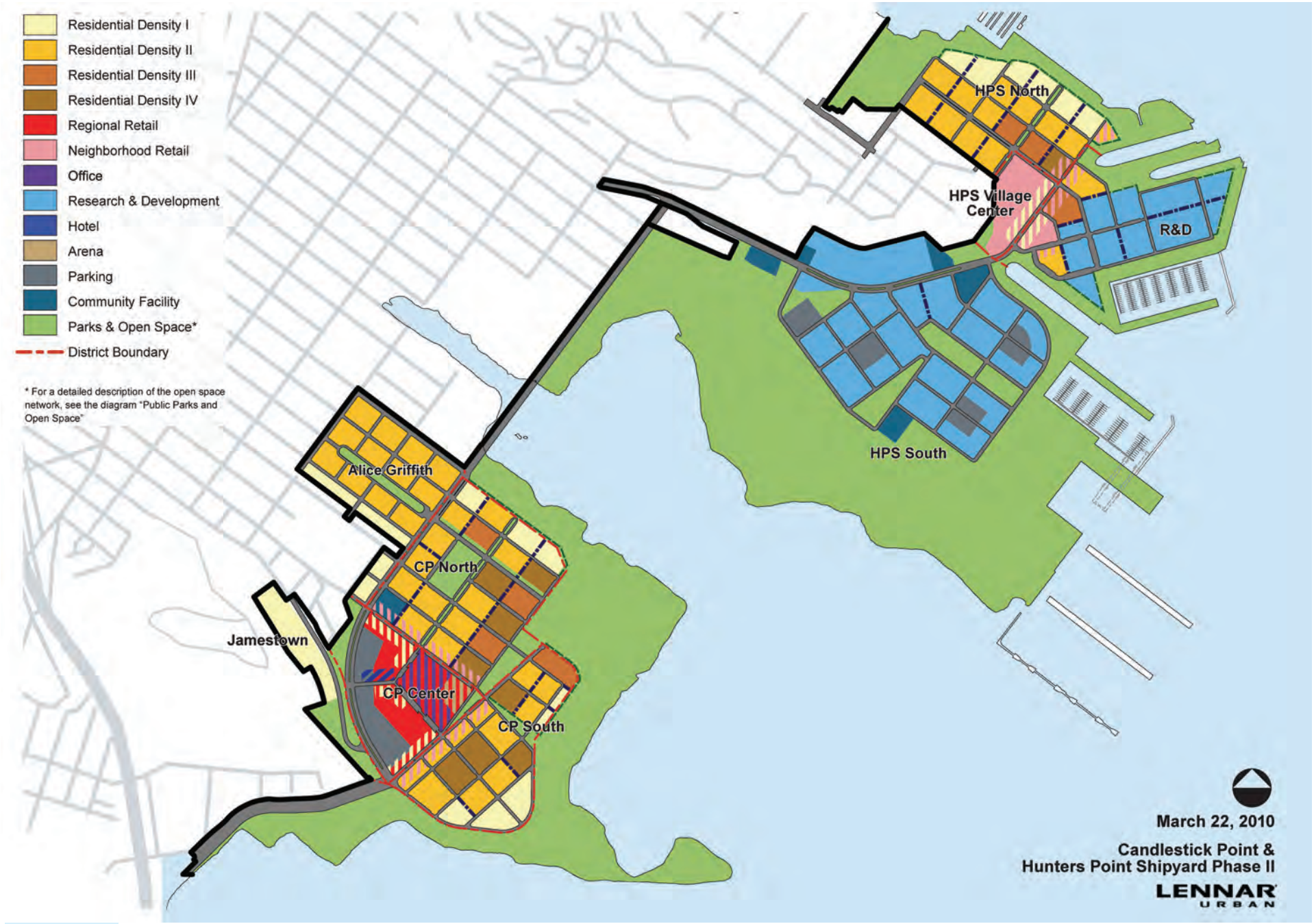


Figure 23: **Land-Use Program: Non-Stadium (Variant 1 – Research & Development)**



Parking Supply

The project parking supply for Variant 1 removes the spaces associated with the stadium and includes approximately 6,000 additional parking spaces to serve the expanded research and development campus. The parking supply for the non-stadium alternative land use program is presented in **Table 23**.

Table 23: Proposed Parking Supply (Variant 1 - Research & Development)

Parcel	Number of Spaces			
	Residential	Commercial Off-Street[1]	General On-Street	Total
Candlestick Point	7,850	2,346	1,360	11,556
Hunters Point Shipyard	2,650	7,028	1,678	11,356
Total	**10,500**	**9,374**	**3,038**	**22,912**

Source: Lennar Urban – December 2008

1 Includes regional retail, neighborhood retail, office, hotel, and arena uses for Candlestick Point and neighborhood retail, artists' space, and research and development for Hunters Point Shipyard.

7.2 Variant 2A – Housing/ Research & Development

The second non-stadium variant is known as Variant 2A. It includes a combination of additional research and development space and housing in the Hunters Point Shipyard site.

Land Use Program

This variant would be similar to Variant 1, except that 1,625 residential units would be shifted from Candlestick Point to the Hunters Point Shipyard and only 3 million square feet of research and development space would be constructed in the Hunters Point Shipyard instead of the 5 million proposed under Variant 1. Similar to Variant 1, the research and development space would be focused on a "green-technology" campus, creating a substantial new employment center. The land use program for Variant 2A is summarized in **Table 24** and illustrated in **Figure 24**.

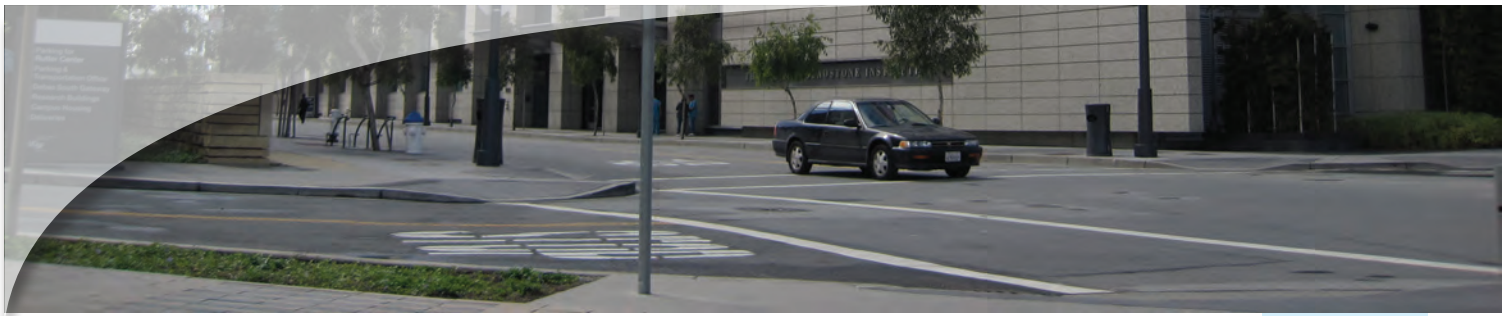


Table 24: Land Use Program (Variant 2A - Housing/Research & Development)			
Land Use	**Candlestick Point**	**Hunters Point Shipyard**	**Project Total**
Residential	6,225 homes	4,275 homes	10,500 homes
Regional-Serving Retail	635,000 sq. ft.	-	635,000 sq. ft.
Neighborhood-Serving Retail	125,000 sq. ft.	125,000 sq. ft.	250,000 sq. ft.
Office	150,000 sq. ft.	-	150,000 sq. ft.
Research & Development	-	3,000,000 sq. ft.	3,000,000 sq. ft.
Hotel	220 rooms	-	220 rooms
Arena	10,000 seats	-	10,000 seats
Parks & Open Space	105 acres	222 acres	327 acres
Artists Studios	-	255,000 sq. ft[1]	255,000 sq. ft
Community Services	50,000 sq. ft.	50,000 sq. ft.	100,000 sq. ft.
Source: Lennar Urban – February 2010			

1 The Project includes 225,000 sq. ft. of existing artist studio space that would be renovated and replaced.

Parking Supply

Similar to Variant 1, the project parking supply for Variant 2A also removes the spaces associated with the stadium and includes additional parking spaces to serve the expanded research and development campus and shifts residential parking spaces from Candlestick Point to Hunters Point Shipyard. The parking supply for the Variant 2A (Housing/ Research & Development) land use program is presented in **Table 25**.

Table 25: Proposed Parking Supply (Variant 2A - Housing/Research & Development)				
Parcel	**Number of Spaces**			
	Residential	**Commercial Off-Street[1]**	**General On-Street**	**Total**
Candlestick Point	6,225	2,346	1,360	9,931
Hunters Point Shipyard	4,275	4,428	1,428	10,131
Total	**10,500**	**6,774**	**2,788**	**20,062**
Source: Lennar Urban – February 2008				

1 Includes regional retail, neighborhood retail, office, hotel, and arena uses for Candlestick Point and neighborhood retail, artists' space, and research and development for Hunters Point Shipyard.

Figure 24: **Land-Use Program: Non-Stadium (Variant 2A - Housing/Research & Development)**

8 Analogies

The mode split goal of the project – 45 percent auto, 30 percent transit, 20 percent walk, and 5 percent bike are analogous to other San Francisco neighborhoods. In addition, automobile travel has declined and alternative modes have gained popularity in projects and neighborhoods in San Francisco and other cities through effective TDM strategies. The following sections draw analogies to Candlestick Point and Hunters Point Shipyard, showing that dense, mixed-use development and a comprehensive TDM program can achieve the project's modal split goal.

8.1 Comparison to Other San Francisco Neighborhoods

With respect to current travel patterns in southeastern San Francisco, the mode split shift sought by the project goals might appear ambitious. However, many San Francisco neighborhoods currently exhibit comparable levels of auto, transit, and walk/bike travel, as shown in **Table 26**. Percentages of residential work trips in other San Francisco neighborhoods that meet or exceed the project modal split goal appear in the table in bold.

All of the featured neighborhoods have a level of transit use greater or equal to 30 percent for residential work trips. Areas of the City where at least a quarter of trips are made on foot or by bike include Nob Hill, North Beach, and Telegraph Hill. Private automobiles are used for 45 percent or less of residential work trips in Nob Hill, North Beach, Telegraph Hill, and the Western Addition.

With a development density, mixed-use character and level of transit service comparable to these neighborhoods, Candlestick Point and Hunters Point Shipyard will achieve a modal split similar to these transit-oriented and walkable San Francisco neighborhoods.

8.2 TDM Case Studies

While it is difficult to isolate the effectiveness of any one of the TDM elements described in Chapter 5, it is clear from the following case studies that comprehensive, multi-faceted TDM plans can achieve dramatic shifts in mode choice. The policies and programs outlined in Section 5.2.4 intend to create this synergy, achieving results comparable to the following case studies.

Table 26: Mode Split Comparison - San Francisco Neighborhoods

Neighborhood	PM Peak Hour Residential Work Trips		
	Transit	Walk/Bike	Auto/Carpool
Marina	40%	11%	49%
Mission	39%	14%	47%
Nob Hill	39%	32%	29%
North Beach	30%	40%	30%
Parkmerced	31%	4%	65%
Russian Hill	35%	15%	50%
Telegraph Hill	31%	29%	40%
Western Addition	45%	16%	39%
% That Would Achieve **Project Goals**	**30%**	**25%**	**45%**

Source: U.S. Census Bureau – 2000

Stanford University, Palo Alto, California

In 2002, four percent of Stanford University employees rode Caltrain to work. By 2007, this figure jumped to nearly 18 percent. During the intervening five years, the following were implemented:

- GO Passes are provided free to all employees who live off-campus, which allow unlimited rides on Caltrain;
- Caltrain introduced “baby bullet” service, with Palo Alto as an express station; and
- “Clean Air Cash” was instituted, an incentive which pays university employees $234 (the cost of a permit) if they do not purchase a parking permit.

TDM plans can achieve dramatic shifts in mode choice

Station Tower, Surrey, British Columbia

Intrawest Corporation developed a trip reduction program for its Station Tower, an office building where 700 people are employed. The tower is located in a suburban area, yet nearly 50 percent of the employees use transportation alternatives. This is due to the tower's location at a SkyTrain rapid transit station, as well as TravelChoices, a TDM program including the following elements:

- Each organization in the building has a TravelChoices representative who administers the program;
- Showers and secure bike lockers are provided for cyclists;
- Free access to fitness facilities, showers and lockers are provided;
- A ride-matching service links potential carpool partners within the complex;
- Preferential parking is reserved for carpools and vanpools;
- A guaranteed ride home program is offered; and
- An incentive program awards "TravelBucks" to each employee that uses alternative transportation to and from work. Prizes include coffee, transit tickets, ski passes and rental car certificates.

North Natomas Transportation Management Association, Sacramento, California

The North Natomas Transportation Management Association (NNTMA) has targeted a 35 percent reduction in single-occupant vehicle trips by residents of the community. Each developer must submit a transportation management plan (TMP) prior to development, which is a commitment to a combination of trip reduction measures. The TMP must be approved by the City of Sacramento. NNTMA's TDM program includes the following TDM elements:

- Baseline telephone survey;
- Association website;
- Online guaranteed ride home program;
- Brochure for residents;
- Subsidized bicycle program; and
- "Spare the Air" cash giveaways.

Marquam Hill Partnership Plan, Portland, Oregon

Three major medical facilities combined efforts to develop a plan to manage the daily transportation demand of 10,000 employees, students, patients and visitors. In the first year after the plan's implementation, single-occupant vehicle trips declined by 15 percent and transit ridership increased by 46 percent. The plan included the following:

- New express buses;
- Coordinated carpool/vanpool database;
- Reduced-cost transit passes and an extensive marketing program.

Employee Commute Options (ECO) – Oregon Department of Environmental Quality

The Oregon Department of Environmental Quality's ECO program aims to reduce vehicle trips in the Portland metropolitan area. Employers with over 100 employees at a work site are required to provide incentives for alternative commute options that have a combined potential to reduce single occupant vehicle commute trips by ten percent from an established baseline. The program estimates the trip reduction potential for various TDM elements among the percentage of employees they are made available to, which are summarized in **Table 27**.

Table 27: Employee Commute Options (ECO) Program	
TDM Element	**Trip Reduction Potential**
Telecommuting (among employees expected to participate)	
Full Time	82-91%
1-2 Days/Week	14-36%
Compressed Work Week (among employees expected to participate)	
9/80 Schedule	7-9%
4/40 Schedule	16-18%
3/36 Schedule	32-36%
Full Transit Pass Subsidy	
High Transit Service	19-32%
Medium Transit Service	4-6%
Low Transit Service	0.5-1%
Half Transit Pass Subsidy	
High Transit Service	10-16%
Medium Transit Service	2-35%
Low Transit Service	0-0.5%
Employee Parking Cash-Out	
High Transit Service	8-20%
Medium Transit Service	5-9%
Low Transit Service	2-4%
Parking Subsidy Elimination	
High Transit Service	8-20%
Medium Transit Service	5-9%
Low Transit Service	2-4%
Reduced Cost Parking for High Occupancy Vehicles (HOV)	1-3%
On-Site Services	1-2%
Bicycling Program (employees who live < 6 miles from work site)	0-10%
Walking Program	0-3%
On-site Rideshare Matching	
Without support strategies[1]	1-2%
With support strategies	6-8%
Company-provided Vanpools (with fee)	15-25%
Company-subsidized Vanpools	30-40%
Gifts/Awards for Alternative Mode Use	0-3%
Time Off with Pay for Alternative Mode Use	1-2%
Company Cars for Business Travel	0-1%
Source: Oregon Department of Environmental Quality – October 2008	

1 Support strategies include employee transportation coordinators, marketing/education campaigns, preferential HOV parking, on-site transit pass sales, pre-tax transit pass sales, employee recognition programs, and shuttles.

Long Range TDM Plan – Hillsborough County, Florida

Researchers at the University of South Florida analyzed the potential of TDM strategies to reduce congestion and air pollution in the Tampa Bay Area. The Environmental Protection Agency's COMMUTER Model was used to measure the effectiveness of different combinations of TDM strategies.

The analysis was applied to the activity centers of Downtown Tampa, Brandon, USF/Busch/New Tampa, and Westshore, with commuting workforces ranging from 23,000 to 58,000 in 2000. Downtown Tampa had a single occupancy vehicle (SOV) mode split of 63 percent, while the other, suburban activity centers ranged from 81 to 83 percent. The results of the analysis are summarized in **Table 28**.

Table 28: Hillsborough County Long Range TDM Plan			
Scenario	Elements	Reduction of SOV Mode Share	
		2000 Baseline	2025 Baseline [1]
Scenario A *(Alternative Work Schedule)*	• 1% increase in 4/40 compressed work week • 2% increase in 9/80 compressed work week • 2% increase in telecommuting	1.0-1.1%	4.1-4.5%
Scenario B *(Alternative Work Schedule & Employer-based TDM Programs)*	• Compressed workweek and telecommuting, as in Scenario A • Preferential parking program • Transit/vanpool subsidy • 10% workforce participation	1.3%	4.4-4.8%
Scenario C *(Employer-based TDM Program II)*	• Same as Scenario B, but with 35% workforce participation and greater employer support levels	2.4-2.5%	5.5-5.9%
Scenario D *(Employer-based TDM Program III)*	• Same as Scenario B, but with 50% workforce participation and greater employer support levels	3.8-3.9%	6.6-7.0%
Source: Florida Department of Transportation, "Incorporating TDM into the Land Development Process" – October 2005			

1 Baseline assumes expected telecommuting growth and existing and committed transit improvements.

An employer-level baseline was also analyzed, using Hillsborough County Government as the employer. In 2000, the county employed 2,860 in downtown Tampa. The model found that a reduction of SOV mode split of up to 11.7 percent could be achieved under the most aggressive scenario.

Santa Clara Valley Transportation Authority (VTA), San Jose, California

Transportation Impact Fee (TIF) credits are offered to developers in Santa Clara County, California, based on the maximum trip reduction potential of the given project elements. **Table 29** summarizes the accepted maximum trip reduction potential for various project elements.

Table 29: Santa Clara Valley Transportation Authority Trip Reductions	
Project Element	Maximum Trip Reduction Potential
Mixed-use Development Project	
With housing and retail components	13%
With hotel and retail components	10%
With housing and employment	3%
With employment and employee-serving retail	3%
Location within 2,000-foot walk of a transit facility	
Housing near Light Rail or Caltrain station	9%
Housing near a major bus stop (≥10 min service)	2%
Employment near Light Rail or Caltrain station	3%
Employment near a major bus stop (≥10 min service)	2%
Effective TDM Program	
Financial Incentives	5%
Project-funded dedicated shuttle, not combined with employment	3%
Project-funded dedicated shuttle, combined with employment	1.5%
Partially-funded multi-site shuttle, near Light Rail or Caltrain station	2%
Source: Santa Clara Valley Transportation Authority – October 2008	

City of Berkeley, California Employee TDM Programs

The City has implemented a number of programs benefiting its 1,500 employees. As a result, single-occupant vehicle use has dropped 25% (from 47 percent to 36 percent) between 2001 and 2005. These programs include:

- Annual EcoPasses are purchased for all employees, at a cost of $60 each ($84,000 total);
- Pre-Tax Commute Benefits;
- Fleet of ten bicycles for employee use;
- Two secure bike parking locations at City Hall;
- Shower facilities available through deeply discounted YMCA membership (adjacent to City Hall);
- Carpool/vanpool parking is discounted 70%;
- City vehicle fleet has been partially replaced with carshare vehicles, saving $87,000 - $130,000 annually; and
- Guaranteed ride home program.

City of Boulder and the University of Colorado

The City of Boulder's 1996 Transportation Master Plan sought to hold traffic to 1994 levels and reduce single-occupant vehicle mode share to 25 percent. As a result of the Plan, the number of trips on transit doubled between 1990 and 2000; 17.4 percent of work trips shifted from SOV to bike (10.6 percent) and transit (5.8 percent); and transit pass holders jumped from 4,000 in 1994 to 60,000 in 2001. The following strategies have been implemented in conjunction with the Plan:

- A "Community Transit Network" of small buses has been developed with identity and amenities shaped with community input and direction;
- University of Colorado provides transit passes for 29,000 students and 6,000 employees (students pay a mandatory fee, while staff passes paid through parking revenues, general fund and head tax);
- 65,000 people have access to a transit pass;
- City matches 25 percent of the cost of bus passes for neighborhood residents, who cover the balance through voluntary contributions or through a General Improvement District (GID). With a GID, all residents are eligible for passes, which are paid for through annual property tax assessments;
- Developers of new residential subdivisions are required to buy each household three years' worth of unlimited transit passes. After the third year, residents pay to HOA or through rent to continue;
- Downtown parking revenues pay for marketing of business area, maintenance of pedestrian area and for employee transit passes;
- Bike routes, paths and lanes have been added; bike-actuated and grade-separated crossings have been implemented; bike racks have been installed on all buses; and CU has a free bicycle check-out program; and
- A "safe ride home" service is funded with $2 of each $50 transit pass.

FEHR & PEERS
TRANSPORTATION CONSULTANTS

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Candlestick Point & Hunters Point Shipyard Phase II

Transportation Plan Appendix

Approved June 3, 2010
Agency Commission Resolution No. 69-2010

Candlestick Point & Hunters Point Shipyard

Transit Operating Plan

May 2010

TABLE OF CONTENTS

List of Figures & Tables

1 Introduction

This report describes the transit service plan for the Candlestick Point / Hunters Point Shipyard Phase II (CP/HPS) project, including elements of the plan and the expected costs associated with operating that service. This analysis and the resulting transit service plan is the product of close collaboration between the Mayor's Office of Economic and Workforce Development, the Planning Department, and SFMTA. There has been general consensus regarding the suitability and financial feasibility of this plan to provide robust transit service to the southeastern portion of San Francisco. However, SFMTA service planning staff will retain the discretion to implement the most appropriate transit service as conditions in the area warrant. However, this transit service plan represents the currently-anticipated transit service improvements.

This report is divided into four chapters. This chapter provides a brief introduction to the report and describes its purpose. The second chapter provides a brief summary of the proposed transit plan. The third chapter describes the costs associated with operating the proposed service plan at completion of the project, and the fourth chapter describes the anticipated phasing of transit service increases (and associated costs) relative to project buildout.

2 Proposed Transit Plan

Fehr & Peers has worked collaboratively with staff from the Planning Department, the Mayor's Office of Economic and Workforce Development, the San Francisco County Transportation Authority, and SFMTA to develop reliable projections of transit ridership associated not just with the proposed project, but with other proposed and planned projects in the area. These detailed, route-specific ridership projections were used to develop and refine transit service plan for buildout conditions. Specifically, the transit operation plan would include the following peak period service improvements at buildout:

- Extension of the 24-Divisadero, the 44-O'Shaughnessy, and the 48-Quintara-24th Street into Hunters Point Shipyard, with increased frequency on the 24-Divisadero to 6 minutes in the AM and PM peak periods[1].
- Extension of the 29-Sunset from its current terminus near the Alice Griffith housing development, near Gilman Avenue and Giants Drive, into the proposed Candlestick Point retail area. The 29-Sunset would operate a short line between Candlestick Point and the Balboa Park BART station. This would increase frequencies on the 29-Sunset by reducing headways between buses from 10 minutes to 5 minutes during the AM and PM peak periods between Candlestick Point and the Balboa BART station. Every other bus would continue to serve the Sunset District at 10-minute headways.

1 Initially, the 23-Monterey would be extended into the Hunters Point Shipyard instead of the 24-Divisadero. Approximately during Major Phase 2, the 23-Monterey would return to its existing route and the 24-Divisadero would be extended into the site.

- Convert T-Third service between Bayview and Chinatown via the Central Subway from one-car to two-car trains or comparable service improvement[2].
- Extension of the 28L-19th Avenue Limited from its TEP-proposed terminus on Geneva Avenue, just east of Mission Street, into the Hunters Point Shipyard transit center. The 28L-19th Avenue Limited would travel along Geneva Avenue across U.S. 101 via the proposed Geneva Avenue extension and new interchange with U.S. 101, to Harney Way. East of Bayshore Boulevard, the 28L-19th Avenue Limited would operate as BRT, traveling in exclusive bus lanes into the Candlestick Point area. The BRT route would travel through the Candlestick Point retail corridor, and cross over Yosemite Slough into the Hunters Point Shipyard transit center. The 28L-19th Avenue Limited would operate a short line to the Balboa Park BART station. This would increase frequencies on the 28L-19th Avenue Limited by reducing headways between buses from 10 minutes to 5 minutes for the segment between Hunters Point Shipyard and the Balboa Park BART station, traveling in exclusive lanes throughout the project site. Every other bus would continue to the Sunset District at 10-minute headways.
- New CPX-Candlestick Express to downtown serving the Candlestick Point site, traveling along Harney Way (with potential stops at Executive Park), before traveling on U.S. 101 toward downtown, terminating at the Transbay Terminal[3].
- New HPX-Hunters Point Shipyard Express to downtown serving the Hunters Point Shipyard site, traveling from the Hunters Point Shipyard Transit Center, along Innes Avenue, with stops at the India Basin and Hunters View areas. The HPX would continue non-stop to the Transbay Terminal in Downtown San Francisco.

This new transit service would be complimented by the provision of a new transit center in the Hunters Point Shipyard site, which would include space for bus stops, bus layovers, transit operator restrooms, customer information, and other amenities as described in the Candlestick Point & Hunters Point Shipyard Phase II Transportation Plan and the project's Infrastructure Plan.

As noted in Chapter 1, the proposed transit service would compliment service changes proposed by the Transit Effectiveness Project (TEP), and is illustrated on **Figure 1**. As currently contemplated, the relative difference between off-peak and peak period transit service would be similar to the relative differences proposed as part of the TEP. Additionally, this transit service plan described above would be the same for the Proposed Project and for the non-stadium scenarios, including Variants 1 and 2A.

The transit service plan used in the transportation impact analysis also assumes completion of the Central Subway. For Caltrain, the analysis assumes an increased headway at the Bayshore Station from the current 60 minutes to 30 minutes, but does not assume extension into Downtown San Francisco.

2 Improvements to service on the T-Third light rail line are not expected to be phased based on project development; instead, improvements on the T-Third will be phased according to construction on the Central Subway project and regional demand needs.

3 Although preliminary routes between the project area and the Transbay Terminal have been identified, SFMTA staff will ultimately determine precise routing at the time the routes are initiated.

Figure 1: Proposed Transit Improvements

3 Transit Operating Costs

Fehr & Peers worked with SFMTA staff to develop cost estimates for operating and maintaining the proposed transit service and for capital costs associated with additional rolling stock. These costs are increases over the proposed TEP operating scenario and include extensions of transit routes into the project site and increased frequencies on some routes.

Table 1 provides the percentage of ridership increases between existing conditions and year 2030 conditions (project buildout) on each route that is attributable to the CP/HPS project[4]. **Table 1** also provides the annual operations and maintenance costs and the capital costs for providing the proposed service on each route. Finally, by multiplying the CP/HPS project's percentage contribution to transit ridership by the capital costs and operations and maintenance costs, the CP/HPS fair-share contribution to the proposed transit service improvements can be determined.

4 The method used in the analysis summarized on Table 1 is based on the project's contribution of ridership at the maximum load point of each route. This is reasonable, since the maximum load point is usually the controlling point in determining route frequency and capacity (and therefore, operating cost). However, another way to look at ridership contribution is based on the project's contribution to overall growth in total number of boardings along each route. This method may be better suited to indicate the proportion of riders realizing benefits to improved frequencies and running times. The method of determining a cost contribution from a project is a policy decision; however, both methods produced similar fair-share contributions for the CP/HPS project. The analysis described in this report is based solely on the maximum load method.

3.1 Operations & Maintenance Costs

The annual costs associated with operating the proposed service were determined using SFMTA's cost estimation model, originally developed for the TEP. This document only discuses costs and does not account for increased revenue to the City associated with farebox recovery. Those offsetting revenues
are discussed separately in the project's fiscal analysis[5].

3.2 Capital Costs

The number of new transit vehicles required to operate the proposed transit plan was also determined using SFMTA's cost estimation model. SFMTA staff have reviewed and concurred with the projections from this model. The unit costs for new rolling stock were also provided by SFMTA, and are summarized in **Table 2**. The total capital costs do not include extension of trolley wires into the project site to serve the 24-Divisadero trolley bus route (approximately $30.4 Million), facilities associated with vehicle maintenance and storage, or the transit center described in the Transportation Plan and the Infrastructure Plan.

As shown, the total additional cost to operate the proposed transit service includes over $167 million in capital costs for rolling stock and will require an annual operations and maintenance cost of over $43 million. Based on the portion of ridership increases attributable to the CP/HPS project between now and full project buildout, the CP/HPS project's share includes over $67 million in capital costs for rolling stock and nearly $19 million annually for operations and maintenance.

TABLE 1 - TRANSIT SERVICE PROPOSAL COSTS AT PROJECT BUILDOUT

Route	Project Contribution	Total Costs[1]				
		Proposed Service Plan Total Costs		CP-HPS Share		
		Annual O&M Costs	Capital Costs	Annual O&M Costs	Capital	Additional Mitigation Capital Costs[2]
CPX	92%	$2,912,038	$10,800,000	$2,679,075	$9,936,000	$0
HPX	56%	$2,293,626	$9,000,000	$1,284,431	$5,040,000	$0
Route 48	20%	$2,536,082	$6,300,000	$507,216	$1,260,000	$900,000
Route 28L	51%	$9,691,345	$15,300,000	$4,942,586	$7,803,000	$900,000
Route 29	27%	$3,710,068	$9,900,000	$1,001,718	$2,673,000	$3,600,000
Route 44	44%	$0	$0	$0	$0	$2,700,000
T-Third	34%	$15,059,469	$104,500,000	$5,120,219	$35,530,000	$5,500,000
Route 24[3]	46%	$7,332,922	$12,000,000	$3,373,144	$5,520,000	$2,400,000
Others	100%					$1,800,000
Total		**$43,535,550**	**$167,780,000**	**$18,908,390**	**$67,762,000**	**$17,800,000**

Notes:
1. Operating costs shown are in Fiscal Year 2006-2007 dollars. Capital costs are in Fiscal Year 2010 dollars.

2. Based on analysis conducted in EIR and supplemented in memorandum dated April 26, 2010 included in FEIR. This amount is based on the project's contribution to cumulative delays to PM peak hour transit travel times. Since traffic forecasts are relatively conservative, this number of additional vehicles may not be needed. Further, this is only the capital costs of additional vehicles, and does not include the associated O&M costs.

3. Capital costs for Route 24 do not include $30,390,000 for installation of overhead catenary electric wires at $17M per mile.

TABLE 2 - TRANSIT VEHICLE CAPITAL COSTS

Vehicle Type	Cost Provided by MTA (FY 2010 Dollars)
LRV	$5.5 Million
Trolley Coaches	$1.2 Million
Motor Coaches	$0.9 Million
Source: SFMTA, 2010	

5 *Fiscal and Economic Analysis*, Economic & Planning Systems, April 2010.

4 Phasing

The transit phasing plan has been designed to ensure that the level of transit service provided generally anticipates the CP/HPS project's transit demand. This will ensure that the Project maintains its "transit orientation" throughout the development horizon. **Tables 3** and **4** present the effective transit trip generation rates per unit of land use for the Candlestick Point and Hunters Point Shipyard sites, respectively, based on the travel demand forecasts presented in the project's Transportation Study[6].

Table 5 presents the various levels of transit service expected to be provided at the site throughout various points of development, and the associated transit trip generation expected to "trigger" those levels of transit service. As shown, generally, each transit route would be extended into the site at approximately 20 percent buildout of Major Phase 1 (for routes serving Hunters Point Shipyard) or Major Phase 2 (for routes serving Candlestick Point). This level of development was selected to ensure that there was some level of ridership demand at the time service is initiated, but to ensure that the initiation of service is relatively early in the overall development timeline. Service would be gradually increased up to full buildout service frequencies to maintain robust and attractive transit service throughout the Project phasing. The service frequency increases would be managed by SFMTA to maintain ridership conditions below SFMTA's 85% capacity utilization standard, a PM peak period external transit mode split of approximately 20% or higher, and an overall transportation system where vehicle traffic congestion (i.e., intersection level of service) along the major transit corridors would be similar to or better than conditions identified in the EIR at study intersections.

TABLE 3 - EFFECTIVE PM PEAK HOUR TRANSIT TRIP GENERATION RATES – CANDLESTICK POINT

Land Use	Amount Provided	Unit	Effective PM Peak Hour Trip Generation Rate (Transit Trips Per Unit of Development)
Residential	7,594	Dwelling Units	0.13
Retail	760	Ksf	0.95
Hotel	220	Rooms	0.15
Office	150	Ksf	0.64
Park	105	Acres	0.02
Community Services	50	Ksf	0.72

TABLE 4 - EFFECTIVE PM PEAK HOUR TRANSIT TRIP GENERATION RATES - HUNTERS POINT SHIPYARD PHASE II

Land Use	Amount Provided	Unit	Effective PM Peak Hour Trip Generation Rate (Transit Trips Per Unit of Development)
Residential	2,650	Dwelling Units	0.13
Retail	125	Ksf	0.75
R&D	2,500	Ksf	0.19
Stadium/Artists	--	--	--
Park	232	Acres	0.02
Community Services	50	Ksf	0.72

6 *Candlestick Point* – Hunters Point Shipyard Phase II Development Plan Transportation Study, November 2009, LCW Consulting, CHS Consulting Group, and Fehr & Peers

Improvements to service on the T-Third light rail line are not expected to be phased based on project development; instead, improvements on the T-Third will be phased according to construction on the Central Subway project and regional demand needs.

Preliminary development schedules provided by the project applicant forecast occupancy of the first building by year 2015 and completion of the final development by year 2032. Table 6 presents the annual capital and operating and maintenance costs expected to accrue based on the projected project buildout and projected implementation of transit service by year.

Table 5 - Transit Improvement Phasing

Improvement	Headway (min.)	One-Way Capacity Serving Project Site (pax/hr)	Stadium Option		Non-Stadium Option	
			Major Phase	Trigger (PM Peak Hour Transit Trips)	Major Phase	Trigger (PM Peak Hour Transit Trips)
Begin Hunters Point Express (HPX)	20	192	1	115 [1]	1	115 [1]
	12	320	1	288 [2]	1	288 [2]
Begin Candlestick Point Express (CPX)	20	192	2	164 [3]	2	164 [3]
	15	256	2	838 [2]	2	838 [2]
	10	384	3	1514 [3]	3	1514 [3]
Extend 23-Monterey	15	256	1	115 [1]	1	115 [1]
Extend 24-Divisadero	7.5	512	2	643 [1]	2	643 [1]
	6	640	2	744 [2]	2	744 [2]
Extend 48-Quintara	15	256	1	1 [3]	1	1 [3]
	10	384	1	288 [2]	1	288 [2]
Extend 44-O'Shaughnessy	7.5	512	1	115 [1]	1	115 [1]
	6.5	591	1	288 [2]	1	288 [2]
Begin/Extend 28L/BRT	8	480	2	1075 [1, 4]	2	1075 [1, 4]
	5	768	2	1582 [2, 4]	2	1582 [2, 4]
Extend 29-Sunset	10	384	2	433 [1]	2	433 [1]
	5	768	2	838 [2]	2	838 [2]
Construct Hunters Point Shipyard Transit Center	N/A	N/A	1	Construction of HPS Stadium	1	288 [5]

Notes:

General: Note that triggers are based on total site transit trip generation; only a fraction of the "trigger" amount will travel on each transit route.

1. Initial route extensions based on 20% of buildout of Major Phase (based on Stadium Option land uses)
2. Based on 50% buildout of Major Phase (based on Stadium Option land uses)
3. Based on initiation of Major Phase. In the case of the CPX, this is because completion of Major Phase 1 will include some residential development that could be served by the CPX, but not likely enough until full buildout of Major Phase 1. In the case of the 48-Quintara, the route would be extended as part of the TEP. Initial route will depend on which streets are constructed.
4. Includes total of trips generated by CP and HP. In the case of the 28L, this means 20% buildout of Major Phase II.
5. Under Non-Stadium Option, implementation of Hunters Point Transit Center based on service improvements to HPX, 48-Quintara, and 44-O'Shaughnessy.

Table 6 - Transit Phasing and Associated Costs by Year

Annual Costs Based on Hunters Point Development

Improvement	Headway (min.)	One-Way Capacity Serving Project Site (pax/hr)	Major Phase	Trigger (PM Peak Hour Transit Trips)	Yearly O&M Costs	Capital Costs	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Begin Hunters Point Express (HPX)	20	192	1	115	$ 770,659	$ 3,024,000	$ -	$ -	$ -	$ -	$ 3,794,659	$ 770,659	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	12	320	1	288 [2]	$ 1,284,431	$ 5,040,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,300,431	$ 1,284,431	$ 1,284,431	$ 1,284,431	$ 1,284,431	$ 1,284,431	$ 1,284,431	$ 1,284,431	$ 1,284,431	$ 1,284,431	$ 1,284,431	$ 1,284,431	$ 1,284,431	$ 1,284,431
Extend 23-Monterey	15	256	1	115 [1]	$ 381,469	$ 414,000	$ -	$ -	$ -	$ -	$ 795,469	$ 381,469	$ 381,469	$ 381,469	$ 381,469	$ 381,469	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Extend 24-Divisadero	10	384	2	643 [1]	$ 1,493,197	$ 2,760,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,839,197	$ 1,493,197	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	7.5	512	2	744 [2]	$ 3,373,144	$ 5,520,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,133,144	$ 3,373,144	$ 3,373,144	$ 3,373,144	$ 3,373,144	$ 3,373,144	$ 3,373,144	$ 3,373,144
Extend 48-Quintara	15	256	1	1 [3]	$ 127,173	$ 180,000	$ -	$ -	$ 307,173	$ 127,173	$ 127,173	$ 127,173	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	10	384	1	288 [2]	$ 507,216	$ 1,260,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,587,216	$ 507,216	$ 507,216	$ 507,216	$ 507,216	$ 507,216	$ 507,216	$ 507,216	$ 507,216	$ 507,216	$ 507,216	$ 507,216	$ 507,216	$ 507,216
Extend 44-O'Shaughnessy	7.5	512	1	115 [1]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	6.5	591	1	288 [2]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				Total PM Transit Trips from HP Dev'l Area					33	69	156	189	356	422	510	603	700	726	862	913	839	839	839	839	839	839
				HP generated Annual Cost			$ -	$ -	$ 307,173	$ 127,173	$ 4,717,301	$ 1,279,301	$ 5,269,116	$ 2,173,116	$ 2,173,116	$ 2,173,116	$ 5,630,844	$ 3,284,844	$ 7,924,791	$ 5,164,791	$ 5,164,791	$ 5,164,791	$ 5,164,791	$ 5,164,791	$ 5,164,791	$ 5,164,791

Annual Costs Based on Candlestick Point Development

Improvement	Headway (min.)	One-Way Capacity Serving Project Site (pax/hr)	Major Phase	Trigger (PM Peak Hour Transit Trips)	Yearly O&M Costs	Capital Costs	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Begin Candlestick Point Express (CPX)	20	192	2	164 [3]	$ 1,339,537	$ 4,968,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,307,537	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	15	256	2	838 [2]	$ 1,786,049	$ 6,624,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,442,049	$ 1,786,049	$ 1,786,049	$ 1,786,049	$ 1,786,049	$ -	$ -	$ -	$ -	$ -	$ -
	10	384	3	1514 [3]	$ 2,679,075	$ 9,936,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,991,075	$ 2,679,075	$ 2,679,075	$ 2,679,075	$ 2,679,075	$ 2,679,075
Extend 29-Sunset	10	384	2	433 [1]	$ 108,806	$ 243,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 351,806	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	5	768	2	838 [2]	$ 1,001,718	$ 2,673,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,431,718	$ 1,001,718	$ 1,001,718	$ 1,001,718	$ 1,001,718	$ 1,001,718	$ 1,001,718	$ 1,001,718	$ 1,001,718	$ 1,001,718	$ 1,001,718
				Total PM Transit Trips from CP Dev'l Area					29	29	38	52	95	110	678	982	1,062	1,237	1,346	1,425	1,522	1,660	1,725	1,770	1,825	1,872
				CP generated Annual Cost			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,659,344	$ 6,873,768	$ 2,787,768	$ 2,787,768	$ 2,787,768	$ 2,787,768	$ 6,992,793	$ 3,680,793	$ 3,680,793	$ 3,680,793	$ 3,680,793	$ 3,680,793

Annual Costs Based on Total Development

Improvement	Headway (min.)	One-Way Capacity Serving Project Site (pax/hr)	Major Phase	Trigger (PM Peak Hour Transit Trips)	Yearly O&M Costs	Capital Costs	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Begin/Extend 28L/BRT	8	480	2	1075 [1, 4]	$ 3,930,543	$ 6,426,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,356,543	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	5	768	2	1582 [2, 4]	$ 4,942,586	$ 7,803,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,319,586	$ 4,942,586	$ 4,942,586	$ 4,942,586	$ 4,942,586	$ 4,942,586	$ 4,942,586	$ 4,942,586	$ 4,942,586	$ 4,942,586	$ 4,942,586
T-Third	6	1010	2	$ -	$ 35,530,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 17,765,000	$ -	$ -	$ -	$ -	$ 17,765,000	$ -	$ -	$ -	$ -	$ -	$ -
	5	2424	3	$ 5,120,219	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,560,110	$ 2,560,110	$ 2,560,110	$ 2,560,110	$ 5,120,219	$ 5,120,219	$ 5,120,219	$ 5,120,219	$ 5,120,219	$ 5,120,219	$ 5,120,219	$ 5,120,219
				Total PM Transit Trips from HP/CP Dev'l Area			0	0	62	98	194	241	451	532	1,188	1,585	1,762	1,963	2,208	2,338	2,361	2,499	2,564	2,610	2,664	2,711
				Combined dev'l costs			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,325,110	$ 12,916,653	$ 8,879,696	$ 7,502,696	$ 7,502,696	$ 27,827,805	$ 10,062,805	$ 10,062,805	$ 10,062,805	$ 10,062,805	$ 10,062,805	$ 10,062,805	$ 10,062,805
Total Operating & Maintenance Costs							$ -	$ -	$ 127,173	$ 127,173	$ 1,279,301	$ 1,279,301	$ 2,173,116	$ 4,733,225	$ 10,112,113	$ 12,463,579	$ 13,575,307	$ 13,575,307	$ 18,015,364	$ 18,015,364	$ 18,908,390	$ 18,908,390	$ 18,908,390	$ 18,908,390	$ 18,908,390	$ 18,908,390
Total Capital Costs							$ -	$ -	$ 180,000	$ -	$ 3,438,000	$ -	$ 3,096,000	$ 17,765,000	$ 11,637,000	$ 5,463,000	$ 2,346,000		$ 20,525,000		$ 3,312,000	$ -	$ -	$ -	$ -	$ -

Notes:

General: Note that triggers are based on total site transit trip generation; only a fraction of the "trigger" amount will travel on each transit route. O&M amounts are in FY 2006-2007 dollars and capital costs are in FY 2010 dollars.

1. Initial route extensions based on 20% of buildout of Major Phase (based on Stadium Option land uses)

2. Based on 50% buildout of Major Phase (based on Stadium Option land uses)

3. Based on initiation of Major Phase. In the case of the CPX, this is because completion of Major Phase 1 will include some residential development that could be served by the CPX, but not likely enough until full buildout of Major Phase 1. In the case of the 48-Quintara, the route would be extended as part of the TEP. Initial route will depend on which streets are constructed.

4. Includes total of trips generated by CP and HP. In the case of the 28L, this means 20% buildout of Major Phase II.

5. Under Non-Stadium Option, implementation of Hunters Point Transit Center based on service improvements to HPX, 48-Quintara, and 44-O'Shaughnessy.

4.1 CONCLUSION

As noted earlier, SFMTA service planning staff will retain the discretion to implement transit service at a time and type based on their best judgment over the course of buildout of the CP/HPS project and other development projects in the southeast portion of San Francisco. However, this analysis represents a reasonable forecast based on the information available at this time.

Candlestick Point & Hunters Point Shipyard

TDM Funding & Implementation Plan

Prepared for: Lennar Urban
April 28, 2010

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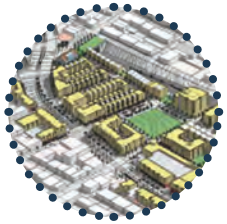
1 Introduction

The Candlestick Point – Hunters Point Shipyard (CP-HPS) Phase II Transportation Plan included a commitment to develop and implement a Transportation Demand Management (TDM) Program designed to reduce use of single-occupant vehicles and to increase the use of rideshare, transit, bicycle, and walk modes for trips to and from, as well as within, the Development Plan Area. The TDM Program was envisioned to highlight and support the demand management qualities of the overall Development Plan, including:



- **Jobs-Housing linkage.** By providing a range of job types (retail, research, hospitality, office, etc.) and a range of housing types from affordable apartments to single family homes, the Development Plan will maximize the potential jobs/housing "matches" on site. Each match reduces the number of vehicle trips that will enter/leave the Development Plan area during peak hours.

- **Streets designed for low speed and safe crossings.** In addition to new residential and commercial buildings, the Development Plan will provide significant infrastructure, including streets. All new streets and intersection upgrades will consider the needs of pedestrians.

- **Land uses and transit located to encourage walking.** People walk more when destinations are within close proximity, along flat routes with easy street crossings, and through interesting areas with storefronts, street trees, street furniture and other pedestrian-oriented amenities. The Development Plan embraces these principles, with all homes located within a 15-minute walk of transit and neighborhood retail services integrated into residential blocks. Many existing neighborhoods will also benefit from their proximity to enhanced transit service, schools, retail locations, and jobs with the Development.

The TDM Program includes a menu of tools that, when employed, will make the most of the above design qualities of the Development Plan. This document further refines the tool menu and sets forth a funding and implementation plan for the TDM Program.

2 CP-HPS II Transportation Demand Management (TDM) Program Overview

The TDM Program includes a comprehensive menu of strategies that support and complement each other and provide "carrots" and "sticks" to incentivize multi-modal travel by residents, employees, and visitors to the Plan area. This chapter summarizes the elements of the TDM Program. A general description of many of the strategies is also presented in the Candlestick Point – Hunters Point Shipyard (CP-HPS) Phase II Transportation Plan.

Following the list of strategies, Figures 2-1, 2-2, and 2-3 present maps detailing the location of transit, bicycle, parking, and game day TDM strategies within the project site. Appendix A documents assumptions for the three figures.

Transit Strategies

- **Central Transit Hub and Ferry Terminal.** A transit center at Hunters Point Shipyard will enable efficient and convenient transfers while providing a central location for transportation brochures and other information to be distributed and for attended bicycle parking. Major bus rapid transit (BRT) stops throughout the Plan Area will also include information kiosks and real-time transit updates. A ferry terminal at Hunters Point Shipyard to accommodate ferry service from the project site to Downtown San Francisco is envisioned as a potential transit expansion for the future.
- **Enhanced Transit Service.** Frequent BRT service, operating in dedicated lanes with signal priority, will offer convenient alternatives to driving to, from, and within the Plan Area. Additional transit service will include extended Muni routes, increased Muni frequencies, and enhanced connections to the regional network (BART and Caltrain).
- **Transit Preferential Street.** Three bus lines serving the site will operate along Palou Avenue. Transit preferential treatments include transit-priority technology and installation of up to thirteen new traffic signals along Palou Avenue. To improve pedestrian comfort and the accessibility of transit in this corridor, new bus shelters will be installed and the street will be upgraded with ADA ramps, bulbouts, and crosswalks.
- **BRT, Bicycle, and Pedestrian Bridge.** A new bridge (four auto lanes during stadium events and two BRT lanes at all times) will be built over Yosemite Slough to connect Hunters Point Shipyard and Candlestick Point. On game days, the bridge will accommodate four auto lanes in the peak direction of travel. On all other days, the four lanes will be closed to auto traffic and accommodate only bicycle and pedestrian traffic.

Bicycle Improvement Strategies

- **Enhanced Bicycle Facilities.** Bicycle routes will be established within a quarter mile of all residents and employment. There will be Class II bicycle lanes and shared-use paths throughout site.
- **Bicycle Support Facilities.** Bicycle support facilities to encourage bicycling will include bicycle parking facilities in both residential and commercial developments (such as racks, indoor/long-term parking, lockers, and showers), attended bicycle parking and repair facilities at major destinations (with discounted rental space for a bike station at the Hunters Point Shipyard Transit Center), and potentially a bike sharing or rental program.

TDM Support Strategies

- **Employee TDM Programs.** All employers in the Development Plan Area will be required to participate in TDM programs that will encourage the use of transit and facilitate walking and bicycling among their employees through both incentives and disincentives. Elements of the TDM programs will include:
  - » *Information Boards/Kiosks.* Employers will display transit routes and schedules; carpooling and vanpooling information; and bicycle lanes, routes, paths and facility information on information boards/kiosks or direct employees to web resources.
  - » *Commuter Benefits.* The TDM program will include participation in the Commuter Benefits program for tax-free paycheck deductions of transit and bicycle commuter expenses (a program mandatory for San Francisco employers of 20 or more employees: *www.commuterbenefits.org*).
  - » *Employee EcoPass.* An employee "EcoPass" will be implemented similar to the programs already underway at the University of California and the City of Berkeley. These passes will allow unlimited transit use at a discount bulk rate. As discussed later in this document, the price of the Pass will include a TDM surcharge to cover the TDM support programs. The per-employee EcoPass cost will be charged to employers on an annual basis.
  - » *Carpool/Vanpools.* Through their TDM program and in collaboration with the On-Site Transportation Coordinator, employers will offer carpool and vanpool matching services, subsidies, and priority accommodation. Designated and convenient spaces in parking facilities will be provided free to vanpools and carpools. Casual carpooling information will be provided through the On-Site Coordinator's TDM website, brochures, and targeted marketing.
  - » *Guaranteed Ride Home Program.* The San Francisco Department of the Environment provides an Emergency Ride Home program (*www.sferh.org*) to reimburse transit riders for return trip travel in the event of an emergency when an alternative means of travel is not available. Reimbursement is available up to $700 per year for each enrolled San Francisco employer, with additional costs paid by the employer. The On-Site Coordinator will ensure all employers are enrolled in this program for their employees.
  - » *Compressed Work Weeks, Flex Time, and Telecommuting.* Through these strategies, employees will adjust their work schedule to reduce vehicle trips to the worksite.
- **Wayfinding.** A comprehensive wayfinding signage program will support the network of walkways and shared-use paths, encouraging pedestrian and bicycle trips.
- **Resident EcoPass.** All residents will be required to purchase a transit pass and pay a TDM "fee," as discussed later in this memo. The transit pass or "EcoPass" will offer significant benefits including: a monthly subsidy towards transit usage, a steady funding stream for enhanced transit service, and a "self selection" incentive – whereby more transit-inclined residents will be attracted to live in the Plan Area.
- **Wireless Internet.** High speed wireless internet access will be provided within the common areas of the Plan Area to encourage telecommuting and provide easy and efficient access to transit, carpool, vanpool, and car share data.

- **Carpool Pickup Points.** The development will provide signage and dedicated areas for a carpool pick-up/ drop-off point to encourage carpooling (including casual carpooling).
- **Off-Peak Commercial Deliveries.** All grocery and high-volume commercial deliveries will be required to avoid peak commute periods.
- **Carshare Services.** Local carshare organizations will be encouraged to provide carshare vehicles throughout the Plan Area with complimentary off-street parking spaces. Carshare services, such as City CarShare and ZipCar, allow members to use vehicles when needed, paying based on how much they drive. Employers may include carshare memberships for their employees as an element of their mandatory TDM Program. For larger housing developments, carshare vehicles may be provided in residential garages.

Parking Strategies

- **Unbundled Residential Parking.** Residential parking will be "unbundled" and sold or leased separately from units. Unbundling parking makes the cost of parking visible to households, and may encourage some residents to save money by opting for a single off-street space or no dedicated parking, when two spaces per dwelling unit may otherwise be the norm. Unbundled parking will also serve as a "self selection" incentive for residents who prefer to live in car-free or car-reduced neighborhoods.
- **Visitor Variable, Market-Rate Parking Pricing.** Visitor parking charges at variable market rates will encourage transit use. This will be accomplished by increasing parking rates during the peak period when transit service is most frequent, or increasing parking rates progressively to favor short term parking over long-term parking, discouraging commuter parking.
- **Parking Maximum Ratio.** The Development Plan includes one off-street parking space per residential unit ratio as a maximum (as well as maximums for other development types), with consideration for a lower ratio based on the results of unbundled parking in earlier development phases.
- **Shared Parking.** Parking will be designed to serve all commercial uses. An example of shared parking is where an office has high use during the day and a restaurant uses the same spaces in the evening. This will reduce the number of required parking spaces on the project site.
- **Preferential Parking for Carpoolers.** Preferential parking spaces will be reserved for carpoolers in commercial zones and near transit centers.
- **Free Parking for Vanpools and Carshare Vehicles.** Parking facilities will have free designated parking spaces for vanpools. In commercial zones, parking spaces will be reserved for free shortterm parking for carshare vehicles.
- **Flexible Parking Management Strategies.** Additional parking management strategies such as residential permit parking, time of day restrictions, parking technologies, and parking wayfinding will also be considered as needed to supplement other parking strategies based on the results of the On-Site Coordinator's annual monitoring program.

Game Day Strategies

The TDM program will also implement strategies to specifically address the travel demand generated at football games in the proposed San Francisco 49ers Stadium. These include:

- **Express Shuttle Service.** Game day shuttle service to Bayshore Caltrain, Balboa Park BART station, and Muni T-line stop will be provided.
- **Muni Long-Haul San Francisco Service.** Muni typically operates some game day services that provide service to Downtown and to the outlying areas of San Francisco such as the Geary Corridor, the Marina District, and San Francisco State University. This service will continue at the new location.

- **Regional Bus Service.** Other private buses (previously operated by Golden Gate Transit, AC Transit and SamTrans[1]) will provide regional bus service to the North, East, and South Bay. These buses will be expected to make only one trip to and from the stadium due to the extended run time to the regional destination.
- **Stadium Transportation Management System (TMS).** A TMS Center located at the proposed stadium will control traffic signals, overhead lane use control signals, and changeable message signs to react to pre- and post-game lane closures and game traffic-related congestion on a realtime basis.
- **Transit Streets.** Palou Avenue will be closed to auto traffic and be available for bus traffic (public and private charters) only during game days. In addition, two lanes normally reserved for the exclusive use of Harney BRT will be made available for other special game day transit service.
- **Lane Reconfigurations.** Several streets will be reconfigured pre- and post- games to improve auto and transit flow and reduce congestion.
- **Bicycle Parking.** Secured valet bicycle parking will be provided at the stadium for game days.

Implementation and Monitoring Strategies

- **On-Site Transportation Coordinator and Website.** An On-site Transportation Coordinator will provide residents, employers, employees, and visitors with information regarding available transportation alternatives. The Coordinator will maintain a website to include transportation-related data and real-time transit information. He/she will serve as a liaison to City staff for all transportation concerns/communication needs, and will be responsible for ongoing monitoring and identifying revised or additional measures for the TDM Plan.
- **Targeted Marketing.** From the day that the first employee comes to work and the first family moves in, a plan will be in place to help people discover alternatives to driving alone in a car. The On-Site Coordinator will be available to help people plan their trips and work with transportation agencies and others to promote transit, vanpooling, carpooling and carsharing, bicycling, and walking. TDM brochures and a website will be available on an ongoing basis. To support carpool and vanpooling, the Transportation Coordinator will manage a carpool/vanpool database and provide ridesharing/ridematching services within the Plan Area. A yearly transportation options "fair" will also be scheduled for the neighborhood, with smaller outreach efforts available to employers and other organizations.
- **Monitoring of Transportation Demand.** The transportation measures and programs will be monitored on an annual basis to determine the success of the programs and to allow the On-Site Coordinator to make decisions about the allocation of resources or changes in the services that may be needed to better address the needs of the Plan Area. The objective of the monitoring will be to maximize the use of alternatives to the single occupant automobile and reduce peak hour congestion. A monitoring program will include user surveys, automobile counts, transit ridership, and bicycle and car share usage and costs.
- **Monitoring Effectiveness of Congestion-Reducing and Traffic Calming Efforts.** As part of annual monitoring, the On-site Coordinator would, in cooperation with SFMTA, review the effectiveness of the Project's transportation measures and other traffic calming measures implemented in the area to reduce congestion due to Project vehicle trips and minimize traffic spillover to neighboring residential streets. If warranted, the On-Site Coordinator and SFMTA would consider implementation of additional traffic-calming and congestion-alleviating measures, potentially including neighborhood traffic calming coupled with increasing capacity on arterial roadways from Third Street to deter use of other neighborhood roads.

1 Effective 2009, regional bus service for Game Days must be provided by private operators. New law in effect prohibits public transit agencies outside of San Francisco from providing Game Day service.

Figure 2-1: **Transit TDM Improvements**

Figure 2-2: Bicycle and Parking TDM Improvements

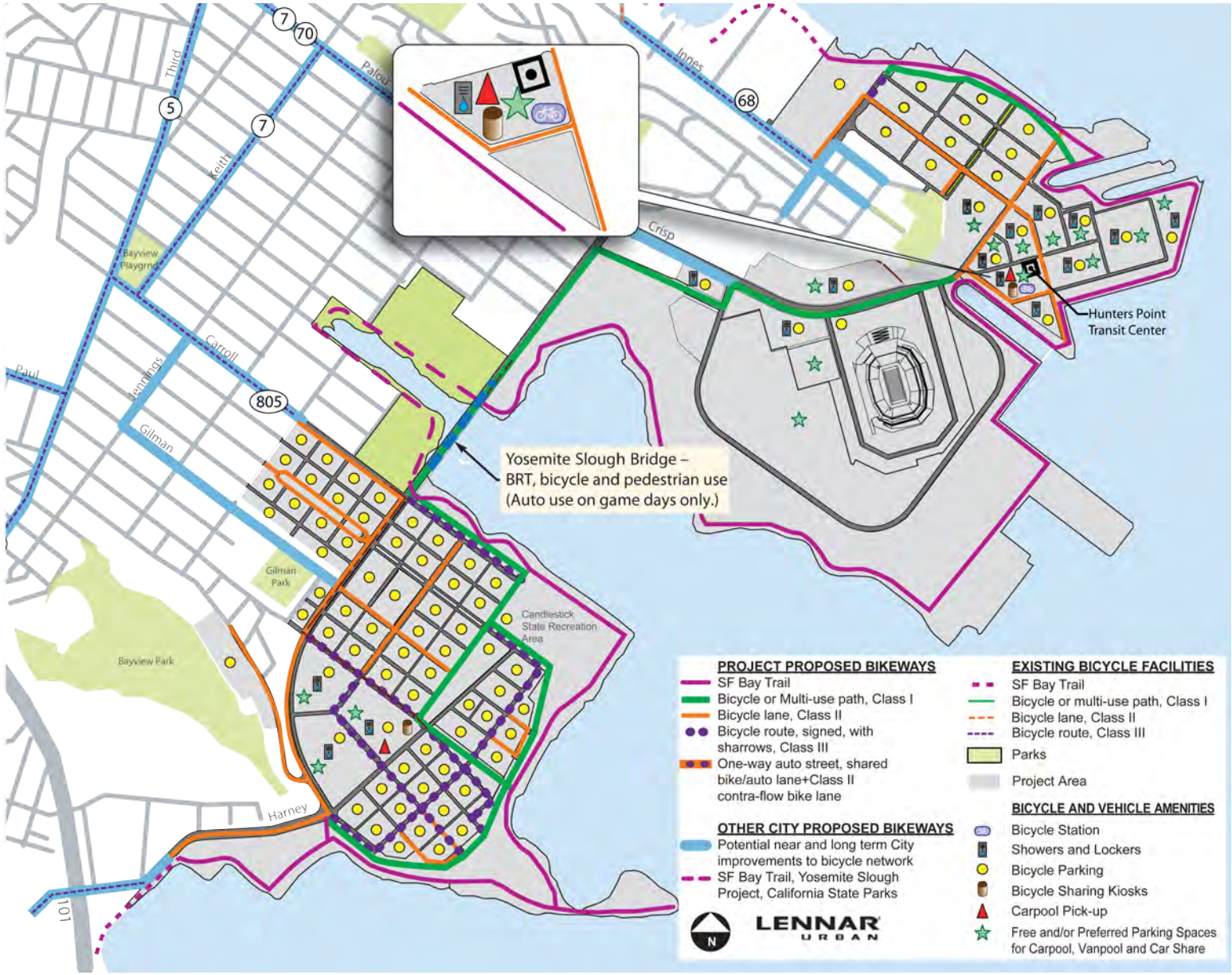


Figure 2-3: Game Day TDM Improvements

3 Implementation Strategies & Funding Overview

To move forward with the TDM Program outlined in the Transportation Plan and summarized in Chapter 2, an implementation and funding plan is needed. This chapter summarizes the anticipated funding source and implementation lead for each TDM strategy to be provided inherently with the Development and through other sources. Subsequent chapters in this Plan will go into further detail for the funding and implementation of strategies that will not be inherent to the Development and/or will require on-going maintenance and monitoring to ensure their effectiveness.

Strategies to be implemented and funded with the Development include: transit infrastructure and operations, parking strategies, pedestrian infrastructure, and a majority of the bicycle improvement strategies, as shown in Table 3-1.

Of the strategies listed below in Table 3-1, those requiring TDM funds or Game Day funds as their funding source will be discussed in detail in Chapters 4 and 5, respectively. TDM support strategies for residents are typically implemented or supported by the On-Site Transportation Coordinator (TC) with TDM funds (paid by all residents and employers). Employee TDM strategies will be funded by the employers but the TC will provide the employer with support in implementing the programs. The TC will also implement and fund monitoring strategies with TDM funds.

TABLE 3-1:
TDM STRATEGIES – IMPLEMENTATION AND FUNDING

Implementation Strategy	Implementation Source	Funding Source
1. Overall		
Jobs-Housing Linkage	Project Development	
Streets designed for low speed and safe crossings	Project Development	
Land uses and transit located to encourage walking	Project Development	
2. Transit Strategies		
Central Transit Hub and Ferry Terminal	Project Development	
Enhanced Transit Service	SFMTA	Resident and Employee EcoPass (subsidy), Project Development
Transit Preferential Street	Project Development	
BRT, Bicycle, and Pedestrian Bridge over Yosemite Slough	Project Development	
3. Bicycle Improvement Strategies		
Enhanced Bicycle Facilities	Project Development	
Bicycle racks, indoor/long-term parking, lockers, and showers	Project Development	
Bicycle Station (attended parking, repair facilities)	TC and Station Staff	Project Development and TDM funds (subsidy)[1]
Bicycle Sharing Kiosks	Bicycle Sharing Company	
4. TDM Support Strategies		
4.a. Employee TDM Programs		
Information boards/kiosks, marketing of alternative travel options, special event planning	TC and Employer	Employers
Commute subsidies, parking cash-out, commuter checks, EcoPass	TC and Employer	Employers
Carpool/Vanpools	TC and Employer	Employers
Guaranteed Ride Home Program	TC and Employer	City of SF/Employers
Compressed work week, flex time, telecommuting options	Employer	Employers
4.b. All Other TDM Support Strategies		
Wayfinding	Project Development	
EcoPass	TC	Residents and Employers
High-speed wireless internet	Project Development	
Carshare Services	Carshare company	
Carpool pick-up points	TC	Project Development
Off-Peak Commercial Deliveries	TC	Project Development

TABLE 3-1 (CONTINUED):
TDM STRATEGIES – IMPLEMENTATION AND FUNDING

Implementation Strategy	Implementation Source	Funding Source
5. Parking		
Unbundled Residential Parking	Project Development	
Visitor Variable, Market Rate Parking Pricing	TC, SFMTA, Project Development, and Private Parking Operator	Project Development
Parking Maximum Ratio	Project Development	
Shared Parking	Project Development	
Preferential parking spaces reserved for carpoolers in commercial zone and near transit centers	Project Development	TDM funds (subsidy)
Free designated spaces in parking facilities to vanpools; Free short-term parking spaces in commercial zones reserved for carshare parking	Project Development	TDM funds (subsidy)
Carshare vehicles hubs	Carshare company	TDM funds (subsidy)
6. Game Day TDM		
Express Shuttle Service	SFMTA	Game Day funds (subsidy)
Muni Long-Haul San Francisco Service	SFMTA	Game Day funds (subsidy)
Regional Bus Service	Private Service Providers	
Stadium Transportation Management System	SFMTA	Project Development, SFMTA
Transit Streets		
Pre-Game and Post-game Lane Reconfigurations		
Bicycle Parking[2]	San Francisco Bicycle Coalition (volunteers)	Project Development
7. Ongoing Implementation and Monitoring		
7.a On-Site Transportation Coordinator (TC)		
Salary + Rent	--	TDM funds
Transportation Website	TC	TDM funds
Rideshare + Ridematching, Carpool/Vanpool Database	TC	TDM funds
Marketing of TDM programs	TC	TDM funds
Monitoring of Transportation Demand	TC	TDM funds
Monitoring Effectiveness of Congestion Reducing/Traffic Calming	TC	TDM funds

1. Project development will fund the capital costs of the bike station. TDM funds will subsidize rent and provide a partial operating subsidy. The bicycle shop operating the station will provide the remaining operating costs for staffing and running the station and the Candlestick Point bicycle kiosk.
2. Bicycle parking space to be funded by the Project Development. Operations of the valet parking for game days assumed to be provided by the San Francisco Bicycle Coalition volunteers, similar to the current arrangement at AT&T Park for San Francisco Giants home games.

Source: Fehr & Peers, 2009.

The transit and parking revenues associated with the above strategies have been calculated separately and are not addressed in this Plan as they are largely meant to offset costs incurred by SFMTA of operating increased transit service to the site. The EcoPass transit pass will also help to subsidize the cost of enhancing transit service to the Project area. All residents will be required to purchase an EcoPass, and employers will be encouraged to participate as well.

4 Transportation Coordinator & TDM Funds

This chapter discusses the role of the Transportation Coordinator (TC), the associated logistics and organization of the TC's office, the estimated costs of all strategies requiring TDM funds, and proposed funding sources to cover these strategies.

Implementation

Roles

The role of the Transportation Coordinator is extensive, as shown by all the strategies with a "TC" label under the Implementation Source column in Table 3-1. At full build-out, the Development may require at least one and up to three full-time positions to implement the TDM strategies. This estimate is based on other TDM plans in the San Francisco Bay Area (see Appendix B for detail). For three full-time positions, the roles would be: one Transportation Liaison in charge of working with other entities; one Technical Coordinator managing website, car/vanpool database, rideshare; and one Marketing Coordinator managing TDM marketing to residents and employers (hereafter known as the TC team). The Transportation Liaison will be the bridge between residents and employers and the transportation agencies and the City of San Francisco. The Liaison will also be working with carshare companies, homeowners associations, and other entities involved with the relevant TDM strategies. The Marketing Coordinator will be the contact person and informational resource to support the project goal of providing residents and employees with alternatives to using a single-occupancy vehicle. Implementation and support of all Transportation Coordinator related TDM strategies will be covered by one of the three positions.

Logistics

The TDM office will house the TC team and will be located next to the bike station at the project transit center. The location is appropriate as the TDM office and bike station will have the option to be within a shared space, since rent for both are supported through the TDM funds. The TDM office will be the location where residents can pick up EcoPasses (if lost, etc.) and obtain general TDM support.

Organization

The TC team will act as staff to the Candlestick Point-Hunters Point Shipyard Transportation Management Association (CPHPSTMA). CPHPSTMA will be formed to develop, implement, operate and administer strategies and programs to manage transportation resources in Candlestick Point-Hunters Point Shipyard (including Phase I and Phase II) in accordance with the Transportation Demand Management Plan for Candlestick Point – Hunters Point Shipyard. The Board of Directors of CPHPSTMA representing private property owners will be initially appointed by Lennar Urban (the Project Applicant). At least one seat on the Board shall be reserved for the appointment by Lennar Urban, one seat on the Board shall be reserved for the appointment by the Commercial Property Owners, and one seat on the Board shall be reserved for the appointment by the Residential Property Owners. CPHPSTMA will enter into Participation Agreements with each and every owner of real property in CP-HPS Phase I and Phase II, setting forth the rights and obligations of each such owner relating to the programs and fees imposed by CPHPSTMA.

Monitoring

The TDM programs will be monitored by the TC team on an annual basis to determine the success of the programs and to allow the TC team and the CPHPSTMA Board of Directors to make decisions about the allocation of resources and/or changes in the services that may be needed.

Costs And Funding

The costs for each TDM strategy supported by TDM funds are estimated below. See Appendix B for detailed assumptions and calculations of TDM strategies costs.

Implementation of the above strategies costs an estimated total of $1,302,696 annually. An annual TDM fee for all residents and employees in the Plan Area will cover the annual costs. The fee will be assessed as an add-on to the mandatory EcoPass (transit pass) fee discussed in Chapters 2 and 3. The project is expected to have a residential population of 24,465, with 10,500 housing units, and 10,491 employees at full build-out. Based on these estimates, an annual TDM fee of $102 per household[2] (assessed through rents or HOA dues) and $44 per employee (incorporated into employer leases) will be able to cover the costs of implementing these TDM strategies. This fee will increase over time as the operating costs increase with inflation and/or with any significant changes in the TDM tool menu.

2 This amount does not include the cost of an EcoPass transit pass, but the two costs would likely be combined into one monthly assessment.

TABLE 4-1:
TDM STRATEGIES COSTS

Implementation Strategy	Funding Source	Annual Operating Cost
3. Bicycle Improvement Strategies		
Bicycle Station (attended parking, repair facilities)	Project Development and TDM funds	$200,000[1]
5. Parking		
Preferential parking spaces reserved for carpoolers in commercial zone and near transit	TDM funds	Assume carpool spaces pay same parking rate
Free designated spaces in parking facilities to vanpools; Free short-term parking spaces in commercial zones reserved for carshare parking	TDM funds	$318,700[2]
Carshare vehicles hubs	TDM funds	$262,500[2]
7. Ongoing Implementation and Monitoring		
7.a On-Site Transportation Coordinator (TC)		
Salary	TDM funds	$420,000
Rent	TDM funds	$26,500
Transportation Website	TDM funds	$10,000
Rideshare and Ridematching, Carpool/Vanpool Database	TDM funds	$5,000
Administrative costs, expenses, printing, etc.	TDM funds	$50,000
Tech consulting	TDM funds	$10,000
Marketing of TDM programs	TDM funds	Assume included in TC's salary and administrative costs
Monitoring of Transportation Demand	TDM funds	Assume included in TC's salary and administrative costs
Monitoring Effectiveness of Congestion Reducing/Traffic Calming	TDM funds	Assume included in TC's salary and administrative costs
Total Cost		**$1,302,696**

1. This cost estimate is only from TDM funds and represents a rent and partial operating subsidy for the Bicycle Station.
2. Amount of lost revenue assuming the parking spaces were used for market-rate parking.

Source: Fehr & Peers, 2009.

TABLE 4-2:
TDM STRATEGIES FUNDING

Funding Strategy	Applicable To	Price
Annual TDM fee	All households within the project site	$102 / household
	All employees within project site	$44 / employee
Monthly TDM fee[1]	All households within the project site	$8.50 / household
	All employees within project site	$3.67 / employee

1 To be paid in addition to the monthly transit fee; assumes 50% of employees participate

Source: Fehr & Peers, 2009.

5 Game Day TDM

This chapter will discuss the game day TDM strategies that are not funded by the developer, SFMTA, the City, or the 49ers; estimate the costs of these strategies; and propose funding sources.

Of the game day TDM strategies, only two strategies do not have an external funding source. These are:

- Express shuttle service to Balboa Park BART station, Bayshore Caltrain station, and T-line stop
- Muni long-haul San Francisco service to outlying areas of San Francisco such as the Geary Corridor, the Marina District and San Francisco State University

These TDM strategies are similar to those currently provided to the 49ers on game day and we will assume they will continue to operate in the same manner. For these strategies, current funding between SFMTA and the 49ers are unclear, but the costs are evaluated below assuming a new funding source is preferable. Transit cost estimates for these game day strategies were derived from SFMTA's transit cost model. Please see Appendix C for detailed cost calculations and assumptions.

Providing these game day accommodations would cost an estimated $429,118 annually. The stadium is expected to sell an estimated 828,000 tickets and 204,540 parking passes annually (assuming sell-out games). Based on these estimates, a surcharge of $0.55 per game ticket or, alternatively, $2.50 per parking pass would cover the costs of providing this additional transit service on game days.

Traffic is also expected for events at the 10,000 seat arena at the project site, along with non-game day events at the stadium. A surcharge may be applied to these events as well to encourage alternative modes of transportation to events and to provide an additional revenue source to cover the TDM strategies discussed in this document.

TABLE 5-1:
GAME DAY STRATEGIES COSTS

Implementation Strategy	Funding Source	Annual Operating Cost
6. Game Day TDM		
Express Shuttle service	Game Day funds	$165,767
Muni Long-Haul San Francisco Service	Game Day funds	$263,352
Total Cost		**$429,118**

Source: Fehr & Peers, 2009.

TABLE 5-2:
GAME DAY STRATEGIES FUNDING

Funding Strategy	Applicable To	Price
Event Ticket Surcharge OR Event Parking Surcharge	Every event ticket sold OR Every parking pass sold	$0.55 / ticket OR $2.50 / parking pass

Source: Fehr & Peers, 2009.

Appendix A: TDM Figures Detail

Figures 2-1, **2-2**, and **2-3** were meant to illustrate the various TDM strategies at CPHPS. They do not represent exact locations or counts of the strategies. Please see the table below for detailed assumptions for mapping out these strategies.

TABLE A-1:
ASSUMPTIONS FOR TDM FIGURES

Strategy Detail (from Transportation Plan)	Notes for Figures
Showers and locker facilities will be provided within each new commercial building with greater than 20,000 square feet of uses	Placed a showers/lockers symbol at every block which had office/commercial/retail use (from BWP Transportation Study document)
Bike sharing program will be considered where bike kiosks are set up at intervals along major corridors and riders can pick up and drop off bicycle in seconds	Assumed there would be two kiosks serving the project site. One would be located at the transit center in HP near the bicycle station. This will allow for assistance from station employees to bike riders and would be the location for bike riders to buy or refill bike cards. Another kiosk would be located near the BRT stop in the commercial center of CP. This kiosk would be a self-service station.
Bicycle parking will be provided within each commercial parking facility, residential garage or within each residential building. Supplemental racks at major destinations	Placed a bike parking symbol on every block of project site that had commercial parking, or residential or was a major destination (from BWP Transportation Study document)
A designated signed area near the transit centers would be reserved for casual carpooling.	Assumed there would be one carpool point at CP (near the BRT stop in the commercial center) and one at HP near the transit center
Free designated spaces in parking facilities to vanpools; Free short-term parking spaces in commercial zones reserved for carshare parking; Preferential parking spaces reserved for carpoolers in commercial zone and near transit centers	Placed a symbol at every block with commercial/office parking facilities or on a commercial block. This includes parking at the stadium. (from BWP Transportation Study document)

Source: Fehr & Peers, 2009.

Appendix B: TDM Strategies Costs Calculations

TABLE B-1:
TDM STRATEGIES COST DETAIL

Implementation Strategies	Annual Operating Costs	Operating Cost Assumptions	Assumption Sources
3. Bicycle Improvement Strategies			
Bicycle Station (attended parking, repair facilities)	$200,000	Estimate of annual operating expenses (not including personnel) based on Downtown Berkeley BART bike station.	Downtown Berkeley BART Bikestation - Economic Analysis for Facility Expansion; September 2005; Strategic Economics.
5. Parking			
Preferential parking spaces reserved for carpoolers in commercial zone and near transit centers	N/A	Assume capital costs, such as signage, would be included in the garage cost; assume no enforcement costs if employed with attended parking; assume carpool spaces pay same parking rate	
Free designated spaces in parking facilities to vanpools; Free short-term parking spaces in commercial zones reserved for carshare parking	$318,700	Lost parking revenue. 1% of parking dedicated to vanpool and carshare. Assume $20/day, 5 days/week, 50 weeks/year.	Per transportation plan (proposed parking supply figure), 6,374 commercial structure parking.

Appendix B: TDM Strategies Costs Calculations (continued)

TABLE B-1:
TDM STRATEGIES COST DETAIL (CONTINUED)

Implementation Strategies	Annual Operating Costs	Operating Cost Assumptions	Assumption Sources
Carshare vehicles hubs	$262,500	Lost parking revenue. 1 carshare vehicle for every 200 dwelling units (53 total spaces). Assume $20/day, 5 days/week, 50 weeks/year.	From citycareshare report, planning code requires 1 carshare space for 201+ units, plus 1 for every 200 dwelling units over 200. (http://www.citycarshare.org/download/CityCarShare2009BestPracticesReport.pdf) Per fiscal report (Table 3), 10,500 dwelling units at build out.
7.Ongoing Implementation and Monitoring			
7.a On-Site Transportation Coordinator (TC)			
Salary	$420,000	3 staff with salary of $70,000 (x2 for benefits)	Assuming one Transportation Liaison in charge of working with other entities; one Technical Coordinator managing website, car/vanpool database, rideshare; one Marketing Coordinator managing TDM marketing to residents and employers. Alameda Point will have 1 TC for 4,503 residential units and 3.532 ksf commercial. Thus will assume candlestick needs 3 with 10,500 residential units, 3,700 ksf commercial, 69,000 seat stadium, and 10,000 seat arena.
Rent	$26,496	Rent at $2/sq ft/month. 276 sq ft per job. Conservative estimate of 4 staff for this calculation.	Rent estimate from typical craigslist office lease postings (for SOMA/south beach area) Fiscal report estimates 276 sq ft per job.
Transportation Website	$10,000	Assume administrative costs included in TC's salary. Calculation includes start up costs and yearly maintenance.	

Appendix B: TDM Strategies Costs Calculations (continued)

TABLE B-1:
TDM STRATEGIES COST DETAIL (CONTINUED)

Implementation Strategies	Annual Operating Costs	Operating Cost Assumptions	Assumption Sources
Ridesharing and Ridematching, Carpool and Vanpool Database	$5,000	Assume administrative costs included in TC's salary. Calculation includes start up costs and yearly maintenance.	*Nelson\Nygaard. "RideNow! Evaluation Draft Report." Alameda County Congestion Management Agency. September 2006. Retrieved September 2008 from http://www.ridenow.org/4113_ACCMADynamicRidesharing.pdf
Administrative costs, expenses, printing, materials, etc.	$50,000	Costs include marketing expenses, flyers, brochures. Total population of 35,000 at project site. Flyers for all residents and employees at $1/flyer. Additional costs for brochures and events.	Per fiscal report (Table 3), residential population of 24,465 and 10,491 employees at buildout.
Tech consulting	$10,000	Assume periodic tech support needed throughout the year	
Marketing of TDM programs	N/A	Assume admin included in TC's salary and administrative costs	
Monitoring and Testing of Transportation Demand	N/A	Assume admin included in TC's salary and administrative costs	
Monitoring Effectiveness of Congestion-Reducing/Traffic Calming	N/A	Assume admin included in TC's salary and administrative costs	

Source: Fehr & Peers, 2009.

Appendix C: Game Day Transit Costs Calculations

Table C-1 provides the operating cost assumptions and sources for express shuttle service and Muni long-haul TDM strategies. It also provides the base assumptions (tickets and parking passes per year) for calculating the game day surcharge on tickets or parking passes.

TABLE C-1:
GAME DAY TDM STRATEGIES COST DETAIL

Implementation Strategies	Annual Operating Costs	Operating Cost Assumptions	Assumption Sources
10. Game Day TDM			
Express shuttle service	$165,767	Assume 3 routes (to Balboa Park BART station, Bayshore Caltrain station, and T-line stop)	See worksheet for detailed assumptions and calculations.
Muni long-haul San Francisco Service	$263,352	3 express services (77X, 78X, 79X)	See worksheet for detailed assumptions and calculations.
Tickets for games to include transit ride	N/A	828,000 tickets and 204,540 parking passes sold per year, assuming 12 sold out events.	Per draft transportation study, stadium venue (not developed under year 6) will have 69,000 attendees and 20,134 vehicles per event for 12 sellout events. Note there are only 17,045 parking spaces available.

Source: Fehr & Peers, 2009.

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