

Appendix L

Transportation, Traffic, and Circulation Resource Data

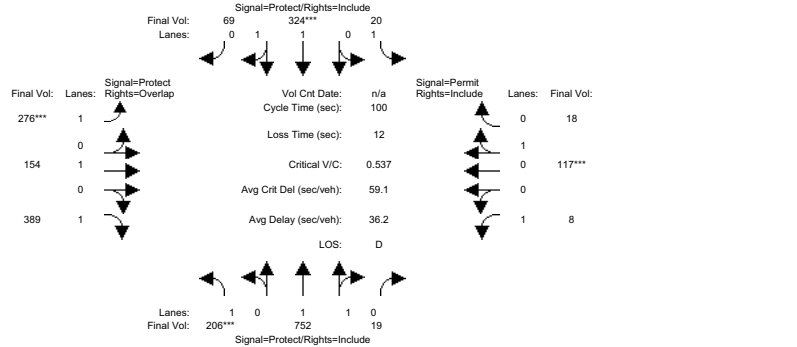
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Appendix: Transportation, Traffic, and Circulation

LOS Calculations and Project Contributions

Existing
 Level of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 Ex Wkdy AM

Intersection #1002: 3rd St / Cesar Chavez



Street Name:	3rd St				Cesar Chavez							
	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Min. Green:	20	50	50	5	35	35	10	35	35	20	20	20
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:	3rd St		Cesar Chavez	
	North Bound	South Bound	East Bound	West Bound
Base Vol:	196	714	18	19
Growth Adj:	1.00	1.00	1.00	1.00
Initial Bse:	196	714	18	19
Added Vol:	0	0	0	0
PasserByVol:	0	0	0	0
Initial Fut:	196	714	18	19
User Adj:	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95
PHF Volume:	206	752	19	20
Reduct Vol:	0	0	0	0
Reduced Vol:	206	752	19	20
PCE Adj:	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00
Final Volume:	206	752	19	20

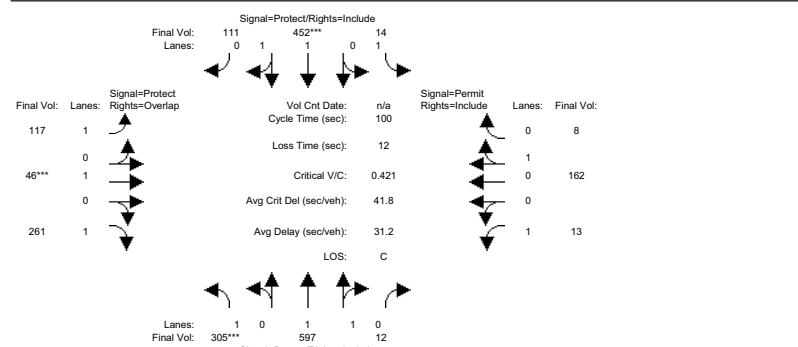
Saturation Flow Module:	3rd St		Cesar Chavez	
	North Bound	South Bound	East Bound	West Bound
Sat/Lane:	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90
Lanes:	1.00	1.95	0.05	1.00
Final Sat.:	1718	3339	84	1718

Capacity Analysis Module:	3rd St		Cesar Chavez	
	North Bound	South Bound	East Bound	West Bound
Vol/Sat:	0.12	0.23	0.23	0.01
Crit Moves:	****	****	****	****
Green/Cycle:	0.20	0.49	0.49	0.05
Volume/Cap:	0.61	0.46	0.46	0.24
Delay/Veh:	45.5	18.0	18.0	53.2
User DelAdj:	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.5	18.0	18.0	53.2
LOS by Move:	D	B	B	C
HCM2kAvgQ:	6	8	8	1

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

Existing
 Level of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 Ex Wkdy PM

Intersection #1002: 3rd St / Cesar Chavez



Street Name:	3rd St				Cesar Chavez							
	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Min. Green:	20	50	50	5	35	35	10	35	35	20	20	20
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:	3rd St		Cesar Chavez	
	North Bound	South Bound	East Bound	West Bound
Base Vol:	290	567	11	13
Growth Adj:	1.00	1.00	1.00	1.00
Initial Bse:	290	567	11	13
Added Vol:	0	0	0	0
PasserByVol:	0	0	0	0
Initial Fut:	290	567	11	13
User Adj:	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95
PHF Volume:	305	597	12	14
Reduct Vol:	0	0	0	0
Reduced Vol:	305	597	12	14
PCE Adj:	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00
Final Volume:	305	597	12	14

Saturation Flow Module:	3rd St		Cesar Chavez	
	North Bound	South Bound	East Bound	West Bound
Sat/Lane:	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90
Lanes:	1.00	1.96	0.04	1.00
Final Sat.:	1718	3361	65	1718

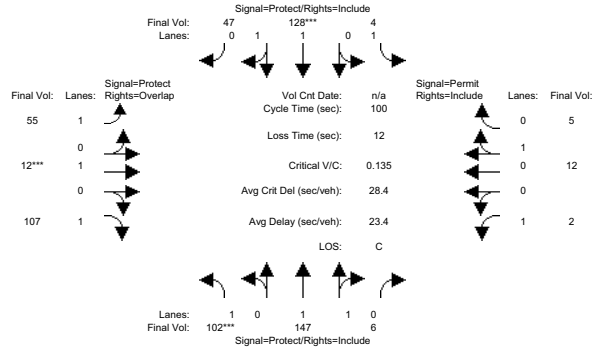
Capacity Analysis Module:	3rd St		Cesar Chavez	
	North Bound	South Bound	East Bound	West Bound
Vol/Sat:	0.18	0.18	0.18	0.01
Crit Moves:	****	****	****	****
Green/Cycle:	0.20	0.49	0.49	0.05
Volume/Cap:	0.91	0.36	0.36	0.16
Delay/Veh:	70.2	16.7	16.7	50.6
User DelAdj:	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.2	16.7	16.7	50.6
LOS by Move:	E	B	B	D
HCM2kAvgQ:	11	6	6	0

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

Existing

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex Sun PM

Intersection #1002: 3rd St / Cesar Chavez



Street Name:	3rd St					Cesar Chavez						
	North Bound		South Bound			East Bound		West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	20	50	50	5	35	35	10	35	35	20	20	20
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:	3rd St					Cesar Chavez						
Base Vol:	97	140	6	4	122	45	52	11	102	2	11	5
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:	97	140	6	4	122	45	52	11	102	2	11	5
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:	97	140	6	4	122	45	52	11	102	2	11	5
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:	102	147	6	4	128	47	55	12	107	2	12	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	147	6	4	128	47	55	12	107	2	12	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	102	147	6	4	128	47	55	12	107	2	12	5

Saturation Flow Module:	3rd St					Cesar Chavez						
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.87	0.87	0.90	0.95	0.81	0.72	0.91	0.91
Lanes:	1.00	1.92	0.08	1.00	1.46	0.54	1.00	1.00	1.00	1.00	0.69	0.31
Final Sat.:	1718	3276	140	1718	2410	889	1718	1809	1537	1373	1185	539

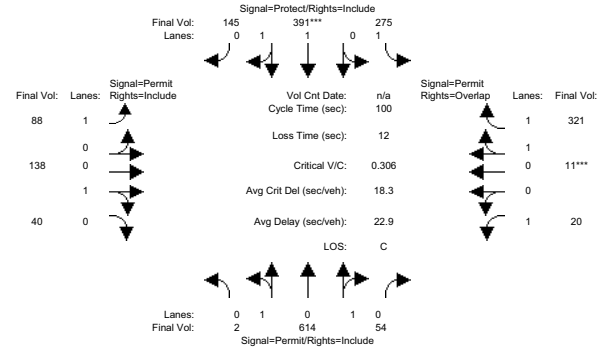
Capacity Analysis Module:	3rd St					Cesar Chavez						
Vol/Sat:	0.06	0.04	0.04	0.00	0.05	0.05	0.03	0.01	0.07	0.00	0.01	0.01
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.20	0.49	0.49	0.05	0.34	0.34	0.15	0.34	0.54	0.20	0.20	0.20
Volume/Cap:	0.30	0.09	0.09	0.05	0.16	0.16	0.22	0.02	0.13	0.01	0.05	0.05
Delay/Veh:	37.3	14.0	14.0	47.4	23.5	23.5	40.3	22.2	12.0	33.1	33.6	33.6
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:	37.3	14.0	14.0	47.4	23.5	23.5	40.3	22.2	12.0	33.1	33.6	33.6
LOS by Move:	D	B	B	D	C	C	D	C	B	C	C	C
HCM2kAvgQ:	3	1	1	0	2	2	1	0	2	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)
Ex Wkdy AM

Intersection #1003: 3rd St / Cargo Way



Street Name:	3rd St					Cargo Way						
	North Bound		South Bound			East Bound		West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	40	40	20	65	65	25	25	25	25	25	25
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:	3rd St					Cargo Way						
Base Vol:	2	583	51	261	371	138	84	131	38	19	10	305
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:	2	583	51	261	371	138	84	131	38	19	10	305
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:	2	583	51	261	371	138	84	131	38	19	10	305
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:	2	614	54	275	391	145	88	138	40	20	11	321
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	614	54	275	391	145	88	138	40	20	11	321
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	2	614	54	275	391	145	88	138	40	20	11	321

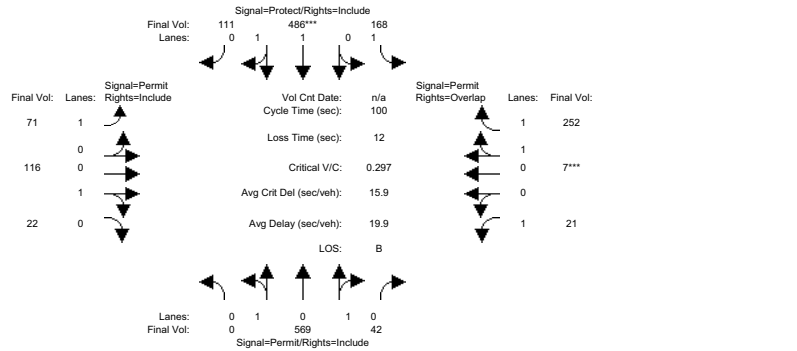
Saturation Flow Module:	3rd St					Cargo Way						
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	0.85	0.85	0.90	0.87	0.87	0.74	0.95	0.95	0.55	0.81	0.81
Lanes:	0.01	1.83	0.16	1.00	1.46	0.54	1.00	0.78	0.22	1.00	0.06	1.94
Final Sat.:	10	2966	259	1718	2402	894	1415	1394	404	1042	98	2995

Capacity Analysis Module:	3rd St					Cargo Way						
Vol/Sat:	0.21	0.21	0.21	0.16	0.16	0.16	0.06	0.10	0.10	0.02	0.11	0.11
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.39	0.39	0.39	0.25	0.64	0.64	0.25	0.25	0.25	0.25	0.25	0.49
Volume/Cap:	0.53	0.53	0.53	0.65	0.26	0.26	0.25	0.40	0.40	0.08	0.44	0.22
Delay/Veh:	25.3	25.3	25.3	42.2	8.3	8.3	32.8	35.0	35.0	30.2	34.4	15.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.3	25.3	25.3	42.2	8.3	8.3	32.8	35.0	35.0	30.2	34.4	15.2
LOS by Move:	C	C	C	D	A	A	C	C	C	C	C	C
HCM2kAvgQ:	9	9	8	4	4	4	2	5	5	1	5	3

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

Existing
Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex Wkdy PM

Intersection #1003: 3rd St / Cargo Way



Street Name:	3rd St					Cargo Way						
	North Bound		South Bound			East Bound		West Bound				
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	40	40	20	65	65	25	25	25	25	25	25
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:	3rd St NB		3rd St SB			Cargo Way EB		Cargo Way WB				
Base Vol:	0	541	40	160	462	105	67	110	21	20	7	239
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	541	40	160	462	105	67	110	21	20	7	239
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	541	40	160	462	105	67	110	21	20	7	239
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	569	42	168	486	111	71	116	22	21	7	252
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	569	42	168	486	111	71	116	22	21	7	252
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	569	42	168	486	111	71	116	22	21	7	252

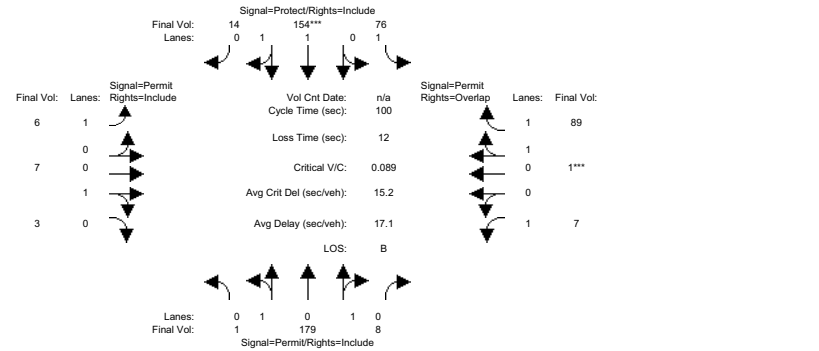
Saturation Flow Module:	3rd St NB		3rd St SB			Cargo Way EB		Cargo Way WB				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.90	0.88	0.88	0.75	0.96	0.96	0.62	0.81	0.81
Lanes:	0.00	1.86	0.14	1.00	1.63	0.37	1.00	0.84	0.16	1.00	0.06	1.94
Final Sat.:	0	3168	234	1718	2722	619	1421	1526	291	1181	88	3002

Capacity Analysis Module:	3rd St NB		3rd St SB			Cargo Way EB		Cargo Way WB				
Vol/Sat:	0.00	0.18	0.18	0.10	0.18	0.18	0.05	0.08	0.08	0.02	0.08	0.08
Crit Moves:	****		****			****		****				
Green/Cycle:	0.00	0.39	0.39	0.25	0.64	0.64	0.25	0.25	0.25	0.25	0.25	0.49
Volume/Cap:	0.00	0.46	0.46	0.40	0.28	0.28	0.20	0.31	0.31	0.07	0.34	0.17
Delay/Veh:	0.0	24.1	24.1	35.0	8.5	8.5	31.9	33.3	33.3	30.1	33.0	14.7
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:	0.0	24.1	24.1	35.0	8.5	8.5	31.9	33.3	33.3	30.1	33.0	14.7
LOS by Move:	A	C	C	D	A	A	C	C	C	C	C	B
HCM2kAvgQ:	0	8	8	4	4	4	2	4	4	1	4	2

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

Existing
Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex Sun PM

Intersection #1003: 3rd St / Cargo Way



Street Name:	3rd St					Cargo Way						
	North Bound		South Bound			East Bound		West Bound				
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	40	40	20	65	65	25	25	25	25	25	25
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:	3rd St NB		3rd St SB			Cargo Way EB		Cargo Way WB				
Base Vol:	1	170	8	72	146	13	6	7	3	7	1	85
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	170	8	72	146	13	6	7	3	7	1	85
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:	1	170	8	72	146	13	6	7	3	7	1	85
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:	1	179	8	76	154	14	6	7	3	7	1	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1	179	8	76	154	14	6	7	3	7	1	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	1	179	8	76	154	14	6	7	3	7	1	89

Saturation Flow Module:	3rd St NB		3rd St SB			Cargo Way EB		Cargo Way WB				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.86	0.86	0.90	0.89	0.89	0.75	0.94	0.94	0.72	0.81	0.81
Lanes:	0.01	1.90	0.09	1.00	1.84	0.16	1.00	0.70	0.30	1.00	0.02	1.98
Final Sat.:	18	3092	146	1718	3118	278	1430	1245	533	1375	36	3046

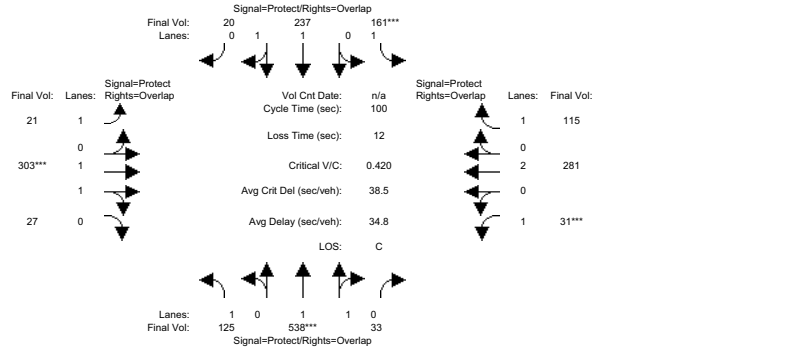
Capacity Analysis Module:	3rd St NB		3rd St SB			Cargo Way EB		Cargo Way WB				
Vol/Sat:	0.06	0.06	0.06	0.04	0.05	0.05	0.00	0.01	0.01	0.01	0.03	0.03
Crit Moves:	****		****			****		****				
Green/Cycle:	0.39	0.39	0.39	0.25	0.64	0.64	0.25	0.25	0.25	0.25	0.25	0.49
Volume/Cap:	0.15	0.15	0.15	0.18	0.08	0.08	0.02	0.02	0.02	0.02	0.12	0.06
Delay/Veh:	20.2	20.2	20.2	31.3	7.1	7.1	29.3	29.3	29.3	29.3	30.3	13.7
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:	20.2	20.2	20.2	31.3	7.1	7.1	29.3	29.3	29.3	29.3	30.3	13.7
LOS by Move:	C	C	C	C	A	A	C	C	C	C	C	B
HCM2kAvgQ:	2	2	2	2	1	1	0	0	0	0	1	1

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

Existing

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex Wkdy AM

Intersection #1004: 3rd St / Evans Ave



Street Name:	3rd St					Evans Ave						
	North Bound		South Bound			East Bound		West Bound				
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	12	43	43	12	33	33	6	34	34	12	31	31
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:	119	511	31	153	225	19	20	288	26	29	267	109
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:	119	511	31	153	225	19	20	288	26	29	267	109
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:	119	511	31	153	225	19	20	288	26	29	267	109
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:	125	538	33	161	237	20	21	303	27	31	281	115
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125	538	33	161	237	20	21	303	27	31	281	115
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	125	538	33	161	237	20	21	303	27	31	281	115

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	0.93	0.90	0.90	0.93	0.93	0.80
Lanes:	1.00	1.89	0.11	1.00	1.84	0.16	1.00	1.83	0.17	1.00	2.00	1.00
Final Sat.:	1718	3211	195	1718	3131	264	1769	3142	284	1769	3538	1519

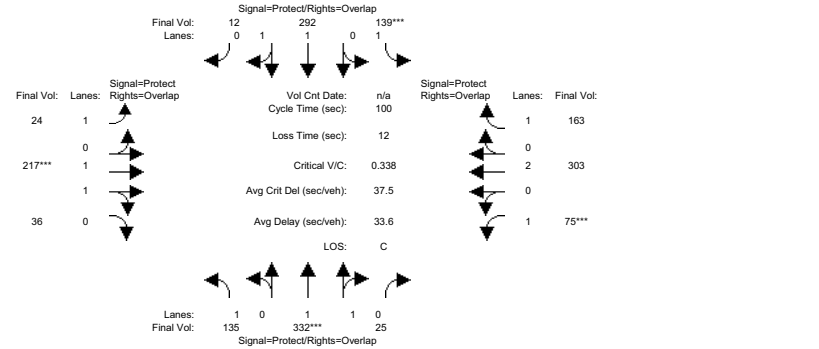
Capacity Analysis Module:												
Vol/Sat:	0.07	0.17	0.17	0.09	0.08	0.08	0.01	0.10	0.10	0.02	0.08	0.08
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.13	0.38	0.49	0.11	0.36	0.42	0.07	0.30	0.43	0.11	0.34	0.45
Volume/Cap:	0.56	0.44	0.34	0.88	0.21	0.18	0.18	0.32	0.22	0.16	0.23	0.17
Delay/Veh:	56.0	27.1	18.4	91.3	25.7	20.6	53.2	31.4	20.6	47.8	27.1	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:	56.0	27.1	18.4	91.3	25.7	20.6	53.2	31.4	20.6	47.8	27.1	19.2
LOS by Move:	E	C	B	F	C	C	D	C	C	D	C	B
HCM2kAvgQ:	4	8	6	7	3	3	1	5	4	1	4	2

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

Existing

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex Wkdy PM

Intersection #1004: 3rd St / Evans Ave



Street Name:	3rd St					Evans Ave						
	North Bound		South Bound			East Bound		West Bound				
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	12	43	43	12	33	33	6	34	34	12	31	31
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:	128	315	24	132	277	11	23	206	34	71	288	155
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:	128	315	24	132	277	11	23	206	34	71	288	155
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:	128	315	24	132	277	11	23	206	34	71	288	155
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:	135	332	25	139	292	12	24	217	36	75	303	163
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	135	332	25	139	292	12	24	217	36	75	303	163
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	135	332	25	139	292	12	24	217	36	75	303	163

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	0.93	0.89	0.89	0.93	0.93	0.80
Lanes:	1.00	1.86	0.14	1.00	1.92	0.08	1.00	1.72	0.28	1.00	2.00	1.00
Final Sat.:	1718	3158	241	1718	3286	130	1769	2913	481	1769	3538	1519

Capacity Analysis Module:												
Vol/Sat:	0.08	0.10	0.10	0.08	0.09	0.09	0.01	0.07	0.07	0.04	0.09	0.11
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.13	0.38	0.49	0.11	0.36	0.42	0.07	0.30	0.43	0.11	0.34	0.45
Volume/Cap:	0.60	0.28	0.22	0.76	0.25	0.21	0.21	0.25	0.17	0.40	0.25	0.24
Delay/Veh:	58.0	24.8	16.9	74.6	26.1	21.0	54.0	30.4	20.0	53.3	27.3	20.2
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:	58.0	24.8	16.9	74.6	26.1	21.0	54.0	30.4	20.0	53.3	27.3	20.2
LOS by Move:	E	C	B	E	C	C	D	C	C	D	C	C
HCM2kAvgQ:	5	4	4	5	4	3	1	3	3	3	4	3

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

Existing
Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex Wkdy PM

Intersection #1006: 3rd St / Palou Ave

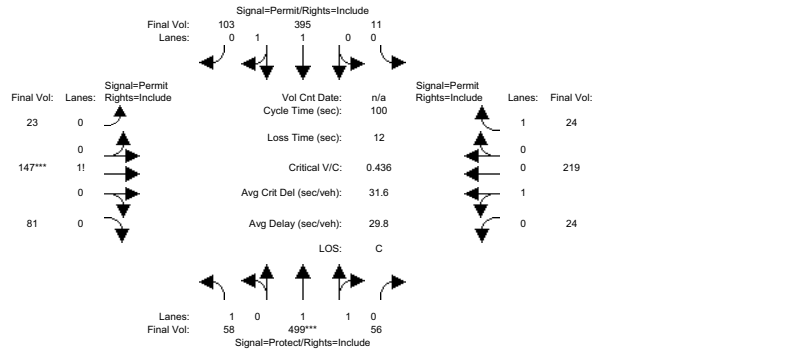


Table with columns for Street Name, Approach, Movement, and Volume. It provides detailed traffic volume data for the intersection, including lane-by-lane volumes and total approach volumes.

Table showing traffic volume and adjustment factors. It lists Base Volume, Growth Adjustment, Initial Base Volume, Added Volume, and Passer-By Volume for each lane and approach.

Saturation Flow Module table listing Sat/Lane, Adjustment, Lanes, and Final Sat. values for each approach and lane configuration.

Capacity Analysis Module table providing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ for the intersection.

Existing
Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex Sun PM

Intersection #1006: 3rd St / Palou Ave

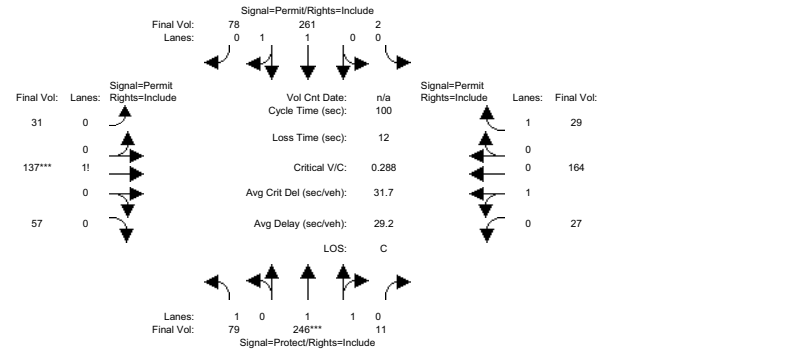


Table with columns for Street Name, Approach, Movement, and Volume. It provides detailed traffic volume data for the intersection on a Sunday.

Table showing traffic volume and adjustment factors for Sunday. It lists Base Volume, Growth Adjustment, Initial Base Volume, Added Volume, and Passer-By Volume.

Saturation Flow Module table listing Sat/Lane, Adjustment, Lanes, and Final Sat. values for each approach and lane configuration.

Capacity Analysis Module table providing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ for the intersection.

Existing

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex Wkdy PM

Intersection #1009: 3rd St / Paul Ave / Gilman Ave

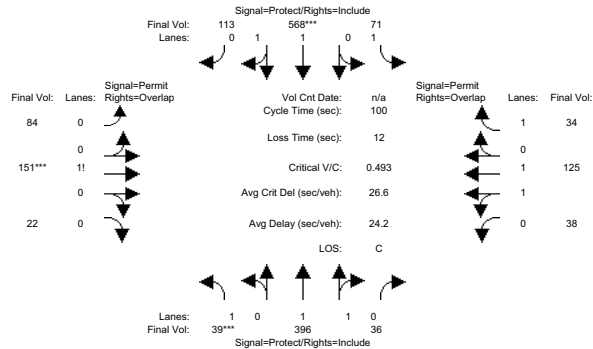


Table with columns for Street Name (3rd St, Paul Ave / Gilman Ave), Approach (North Bound, South Bound, East Bound, West Bound), and Movement (L, T, R). Rows include Min. Green, Y+R, and Final Volume.

Volume Module table with columns for traffic volume and various adjustment factors (Growth, Initial, Added, PasserBy, Initial Fut, User, PHF, Reduct, Reduced, PCE, MLF). Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Existing

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex Sun PM

Intersection #1009: 3rd St / Paul Ave / Gilman Ave

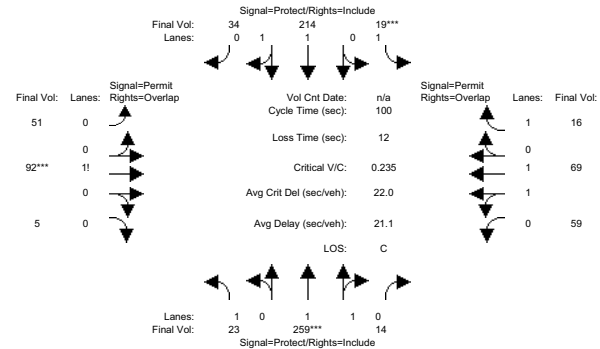


Table with columns for Street Name (3rd St, Paul Ave / Gilman Ave), Approach (North Bound, South Bound, East Bound, West Bound), and Movement (L, T, R). Rows include Min. Green, Y+R, and Final Volume.

Volume Module table with columns for traffic volume and various adjustment factors (Growth, Initial, Added, PasserBy, Initial Fut, User, PHF, Reduct, Reduced, PCE, MLF). Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

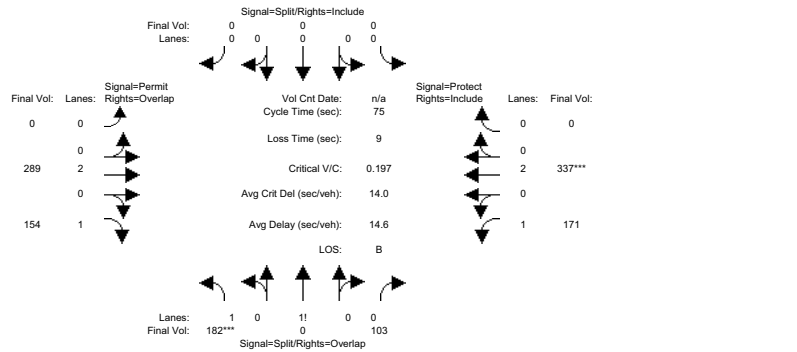
Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Existing
 Level of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 Ex Sun PM

Intersection #1016: Evans Ave / Cesar Chavez

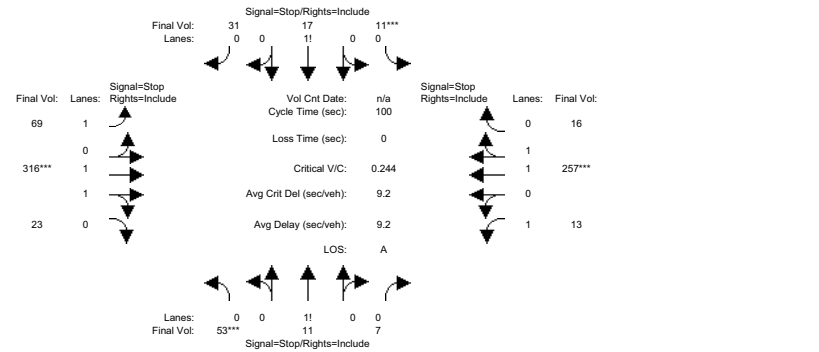


Street Name:	Evans Ave				Cesar Chavez							
Approach:	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Min. Green:	19	0	19	0	0	0	0	21	21	22	47	47
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	164	0	93	0	0	0	0	260	139	154	303	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:	164	0	93	0	0	0	0	260	139	154	303	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:	164	0	93	0	0	0	0	260	139	154	303	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:	182	0	103	0	0	0	0	289	154	171	337	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	182	0	103	0	0	0	0	289	154	171	337	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:	182	0	103	0	0	0	0	289	154	171	337	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	1.00	0.86	1.00	1.00	1.00	1.00	0.90	0.81	0.90	0.90	1.00
Lanes:	1.47	0.00	0.53	0.00	0.00	0.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	2407	0	868	0	0	0	0	3437	1537	1718	3437	0
Capacity Analysis Module:												
Vol/Sat:	0.08	0.00	0.12	0.00	0.00	0.00	0.00	0.08	0.10	0.10	0.10	0.00
Crit Moves:	****											****
Green/Cycle:	0.25	0.00	0.59	0.00	0.00	0.00	0.00	0.29	0.54	0.34	0.63	0.00
Volume/Cap:	0.30	0.00	0.20	0.00	0.00	0.00	0.00	0.29	0.19	0.29	0.16	0.00
Delay/Veh:	23.4	0.0	7.4	0.0	0.0	0.0	0.0	21.6	9.3	19.4	5.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.4	0.0	7.4	0.0	0.0	0.0	0.0	21.6	9.3	19.4	5.9	0.0
LOS by Move:	C	A	A	A	A	A	A	C	A	B	A	A
HCM2kAvgQ:	2	0	2	0	0	0	0	3	2	3	2	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)
 Ex Wkdy AM

Intersection #1048: Middle Point Rd / Evans Ave

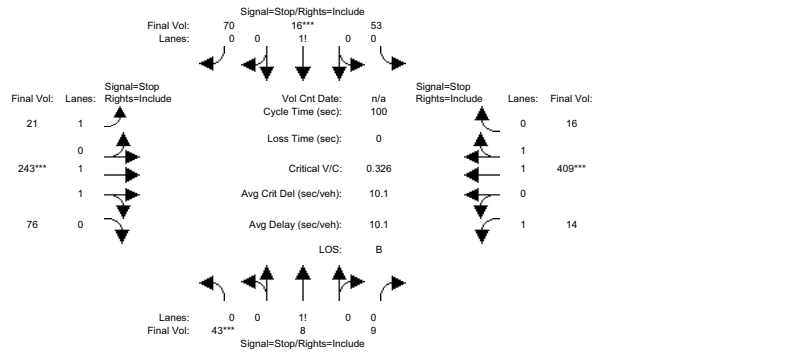


Street Name:	Middle Point Rd				Evans Ave							
Approach:	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Min. Green:	0	0	0	0	0	0	0	0	0			
Y+R:	0	0	0	0	0	0	0	0	0			
Volume Module:												
Base Vol:	48	10	6	10	15	28	62	284	21	12	231	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	48	10	6	10	15	28	62	284	21	12	231	14
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:	48	10	6	10	15	28	62	284	21	12	231	14
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:	53	11	7	11	17	31	69	316	23	13	257	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	11	7	11	17	31	69	316	23	13	257	16
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:	53	11	7	11	17	31	69	316	23	13	257	16
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:	0.75	0.16	0.09	0.19	0.28	0.53	1.00	1.86	0.14	1.00	1.89	0.11
Final Sat.:	453	94	57	120	181	337	628	1295	97	611	1272	78
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.09	0.09	0.09	0.11	0.24	0.24	0.02	0.20	0.20
Crit Moves:	****			****			****			****		
Delay/Veh:	9.2	9.2	9.2	8.7	8.7	8.7	9.0	9.4	9.3	8.6	9.2	9.1
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:	9.2	9.2	9.2	8.7	8.7	8.7	9.0	9.4	9.3	8.6	9.2	9.1
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	9.2			8.7			9.3			9.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.2			8.7			9.3			9.1		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.0	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)
Ex Wkdy PM

Intersection #1048: Middle Point Rd / Evans Ave



Street Name: Middle Point Rd Evans 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: 39 7 8 48 14 63 19 219 68 13 368 14
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: 39 7 8 48 14 63 19 219 68 13 368 14
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: 39 7 8 48 14 63 19 219 68 13 368 14
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: 43 8 9 53 16 70 21 243 76 14 409 16
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 43 8 9 53 16 70 21 243 76 14 409 16
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 43 8 9 53 16 70 21 243 76 14 409 16

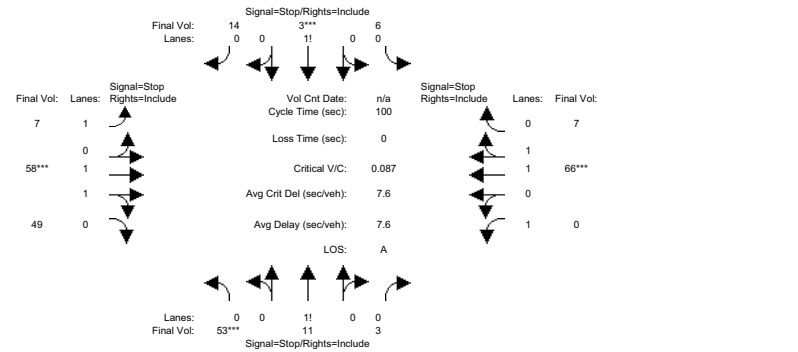
Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.72 0.13 0.15 0.38 0.11 0.51 1.00 1.53 0.47 1.00 1.93 0.07
Final Sat.: 405 73 83 236 69 310 580 986 318 594 1256 48

Capacity Analysis Module:
Vol/Sat: 0.11 0.11 0.11 0.23 0.23 0.23 0.04 0.25 0.24 0.02 0.33 0.32
Crit Moves: **** *
Delay/Veh: 9.5 9.5 9.5 9.9 9.9 9.9 8.9 9.8 9.4 8.8 10.6 10.5
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: 9.5 9.5 9.5 9.9 9.9 9.9 8.9 9.8 9.4 8.8 10.6 10.5
LOS by Move: A A A A A A A A A B
ApproachDel: 9.5 9.9 9.7 10.5
Delay Adj: 1.00 1.00 1.00
ApprAdjDel: 9.5 9.9 9.7 10.5
LOS by Appr: A A A B
AllWayAvgQ: 0.1 0.1 0.1 0.2 0.2 0.2 0.0 0.3 0.3 0.0 0.5 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)
Ex Sun PM

Intersection #1048: Middle Point Rd / Evans Ave



Street Name: Middle Point Rd Evans 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: 48 10 3 5 3 13 6 52 44 0 59 6
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: 48 10 3 5 3 13 6 52 44 0 59 6
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: 48 10 3 5 3 13 6 52 44 0 59 6
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: 53 11 3 6 3 14 7 58 49 0 66 7
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 53 11 3 6 3 14 7 58 49 0 66 7
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: 53 11 3 6 3 14 7 58 49 0 66 7

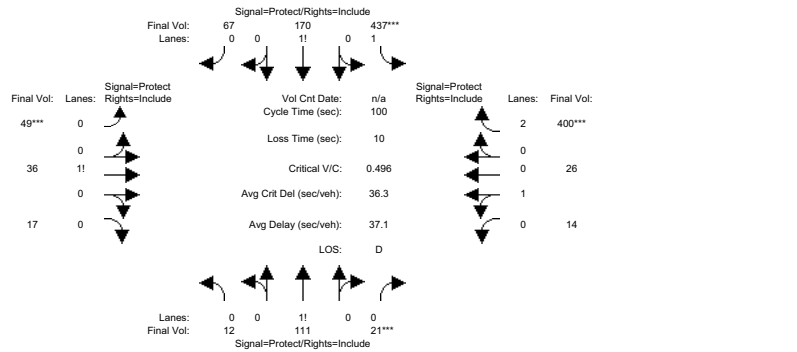
Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.79 0.16 0.05 0.24 0.14 0.62 1.00 1.08 0.92 1.00 1.82 0.18
Final Sat.: 613 128 38 202 121 526 674 815 786 669 1357 140

Capacity Analysis Module:
Vol/Sat: 0.09 0.09 0.09 0.03 0.03 0.03 0.01 0.07 0.06 0.00 0.05 0.05
Crit Moves: **** *
Delay/Veh: 7.9 7.9 7.9 7.2 7.2 7.2 8.0 7.8 7.1 0.0 7.7 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: 7.9 7.9 7.9 7.2 7.2 7.2 8.0 7.8 7.1 0.0 7.7 7.6
LOS by Move: A A A A A A A A * A A
ApproachDel: 7.9 7.2 7.5 7.7
Delay Adj: 1.00 1.00 1.00
ApprAdjDel: 7.9 7.2 7.5 7.7
LOS by Appr: A A A B
AllWayAvgQ: 0.1 0.1 0.1 0.0 0.0 0.0 0.0 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 Operations (Future Volume Alternative)
Ex Wkdy AM

Intersection #1058: Evans Ave/Napolean Ave/Toland



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	19	19	19	40	40	40	12	12	12	13	13	40
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:

	North Bound			South Bound			East Bound			West Bound		
Base Vol:	11	102	19	402	156	62	45	33	16	13	24	368
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	102	19	402	156	62	45	33	16	13	24	368
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	102	19	402	156	62	45	33	16	13	24	368
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:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	12	111	21	437	170	67	49	36	17	14	26	400
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	111	21	437	170	67	49	36	17	14	26	400
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	12	111	21	437	170	67	49	36	17	14	26	400

Saturation Flow Module:

Sat/Lane:	North Bound			South Bound			East Bound			West Bound		
Adjustment:	0.96	0.96	0.96	0.91	0.91	0.91	0.94	0.94	0.94	0.94	0.94	0.71
Lanes:	0.08	0.78	0.14	1.48	0.37	0.15	0.48	0.35	0.17	0.35	0.65	2.00
Final Sat.:	152	1406	262	2555	643	255	851	624	303	625	1153	2706

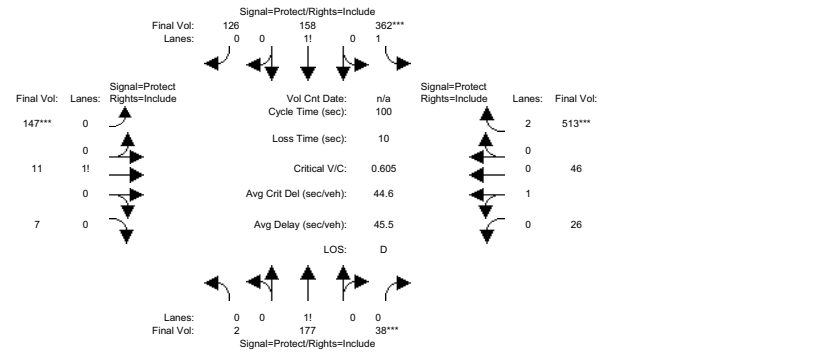
Capacity Analysis Module:

Vol/Sat:	North Bound			South Bound			East Bound			West Bound		
Crit Moves:	0.08	0.08	0.08	0.17	0.26	0.26	0.06	0.06	0.06	0.02	0.02	0.15
Green/Cycle:	0.16	0.16	0.16	0.33	0.33	0.33	0.10	0.21	0.21	0.22	0.33	0.33
Volume/Cap:	0.50	0.50	0.50	0.52	0.80	0.80	0.58	0.28	0.28	0.10	0.07	0.45
Delay/Veh:	48.1	48.1	48.1	33.1	42.2	42.2	56.9	40.9	40.9	37.4	27.8	32.2
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:	48.1	48.1	48.1	33.1	42.2	42.2	56.9	40.9	40.9	37.4	27.8	32.2
LOS by Move:	D	D	D	D	C	D	D	E	D	D	D	C
HCM2kAvgQ:	5	5	5	9	16	16	5	3	3	1	1	6

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

Existing
Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex Wkdy PM

Intersection #1058: Evans Ave/Napolean Ave/Toland



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	19	19	19	40	40	40	12	12	12	13	13	40
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:

	North Bound			South Bound			East Bound			West Bound		
Base Vol:	2	161	35	329	144	115	134	10	6	24	42	467
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:	2	161	35	329	144	115	134	10	6	24	42	467
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:	2	161	35	329	144	115	134	10	6	24	42	467
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:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	2	177	38	362	158	126	147	11	7	26	46	513
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	177	38	362	158	126	147	11	7	26	46	513
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	2	177	38	362	158	126	147	11	7	26	46	513

Saturation Flow Module:

Sat/Lane:	North Bound			South Bound			East Bound			West Bound		
Adjustment:	0.96	0.96	0.96	0.90	0.90	0.90	0.93	0.93	0.93	0.93	0.93	0.71
Lanes:	0.01	0.81	0.18	1.39	0.34	0.27	0.89	0.07	0.04	0.36	0.64	2.00
Final Sat.:	18	1478	321	2373	581	464	1584	118	71	646	1130	2706

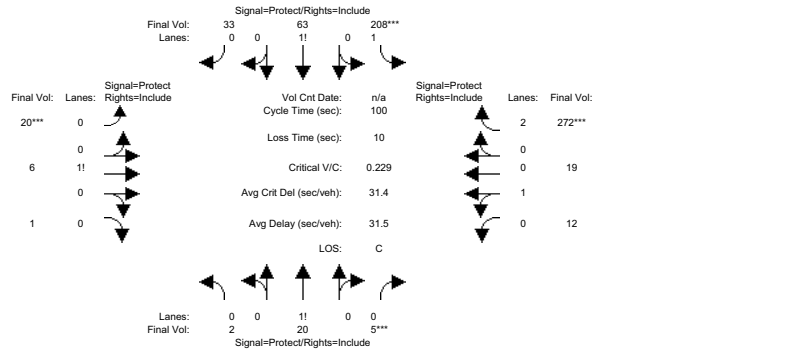
Capacity Analysis Module:

Vol/Sat:	North Bound			South Bound			East Bound			West Bound		
Crit Moves:	0.12	0.12	0.12	0.15	0.27	0.27	0.09	0.09	0.09	0.04	0.04	0.19
Green/Cycle:	0.16	0.16	0.16	0.33	0.33	0.33	0.10	0.21	0.21	0.22	0.33	0.33
Volume/Cap:	0.76	0.76	0.76	0.46	0.82	0.82	0.94	0.45	0.45	0.18	0.12	0.57
Delay/Veh:	60.3	60.3	60.3	32.2	44.3	44.3	104.0	42.9	42.9	38.3	28.4	34.4
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:	60.3	60.3	60.3	32.2	44.3	44.3	104.0	42.9	42.9	38.3	28.4	34.4
LOS by Move:	E	E	E	C	D	D	F	D	D	D	D	C
HCM2kAvgQ:	9	9	9	7	17	17	9	6	6	2	2	9

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

Existing
Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex Sun PM

Intersection #1058: Evans Ave/Napolean Ave/Toland



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	19	19	19	40	40	40	12	12	12	13	13	40
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:

	North Bound			South Bound			East Bound			West Bound		
Base Vol:	2	19	5	198	60	31	19	6	1	11	18	258
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:	2	19	5	198	60	31	19	6	1	11	18	258
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:	2	19	5	198	60	31	19	6	1	11	18	258
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:	2	20	5	208	63	33	20	6	1	12	19	272
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	20	5	208	63	33	20	6	1	12	19	272
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:	2	20	5	208	63	33	20	6	1	12	19	272

Saturation Flow Module:

Sat/Lane:	North Bound			South Bound			East Bound			West Bound		
Adjustment:	0.95	0.95	0.95	0.91	0.91	0.91	0.94	0.94	0.94	0.93	0.93	0.71
Lanes:	0.08	0.73	0.19	1.52	0.32	0.16	0.73	0.23	0.04	0.38	0.62	2.00
Final Sat.:	139	1320	347	2618	544	281	1307	413	69	673	1101	2706

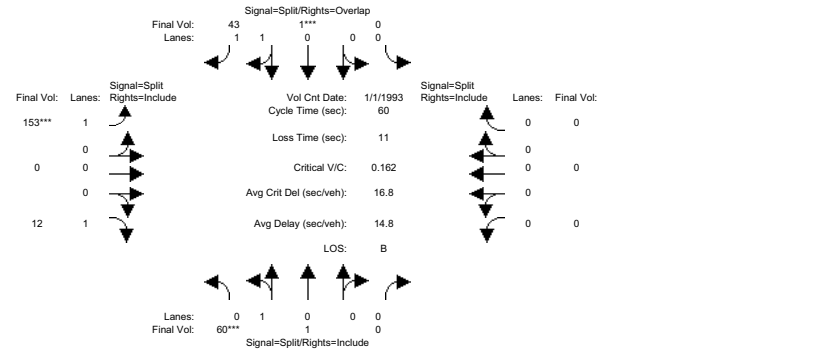
Capacity Analysis Module:

Vol/Sat:	North Bound			South Bound			East Bound			West Bound		
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.16	0.16	0.16	0.33	0.33	0.33	0.10	0.21	0.21	0.22	0.33	0.33
Volume/Cap:	0.10	0.10	0.10	0.24	0.35	0.35	0.15	0.07	0.07	0.08	0.05	0.30
Delay/Veh:	43.8	43.8	43.8	29.6	30.9	30.9	50.3	38.8	38.8	37.2	27.6	30.3
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:	43.8	43.8	43.8	29.6	30.9	30.9	50.3	38.8	38.8	37.2	27.6	30.3
LOS by Move:	D	D	D	C	C	C	D	D	D	D	C	C
HCM2kAvgQ:	1	1	1	4	5	5	1	1	1	1	1	4

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 #110: Innes Ave/Donahue St



Street Name:	Donahue St			Innes 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:	22	22	22	10	10	10	17	17	17	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: >> Count Date: 1 Jan 1993 << AM

	North Bound			South Bound			East Bound			West Bound		
Base Vol:	60	1	0	0	1	43	153	0	12	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	60	1	0	0	1	43	153	0	12	0	0	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:	60	1	0	0	1	43	153	0	12	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	60	1	0	0	1	43	153	0	12	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	1	0	0	1	43	153	0	12	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	60	1	0	0	1	43	153	0	12	0	0	0

Saturation Flow Module:

Sat/Lane:	North Bound			South Bound			East Bound			West Bound		
Adjustment:	0.95	0.95	1.00	1.00	0.85	0.85	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	0.98	0.02	0.00	0.00	0.05	1.95	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1781	30	0	0	74	3168	1805	0	1615	0	0	0

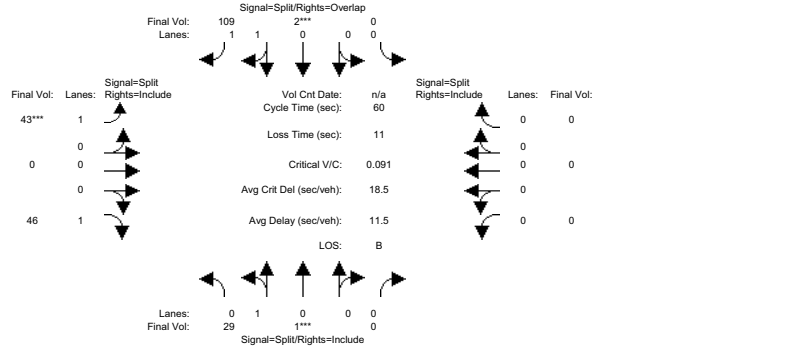
Capacity Analysis Module:

Vol/Sat:	North Bound			South Bound			East Bound			West Bound		
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.37	0.37	0.00	0.00	0.17	0.45	0.28	0.00	0.28	0.00	0.00	0.00
Volume/Cap:	0.09	0.09	0.00	0.00	0.08	0.03	0.30	0.00	0.03	0.00	0.00	0.00
Delay/Veh:	12.5	12.5	0.0	0.0	21.2	9.2	17.2	0.0	15.5	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.5	12.5	0.0	0.0	21.2	9.2	17.2	0.0	15.5	0.0	0.0	0.0
LOS by Move:	B	B	A	A	C	A	B	A	B	A	A	A
HCM2kAvgQ:	1	1	0	0	0	0	2	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 #110: Innes Ave/Donahue St



Street Name:	Donahue St						Innes Ave					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	22	22	22	10	10	10	17	17	17	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:	29	1	0	0	2	109	43	0	46	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	1	0	0	2	109	43	0	46	0	0	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:	29	1	0	0	2	109	43	0	46	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	29	1	0	0	2	109	43	0	46	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	1	0	0	2	109	43	0	46	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	29	1	0	0	2	109	43	0	46	0	0	0

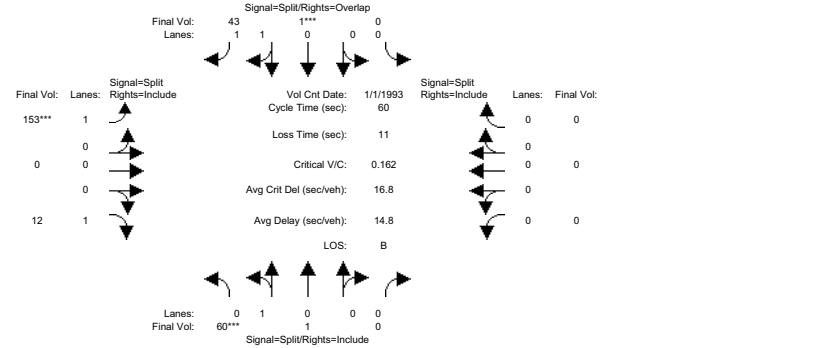
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.85	0.85	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	0.97	0.03	0.00	0.00	0.04	1.96	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1752	60	0	0	58	3183	1805	0	1615	0	0	0

Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.00	0.00	0.03	0.03	0.02	0.00	0.03	0.00	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.37	0.37	0.00	0.00	0.17	0.48	0.31	0.00	0.31	0.00	0.00	0.00
Volume/Cap:	0.05	0.05	0.00	0.00	0.21	0.07	0.08	0.00	0.09	0.00	0.00	0.00
Delay/Veh:	12.3	12.3	0.0	0.0	21.8	8.5	14.6	0.0	14.7	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.3	12.3	0.0	0.0	21.8	8.5	14.6	0.0	14.7	0.0	0.0	0.0
LOS by Move:	B	B	A	A	C	A	B	A	B	A	A	A
HCM2kAvgQ:	0	0	0	0	1	1	1	0	1	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 Sunday

Intersection #110: Innes Ave/Donahue St



Street Name:	Donahue St						Innes Ave					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	22	22	22	10	10	10	17	17	17	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:	60	1	0	0	1	43	153	0	12	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	60	1	0	0	1	43	153	0	12	0	0	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:	60	1	0	0	1	43	153	0	12	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	60	1	0	0	1	43	153	0	12	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	1	0	0	1	43	153	0	12	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	60	1	0	0	1	43	153	0	12	0	0	0

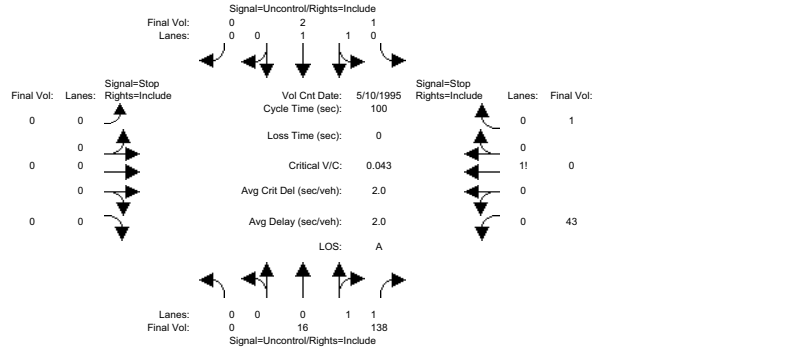
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.85	0.85	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	0.98	0.02	0.00	0.00	0.05	1.95	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1781	30	0	0	74	3168	1805	0	1615	0	0	0

Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.00	0.00	0.01	0.01	0.08	0.00	0.01	0.00	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.37	0.37	0.00	0.00	0.17	0.45	0.28	0.00	0.28	0.00	0.00	0.00
Volume/Cap:	0.09	0.09	0.00	0.00	0.08	0.03	0.30	0.00	0.03	0.00	0.00	0.00
Delay/Veh:	12.5	12.5	0.0	0.0	21.2	9.2	17.2	0.0	15.5	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.5	12.5	0.0	0.0	21.2	9.2	17.2	0.0	15.5	0.0	0.0	0.0
LOS by Move:	B	B	A	A	C	A	B	A	B	A	A	A
HCM2kAvgQ:	1	1	0	0	0	0	2	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 #111: Donahue St/Galvez Ave



Street Name:	Donahue St				Galvez Ave							
Approach:	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Volume Module: >> Count Date: 10 May 1995 <<	0	16	138	1	2	0	0	0	0	43	0	1
Base Vol:	0	16	138	1	2	0	0	0	0	43	0	1
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	16	138	1	2	0	0	0	0	43	0	1
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	16	138	1	2	0	0	0	0	43	0	1
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:	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 Volume:	0	16	138	1	2	0	0	0	0	43	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	16	138	1	2	0	0	0	0	43	0	1

Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxxx	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxxx	xxxx	xxxxxx	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	4.0	3.3

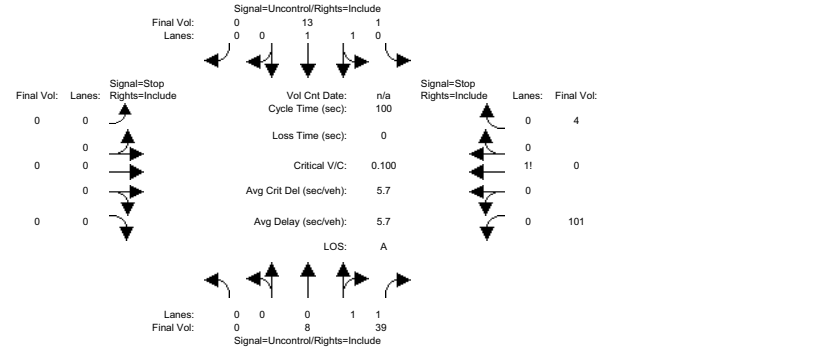
Capacity Module:												
Cnflct Vol:	xxxx	xxxx	xxxxxx	154	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	19	20	16
Potent Cap.:	xxxx	xxxx	xxxxxx	1439	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	1004	878	1069
Move Cap.:	xxxx	xxxx	xxxxxx	1439	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	1003	877	1069
Volume/Cap:	xxxx	xxxx	xxxxxx	0.00	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.04	0.00	0.00

Level of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Control Del:	xxxxxx	xxxx	xxxxxx	7.5	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	1004	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	0.1	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	7.5	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	8.7	xxxxxx	
Shared LOS:	*	*	*	A	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			8.7		
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 #111: Donahue St/Galvez Ave



Street Name:	Donahue St				Galvez Ave							
Approach:	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Volume Module:	0	8	39	1	13	0	0	0	0	101	0	4
Base Vol:	0	8	39	1	13	0	0	0	0	101	0	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:	0	8	39	1	13	0	0	0	0	101	0	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:	0	8	39	1	13	0	0	0	0	101	0	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:	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 Volume:	0	8	39	1	13	0	0	0	0	101	0	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	8	39	1	13	0	0	0	0	101	0	4

Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxxx	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxxx	xxxx	xxxxxx	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	4.0	3.3

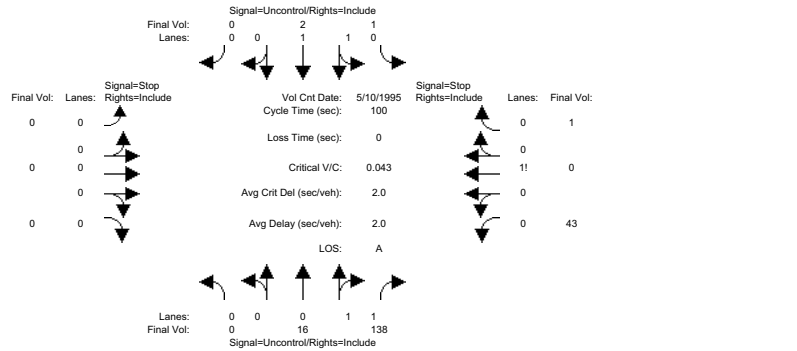
Capacity Module:												
Cnflct Vol:	xxxx	xxxx	xxxxxx	47	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	17	23	8
Potent Cap.:	xxxx	xxxx	xxxxxx	1573	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	1007	874	1080
Move Cap.:	xxxx	xxxx	xxxxxx	1573	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	1006	874	1080
Volume/Cap:	xxxx	xxxx	xxxxxx	0.00	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.10	0.00	0.00

Level of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Control Del:	xxxxxx	xxxx	xxxxxx	7.3	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	1009	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	0.3	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	7.3	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	9.0	xxxxxx	
Shared LOS:	*	*	*	A	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.0		
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 Sunday

Intersection #111: Donahue St/Galvez Ave



Street Name:	Donahue St				Galvez Ave							
Approach:	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Volume Module:	>>	Count	Date:	10 May 1995	<<							
Base Vol:	0	16	138	1	2	0	0	0	0	43	0	1
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	16	138	1	2	0	0	0	0	43	0	1
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	16	138	1	2	0	0	0	0	43	0	1
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:	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 Volume:	0	16	138	1	2	0	0	0	0	43	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	16	138	1	2	0	0	0	0	43	0	1

Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxxx	xxxx	xxxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

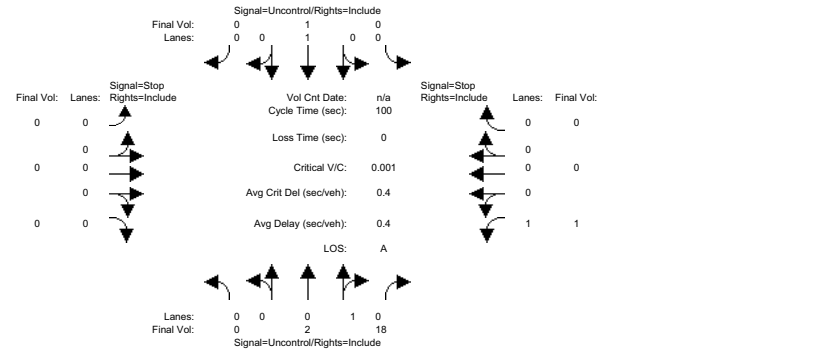
Capacity Module:												
Cnflct Vol:	xxxx	xxxx	xxxxx	154	xxxx	xxxxx	xxxx	xxxx	xxxxx	19	20	16
Potent Cap.:	xxxx	xxxx	xxxxx	1439	xxxx	xxxxx	xxxx	xxxx	xxxxx	1004	878	1069
Move Cap.:	xxxx	xxxx	xxxxx	1439	xxxx	xxxxx	xxxx	xxxx	xxxxx	1003	877	1069
Volume/Cap:	xxxx	xxxx	xxxxx	0.00	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.04	0.00	0.00

Level of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1004	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.7	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	8.7	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 AM

Intersection #112: Donahue St/Lockwood St



Street Name:	Donahue St				Lockwood St							
Approach:	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Volume Module:	>>	Count	Date:	n/a	<<							
Base Vol:	0	2	18	0	1	0	0	0	0	1	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	2	18	0	1	0	0	0	0	1	0	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:	0	2	18	0	1	0	0	0	0	1	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	0	2	18	0	1	0	0	0	0	1	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	2	18	0	1	0	0	0	0	1	0	0

Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx
FollowUpTim:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	xxxx	xxxxxx

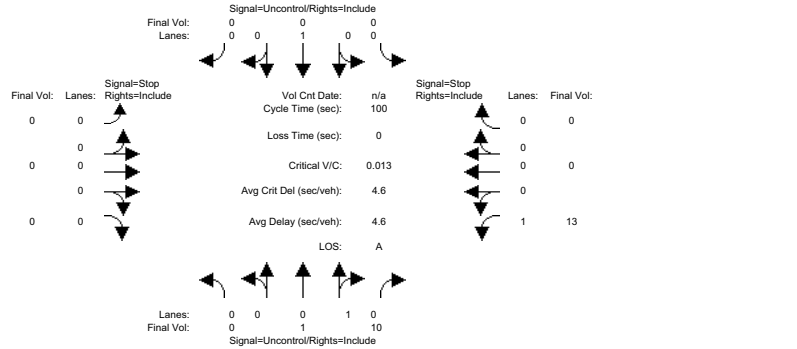
Capacity Module:												
Cnflct Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	12	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1013	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1013	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.00	xxxx	xxxxx

Level of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	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	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	8.6	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 #112: Donahue St/Lockwood St

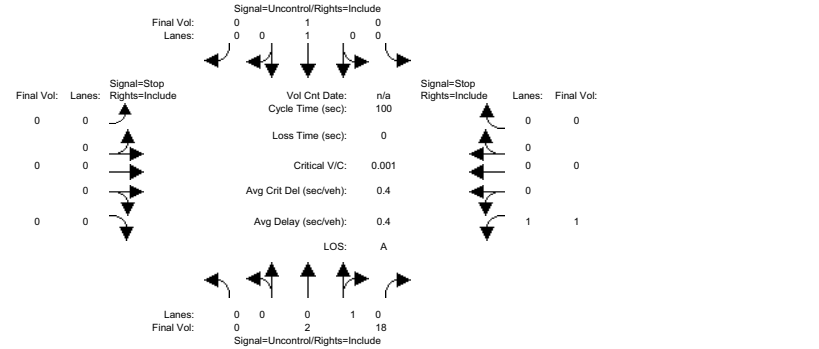


Street Name:	Donahue St					Lockwood St					
Approach:	North Bound		South Bound			East Bound		West Bound			
Movement:	L	T - R	L	T - R	R	L	T - R	L	T - R	R	
Volume Module:	0	1	10	0	0	0	0	0	13	0	0
Base Vol:	0	1	10	0	0	0	0	0	13	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1	10	0	0	0	0	0	13	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1	10	0	0	0	0	0	13	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1	10	0	0	0	0	0	13	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	1	10	0	0	0	0	0	13	0	0
Critical Gap Module:											
Critical Gp:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	6.4	xxxx	xxxx
FollowUpTim:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	3.5	xxxx	xxxx
Capacity Module:											
Cnflct Vol:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	6	xxxx	xxxx
Potent Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1021	xxxx	xxxx
Move Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1021	xxxx	xxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx
Level of Service Module:											
2Way95thQ:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.0	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	8.6	xxxx	xxxx
LOS by Move:	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	8.6	xxxx	xxxx
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1021	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1021	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	8.6	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 Sunday

Intersection #112: Donahue St/Lockwood St

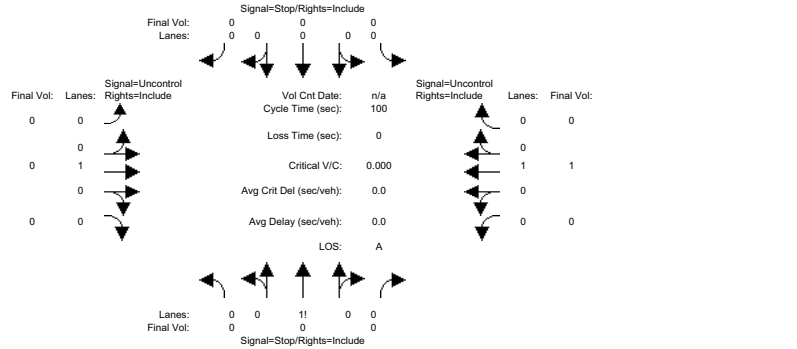


Street Name:	Donahue St					Lockwood St					
Approach:	North Bound		South Bound			East Bound		West Bound			
Movement:	L	T - R	L	T - R	R	L	T - R	L	T - R	R	
Volume Module:	0	2	18	0	1	0	0	0	1	0	0
Base Vol:	0	2	18	0	1	0	0	0	1	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	2	18	0	1	0	0	0	1	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	2	18	0	1	0	0	0	1	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	2	18	0	1	0	0	0	1	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	2	18	0	1	0	0	0	1	0	0
Critical Gap Module:											
Critical Gp:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	6.4	xxxx	xxxx
FollowUpTim:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	3.5	xxxx	xxxx
Capacity Module:											
Cnflct Vol:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	12	xxxx	xxxx
Potent Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1013	xxxx	xxxx
Move Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1013	xxxx	xxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx
Level of Service Module:											
2Way95thQ:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.0	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	8.6	xxxx	xxxx
LOS by Move:	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	8.6	xxxx	xxxx
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1013	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1013	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	8.6	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 AM

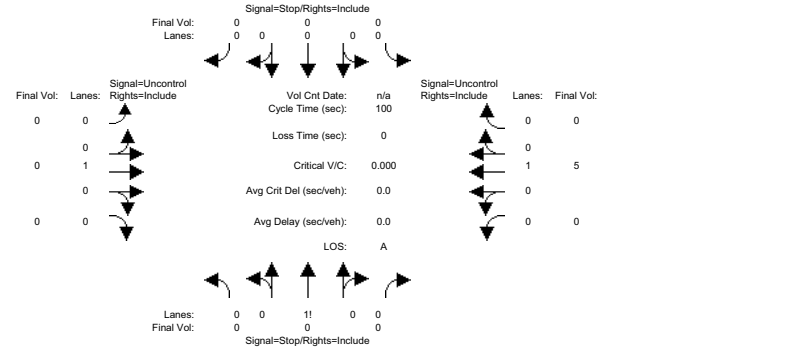
Intersection #113: Crisp Ave/I St



Street Name:	Crisp Ave												I St			
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	0	0	0	0	0	0	0	0	1	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	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	1	0			
Added Vol:	0	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	0			
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	1	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	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	1	0			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	0	1	0			
Critical Gap Module:	----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----															
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Capacity Module:	----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----															
Cnflct Vol:	1	1	0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
Potent Cap.:	1027	899	1091	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
Move Cap.:	1027	899	1091	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
Volume/Cap:	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level of Service Module:	----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----															
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx	
ApproachLOS:	*		*		*		*		*		*		*		*	

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

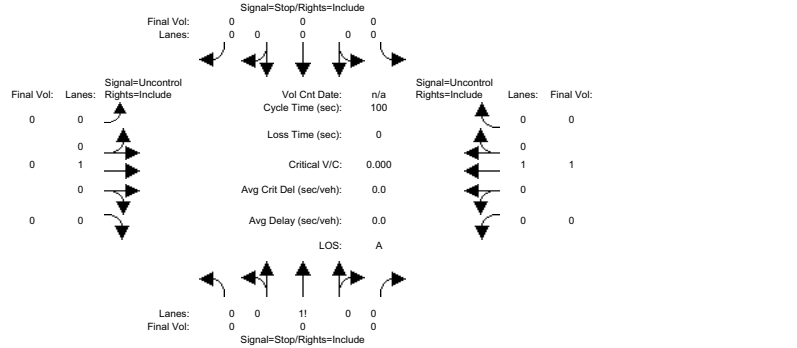
Intersection #113: Crisp Ave/I St



Street Name:	Crisp Ave												I St			
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	0	0	0	0	0	0	0	0	5	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	1.00			
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	5	0			
Added Vol:	0	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	0			
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	5	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	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	5	0			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	0	0	0	0	5	0			
Critical Gap Module:	----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----															
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Capacity Module:	----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----															
Cnflct Vol:	5	5	0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
Potent Cap.:	1022	894	1091	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
Move Cap.:	1022	894	1091	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
Volume/Cap:	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level of Service Module:	----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----															
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx	
ApproachLOS:	*		*		*		*		*		*		*		*	

Existing
 Level of Service Computation Report
 2000 HCM Unsignalized (Future Volume Alternative)
 Existing Sunday

Intersection #113: Crisp Ave/I St

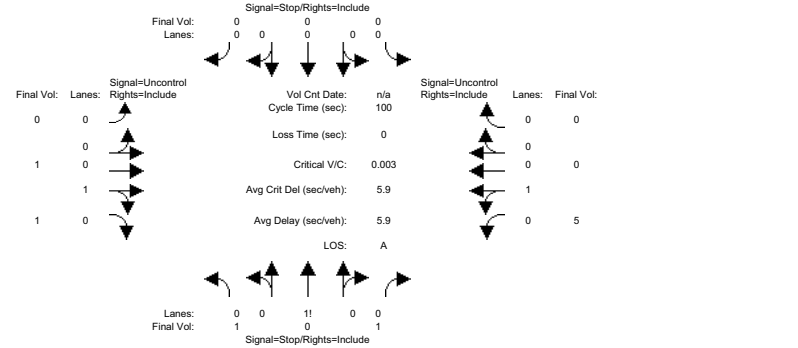


Street Name:	Crisp Ave												I St						
Approach:	North Bound			South Bound			East Bound			West Bound									
Movement:	L	T	R	L	T	R	L	T	R	L	T	R							
Volume Module:	0	0	0	0	0	0	0	0	0	0	1	0							
Base Vol:	0	0	0	0	0	0	0	0	0	0	1	0							
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
Initial Bse:	0	0	0	0	0	0	0	0	0	0	1	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:	0	0	0	0	0	0	0	0	0	0	1	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:	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 Volume:	0	0	0	0	0	0	0	0	0	0	1	0							
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0							
FinalVolume:	0	0	0	0	0	0	0	0	0	0	1	0							
Critical Gap Module:																			
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																			
Cnflct Vol:	1	1	0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	1027	899	1091	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	1027	899	1091	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx				
Level of Service Module:																			
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*				
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT							
Shared Cap.:	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx							
SharedQueue:	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx							
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx							
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*							
ApproachDel:	xxxxxx		xxxxxx			xxxxxx			xxxxxx			xxxxxx							
ApproachLOS:	*		*			*			*			*							

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 #114: Crisp Ave/Spear Ave

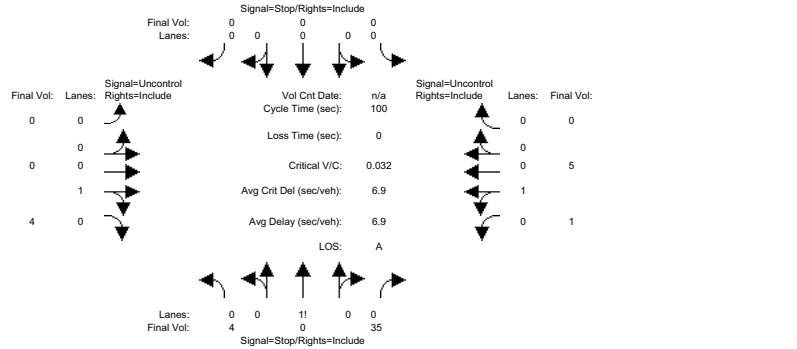


Street Name:	Spear Ave												Crisp Ave-Spear Ave						
Approach:	North Bound			South Bound			East Bound			West Bound									
Movement:	L	T	R	L	T	R	L	T	R	L	T	R							
Volume Module:	1	0	1	0	0	0	0	1	1	5	0	0							
Base Vol:	1	0	1	0	0	0	0	1	1	5	0	0							
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
Initial Bse:	1	0	1	0	0	0	0	1	1	5	0	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:	1	0	1	0	0	0	0	1	1	5	0	0							
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
PHF Adj:	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 Volume:	1	0	1	0	0	0	0	1	1	5	0	0							
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0							
FinalVolume:	1	0	1	0	0	0	0	1	1	5	0	0							
Critical Gap Module:																			
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	4.1	xxxx	xxxxx				
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	2.2	xxxx	xxxxx				
Capacity Module:																			
Cnflct Vol:	12	12	2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	2	xxxx	xxxxx							
Potent Cap.:	1013	887	1089	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1634	xxxx	xxxxx							
Move Cap.:	1011	884	1089	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1634	xxxx	xxxxx							
Volume/Cap:	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx							
Level of Service Module:																			
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx							
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx							
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*							
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT							
Shared Cap.:	xxxx	1048	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx							
SharedQueue:	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx							
Shrd ConDel:	xxxxx	8.4	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx							
Shared LOS:	*	A	*	*	*	*	*	*	*	*	*	*							
ApproachDel:	8.4		xxxxxx			xxxxxx			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

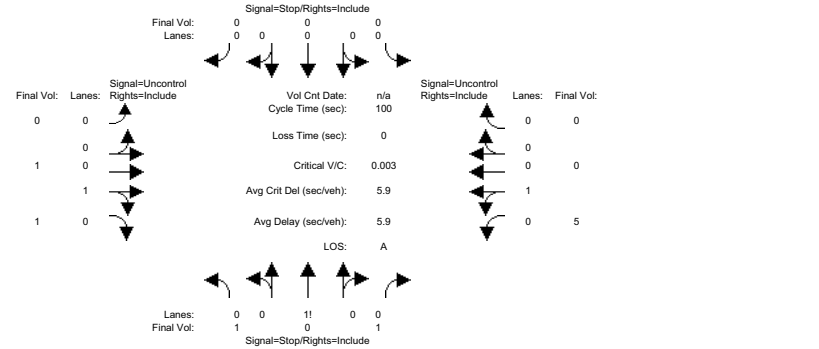
Intersection #114: Crisp Ave/Spear Ave



Street Name:	Spear Ave						Crisp Ave-Spear 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:	4	0	35	0	0	0	0	0	4	1	5	0
Base Vol:	4	0	35	0	0	0	0	0	4	1	5	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:	4	0	35	0	0	0	0	0	4	1	5	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:	4	0	35	0	0	0	0	0	4	1	5	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:	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 Volume:	4	0	35	0	0	0	0	0	4	1	5	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	0	35	0	0	0	0	0	4	1	5	0
Critical Gap Module:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:	7	7	0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	4	xxxx	xxxxx
Cnflct Vol:	1019	892	1091	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1631	xxxx	xxxxx
Potent Cap.:	1019	892	1091	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1631	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx
Level of Service Module:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Control Del:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap.:	xxxx	1083	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	8.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*
ApproachDel:	8.4		xxxxxx			xxxxxx			xxxxxx			xxxxxx
ApproachLOS:	A		*			*			*	*		*

Existing
 Level of Service Computation Report
 2000 HCM Unsignalized (Future Volume Alternative)
 Existing Sunday

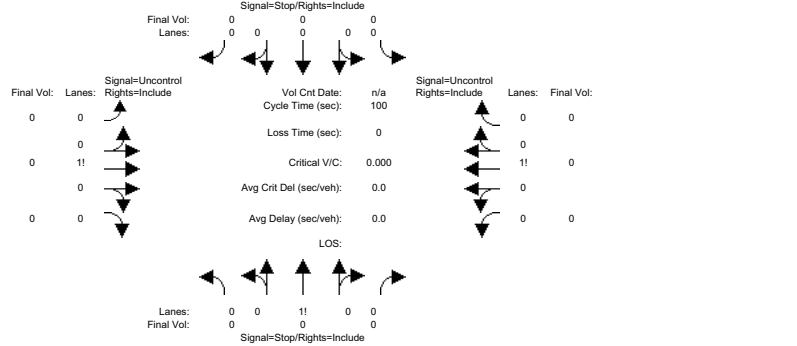
Intersection #114: Crisp Ave/Spear Ave



Street Name:	Spear Ave						Crisp Ave-Spear 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:	1	0	1	0	0	0	0	1	1	5	0	0
Base Vol:	1	0	1	0	0	0	0	1	1	5	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	0	1	0	0	0	0	1	1	5	0	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:	1	0	1	0	0	0	0	1	1	5	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	1	0	1	0	0	0	0	1	1	5	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	0	1	0	0	0	0	1	1	5	0	0
Critical Gap Module:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:	12	12	2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	2	xxxx	xxxxx
Cnflct Vol:	1013	887	1089	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1634	xxxx	xxxxx
Potent Cap.:	1011	884	1089	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1634	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx
Level of Service Module:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Control Del:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap.:	xxxx	1048	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	8.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*
ApproachDel:	8.4		xxxxxx			xxxxxx			xxxxxx			xxxxxx
ApproachLOS:	A		*			*			*	*		*

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

Intersection #115: Galvez Ave/Spear Ave

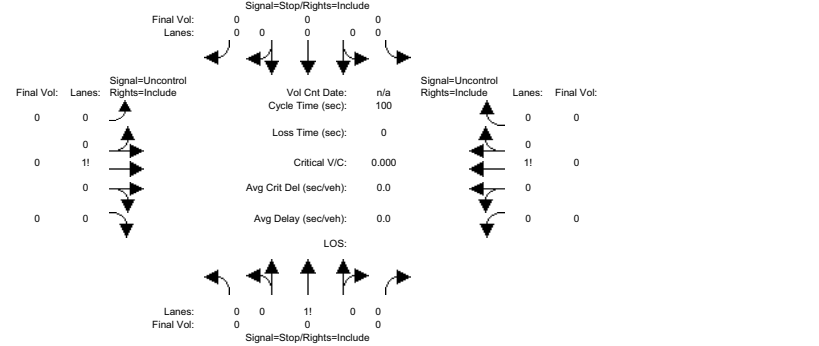


Street Name:	Galvez Ave				Spear Ave					
Approach:	North Bound		South Bound		East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	
Volume Module:	----- ----- ----- ----- ----- ----- ----- ----- -----									
Base Vol:	0	0	0	0	0	0	0	0	0	
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Initial Bse:	0	0	0	0	0	0	0	0	0	
Added Vol:	0	0	0	0	0	0	0	0	0	
PasserByVol:	0	0	0	0	0	0	0	0	0	
Initial Fut:	0	0	0	0	0	0	0	0	0	
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PHF Volume:	0	0	0	0	0	0	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	
FinalVolume:	0	0	0	0	0	0	0	0	0	
Critical Gap Module:	----- ----- ----- ----- ----- ----- ----- ----- -----									
Critical Gp:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Capacity Module:	----- ----- ----- ----- ----- ----- ----- ----- -----									
Cnflct Vol:	0	0	0	0	0	0	0	0	0	
Potent Cap.:	0	0	0	0	0	0	0	0	0	
Move Cap.:	1	1	1	1	1	1	1	1	1	
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Level of Service Module:	----- ----- ----- ----- ----- ----- ----- ----- -----									
2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
LOS by Move:	----- ----- ----- ----- ----- ----- ----- ----- -----									
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	
Shared Cap.:	0	0	0	0	0	0	0	0	0	
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Shared LOS:	----- ----- ----- ----- ----- ----- ----- ----- -----									
ApproachDel:	0.0	0.0			0.0			0.0		
ApproachLOS:	----- ----- ----- ----- ----- ----- ----- ----- -----									

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 #115: Galvez Ave/Spear Ave

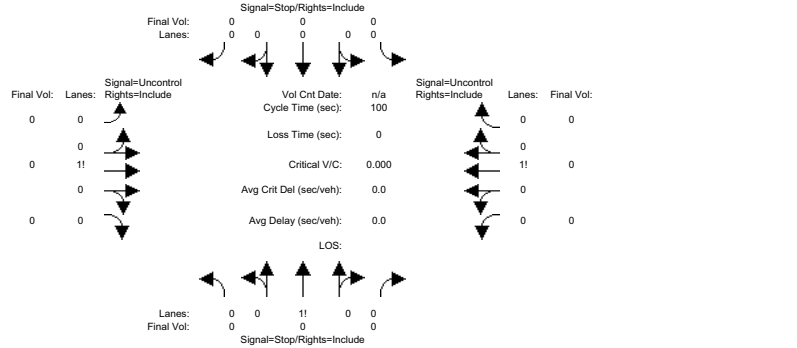


Street Name:	Galvez Ave				Spear Ave					
Approach:	North Bound		South Bound		East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	
Volume Module:	----- ----- ----- ----- ----- ----- ----- ----- -----									
Base Vol:	0	0	0	0	0	0	0	0	0	
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Initial Bse:	0	0	0	0	0	0	0	0	0	
Added Vol:	0	0	0	0	0	0	0	0	0	
PasserByVol:	0	0	0	0	0	0	0	0	0	
Initial Fut:	0	0	0	0	0	0	0	0	0	
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PHF Volume:	0	0	0	0	0	0	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	
FinalVolume:	0	0	0	0	0	0	0	0	0	
Critical Gap Module:	----- ----- ----- ----- ----- ----- ----- ----- -----									
Critical Gp:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Capacity Module:	----- ----- ----- ----- ----- ----- ----- ----- -----									
Cnflct Vol:	0	0	0	0	0	0	0	0	0	
Potent Cap.:	0	0	0	0	0	0	0	0	0	
Move Cap.:	1	1	1	1	1	1	1	1	1	
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Level of Service Module:	----- ----- ----- ----- ----- ----- ----- ----- -----									
2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
LOS by Move:	----- ----- ----- ----- ----- ----- ----- ----- -----									
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	
Shared Cap.:	0	0	0	0	0	0	0	0	0	
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Shared LOS:	----- ----- ----- ----- ----- ----- ----- ----- -----									
ApproachDel:	0.0	0.0			0.0			0.0		
ApproachLOS:	----- ----- ----- ----- ----- ----- ----- ----- -----									

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

Existing
Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing Sunday

Intersection #115: Galvez Ave/Spear Ave

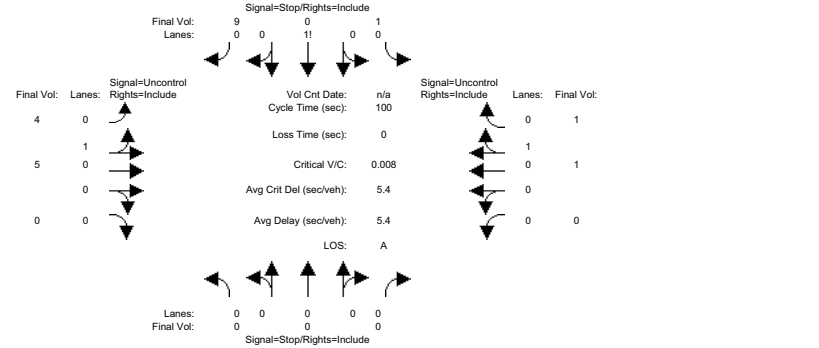


Street Name:	Galvez Ave				Spear Ave				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Volume Module:	0	0	0	0	0	0	0	0	0
Base Vol:	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	0	0	0
Critical Gap Module:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capacity Module:	0	0	0	0	0	0	0	0	0
Cnflct Vol:	0	0	0	0	0	0	0	0	0
Potent Cap.:	1	1	1	1	1	1	1	1	1
Move Cap.:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Level of Service Module:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	0	0	0	0	0	0	0	0	0
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Shared LOS:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ApproachDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ApproachLOS:	A	A	A	A	A	A	A	A	A

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 #116: Lockwood St/Spear Ave

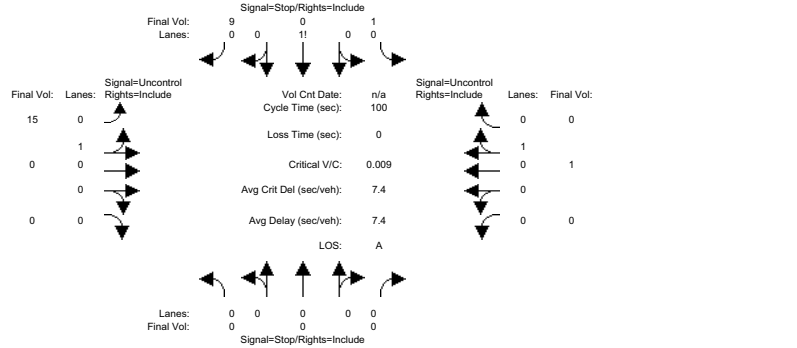


Street Name:	Lockwood St				Spear Ave				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Volume Module:	4	0	1	5	0	0	0	0	1
Base Vol:	4	0	1	5	0	0	0	0	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1	0	9	4	5	0
Added Vol:	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	1	0	9	4	5	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	1	0	9	4	5	0
Reduct Vol:	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	1	0	9	4	5	0
Critical Gap Module:	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:	15	15	2	2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Cnflct Vol:	1009	884	1089	1634	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	1008	882	1089	1634	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	0.00	0.00	0.01	0.00	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level of Service Module:	0.0	0.0	0.0	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
2Way95thQ:	7.2	xxxxx	xxxxx	7.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	*	*	*	*	*	*	*	*	*
LOS by Move:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1080	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	0.0	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	8.4	xxxxx	xxxxx	8.4	xxxxx	7.2	xxxx	xxxxx	xxxx
Shared LOS:	*	*	*	*	*	*	*	*	*
ApproachDel:	8.4	xxxxxx	xxxxxx	8.4	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	A	A	A	A	A	A	A	A	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

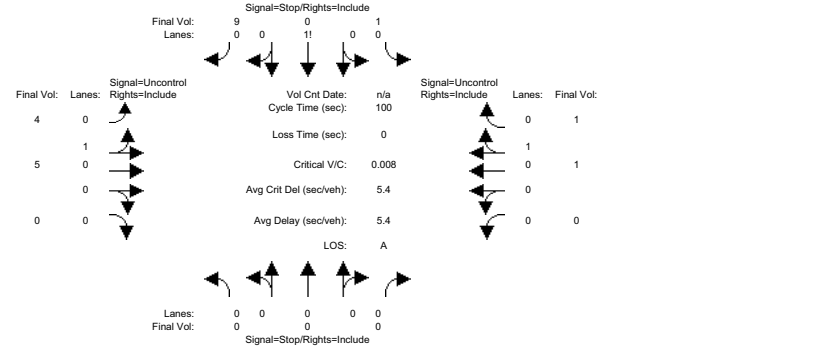
Intersection #116: Lockwood St/Spear Ave



Street Name:	Lockwood St				Spear Ave								
Approach:	North Bound		South Bound		East Bound		West Bound						
Movement:	L	T	R	L	T	R	L	T	R				
Volume Module:	0	0	0	1	0	9	15	0	0	1	0		
Base Vol:	0	0	0	1	0	9	15	0	0	1	0		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	1	0	9	15	0	0	1	0		
Added Vol:	0	0	0	0	0	0	0	0	0	0	0		
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0		
Initial Fut:	0	0	0	1	0	9	15	0	0	1	0		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	0	0	0	1	0	9	15	0	0	1	0		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0		
FinalVolume:	0	0	0	1	0	9	15	0	0	1	0		
Critical Gap Module:					6.4	6.5	6.2	4.1	xxxx	xxxx	xxxx	xxxx	xxxx
FollowUpTim:					3.5	4.0	3.3	2.2	xxxx	xxxx	xxxx	xxxx	xxxx
Capacity Module:					31	31	1	1	xxxx	xxxx	xxxx	xxxx	xxxx
Cnflct Vol:					988	866	1090	1635	xxxx	xxxx	xxxx	xxxx	xxxx
Potent Cap.:					981	858	1090	1635	xxxx	xxxx	xxxx	xxxx	xxxx
Move Cap.:					0.00	0.00	0.01	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Volume/Cap:													
Level of Service Module:					0.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
2Way95thQ:					7.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Control Del:					A	*	*	*	*	*	*	*	*
LOS by Move:					A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	
Shared Cap.:					1078	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:					0.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:					8.4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:					A	*	*	*	*	*	*	*	*
ApproachDel:					8.4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
ApproachLOS:					A	*	*	*	*	*	*	*	*

Existing
Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing Sunday

Intersection #116: Lockwood St/Spear Ave

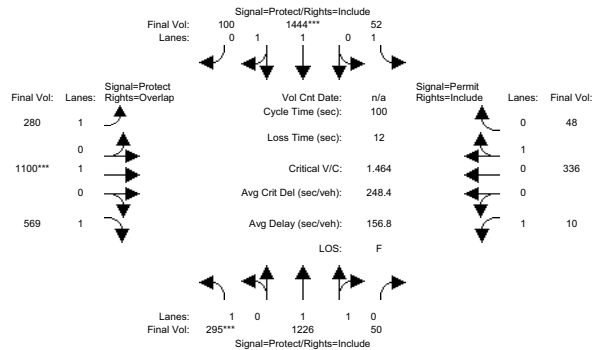


Street Name:	Lockwood St				Spear Ave								
Approach:	North Bound		South Bound		East Bound		West Bound						
Movement:	L	T	R	L	T	R	L	T	R				
Volume Module:	0	0	0	1	0	9	4	5	0	0	1	1	
Base Vol:	0	0	0	1	0	9	4	5	0	0	1	1	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	0	0	1	0	9	4	5	0	0	1	1	
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	1	0	9	4	5	0	0	1	1	
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:	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 Volume:	0	0	0	1	0	9	4	5	0	0	1	1	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
FinalVolume:	0	0	0	1	0	9	4	5	0	0	1	1	
Critical Gap Module:					6.4	6.5	6.2	4.1	xxxx	xxxx	xxxx	xxxx	xxxx
FollowUpTim:					3.5	4.0	3.3	2.2	xxxx	xxxx	xxxx	xxxx	xxxx
Capacity Module:					15	15	2	2	xxxx	xxxx	xxxx	xxxx	xxxx
Cnflct Vol:					1009	884	1089	1634	xxxx	xxxx	xxxx	xxxx	xxxx
Potent Cap.:					1008	882	1089	1634	xxxx	xxxx	xxxx	xxxx	xxxx
Move Cap.:					0.00	0.00	0.01	0.00	xxxx	xxxx	xxxx	xxxx	xxxx
Volume/Cap:													
Level of Service Module:					0.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
2Way95thQ:					7.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Control Del:					A	*	*	*	*	*	*	*	*
LOS by Move:					A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	
Shared Cap.:					1080	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:					0.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:					8.4	xxxx	7.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:					A	*	A	*	A	*	A	*	A
ApproachDel:					8.4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
ApproachLOS:					A	*	*	*	*	*	*	*	*

No Action Alternative (1993 Baseline)

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project AM

Intersection #1002: 3rd St / Cesar Chavez

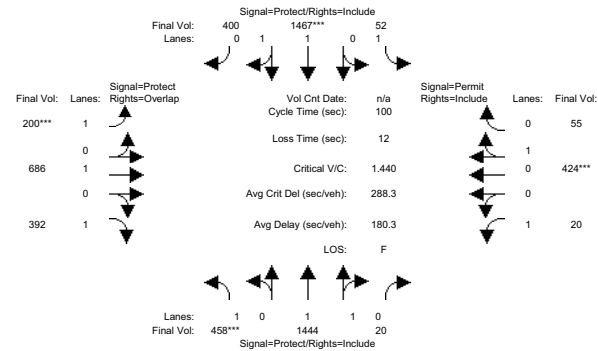


Street Name:	3rd St				Cesar Chavez							
	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Min. Green:	15	45	45	5	35	35	15	40	40	20	20	20
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	295	1226	50	52	1444	100	280	1100	569	10	336	48
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:	295	1226	50	52	1444	100	280	1100	569	10	336	48
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:	295	1226	50	52	1444	100	280	1100	569	10	336	48
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:	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 Volume:	295	1226	50	52	1444	100	280	1100	569	10	336	48
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	295	1226	50	52	1444	100	280	1100	569	10	336	48
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:	295	1226	50	52	1444	100	280	1100	569	10	336	48
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.86	0.86	0.86	0.85	0.85	0.86	0.91	0.77	0.18	0.89	0.89
Lanes:	1.00	1.92	0.08	1.00	1.87	0.13	1.00	1.00	1.00	1.00	0.88	0.12
Final Sat.:	1641	3134	128	1641	3038	210	1641	1727	1468	345	1482	212
Capacity Analysis Module:												
Vol/Sat:	0.18	0.39	0.39	0.03	0.48	0.48	0.17	0.64	0.39	0.03	0.23	0.23
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.15	0.44	0.44	0.05	0.34	0.34	0.20	0.39	0.54	0.20	0.20	0.20
Volume/Cap:	1.22	0.89	0.89	0.65	1.39	1.39	0.87	1.62	0.72	0.14	1.16	1.16
Delay/Veh:	174.8	34.6	34.6	81.4	212	212.5	65.7	319	23.3	38.1	140	139.7
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:	174.8	34.6	34.6	81.4	212	212.5	65.7	319	23.3	38.1	140	139.7
LOS by Move:	F	C	C	F	F	F	E	F	C	D	F	F
HCM2kAvgQ:	16	19	19	1	52	52	10	86	14	0	20	20

No Action Alternative (1993 Baseline)

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project PM

Intersection #1002: 3rd St / Cesar Chavez

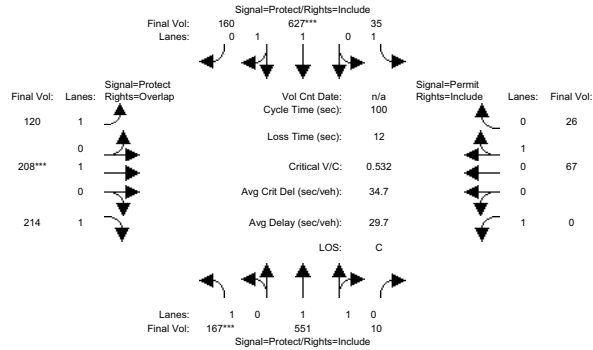


Street Name:	3rd St				Cesar Chavez							
	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Min. Green:	15	45	45	5	35	35	15	40	40	20	20	20
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	458	1444	20	52	1467	400	200	686	392	20	424	55
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:	458	1444	20	52	1467	400	200	686	392	20	424	55
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:	458	1444	20	52	1467	400	200	686	392	20	424	55
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:	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 Volume:	458	1444	20	52	1467	400	200	686	392	20	424	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	458	1444	20	52	1467	400	200	686	392	20	424	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:	458	1444	20	52	1467	400	200	686	392	20	424	55
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.86	0.86	0.86	0.84	0.84	0.86	0.91	0.77	0.18	0.89	0.89
Lanes:	1.00	1.97	0.03	1.00	1.57	0.43	1.00	1.00	1.00	1.00	0.89	0.11
Final Sat.:	1641	3230	45	1641	2496	681	1641	1727	1468	345	1503	195
Capacity Analysis Module:												
Vol/Sat:	0.28	0.45	0.45	0.03	0.59	0.59	0.12	0.40	0.27	0.06	0.28	0.28
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.17	0.49	0.49	0.05	0.37	0.37	0.15	0.34	0.52	0.20	0.20	0.20
Volume/Cap:	1.61	0.92	0.92	0.59	1.61	1.61	0.83	1.16	0.52	0.28	1.44	1.44
Delay/Veh:	331.5	34.5	34.5	73.6	310	309.8	69.0	122	18.8	44.7	255	254.8
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:	331.5	34.5	34.5	73.6	310	309.8	69.0	122	18.8	44.7	255	254.8
LOS by Move:	F	C	C	E	F	F	F	E	F	B	D	F
HCM2kAvgQ:	35	21	21	1	74	74	7	35	8	1	34	34

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project Sunday

Intersection #1002: 3rd St / Cesar Chavez



Street Name:	3rd St						Cesar Chavez					
	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	45	45	5	35	35	15	40	40	20	20	20
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:	167	551	10	35	627	160	120	208	214	0	67	26
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:	167	551	10	35	627	160	120	208	214	0	67	26
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:	167	551	10	35	627	160	120	208	214	0	67	26
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:	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 Volume:	167	551	10	35	627	160	120	208	214	0	67	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	167	551	10	35	627	160	120	208	214	0	67	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:	167	551	10	35	627	160	120	208	214	0	67	26

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.86	0.86	0.86	0.84	0.84	0.86	0.91	0.77	1.00	0.87	0.87
Lanes:	1.00	1.96	0.04	1.00	1.59	0.41	1.00	1.00	1.00	1.00	0.72	0.28
Final Sat.:	1641	3213	58	1641	2536	647	1641	1727	1468	1900	1192	463

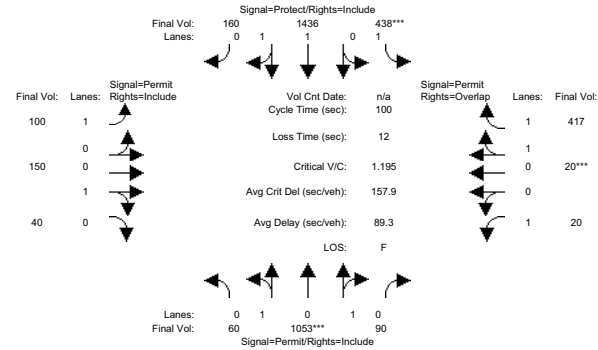
Capacity Analysis Module:												
Vol/Sat:	0.10	0.17	0.17	0.02	0.25	0.25	0.07	0.12	0.15	0.00	0.06	0.06
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.15	0.44	0.44	0.05	0.34	0.34	0.20	0.39	0.54	0.00	0.20	0.20
Volume/Cap:	0.69	0.39	0.39	0.44	0.72	0.72	0.37	0.31	0.27	0.00	0.29	0.29
Delay/Veh:	56.4	20.0	20.0	63.4	33.4	33.4	38.8	22.6	13.5	0.0	37.1	37.1
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:	56.4	20.0	20.0	63.4	33.4	33.4	38.8	22.6	13.5	0.0	37.1	37.1
LOS by Move:	E	C	C	E	C	C	D	C	B	A	D	D
HCM2kAvgQ:	5	6	6	1	12	12	3	4	4	0	2	2

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project AM

Intersection #1003: 3rd St / Cargo Way



Street Name:	3rd St						Cargo Way					
	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	40	40	20	65	65	25	25	25	25	25	25
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:	60	1053	90	438	1436	160	100	150	40	20	20	417
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:	60	1053	90	438	1436	160	100	150	40	20	20	417
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:	60	1053	90	438	1436	160	100	150	40	20	20	417
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:	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 Volume:	60	1053	90	438	1436	160	100	150	40	20	20	417
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	1053	90	438	1436	160	100	150	40	20	20	417
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:	60	1053	90	438	1436	160	100	150	40	20	20	417

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	0.85	0.85	0.43	0.85	0.85	0.72	0.92	0.92	0.46	0.78	0.78
Lanes:	0.10	1.75	0.15	1.00	1.80	0.20	1.00	0.79	0.21	1.00	0.09	1.91
Final Sat.:	161	2821	241	820	2908	324	1360	1382	369	867	135	2825

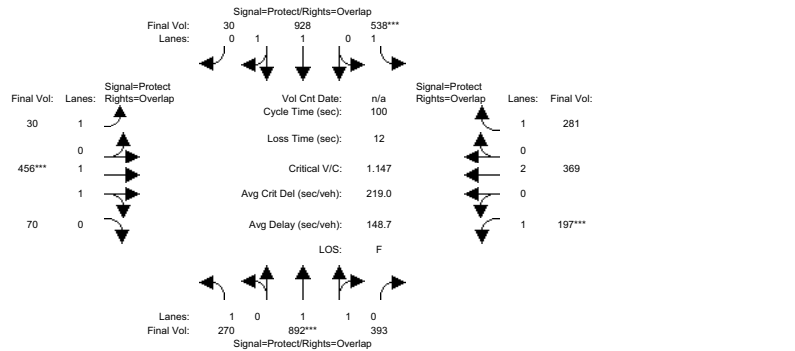
Capacity Analysis Module:												
Vol/Sat:	0.37	0.37	0.37	0.53	0.49	0.49	0.07	0.11	0.11	0.02	0.15	0.15
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.39	0.39	0.39	0.25	0.64	0.64	0.25	0.25	0.25	0.25	0.25	0.49
Volume/Cap:	0.95	0.95	0.95	2.18	0.77	0.77	0.30	0.44	0.44	0.09	0.60	0.30
Delay/Veh:	46.2	46.2	46.2	584.8	16.2	16.2	33.7	35.9	35.9	30.6	37.8	16.1
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:	46.2	46.2	46.2	584.8	16.2	16.2	33.7	35.9	35.9	30.6	37.8	16.1
LOS by Move:	D	D	D	F	B	B	C	D	D	C	D	B
HCM2kAvgQ:	20	20	20	42	16	3	3	5	5	1	7	4

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project AM

Intersection #1004: 3rd St / Evans Ave



Street Name:	3rd St						Evans Ave					
	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	12	46	46	12	46	46	6	20	20	12	26	26
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:	270	892	393	538	928	30	30	456	70	197	369	281
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:	270	892	393	538	928	30	30	456	70	197	369	281
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:	270	892	393	538	928	30	30	456	70	197	369	281
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:	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 Volume:	270	892	393	538	928	30	30	456	70	197	369	281
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	270	892	393	538	928	30	30	456	70	197	369	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:	270	892	393	538	928	30	30	456	70	197	369	281

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.82	0.82	0.86	0.86	0.86	0.90	0.87	0.87	0.90	0.90	0.78
Lanes:	1.00	1.39	0.61	1.00	1.94	0.06	1.00	1.73	0.27	1.00	2.00	1.00
Final Sat.:	1641	2173	957	1641	3163	102	1718	2861	439	1718	3437	1476

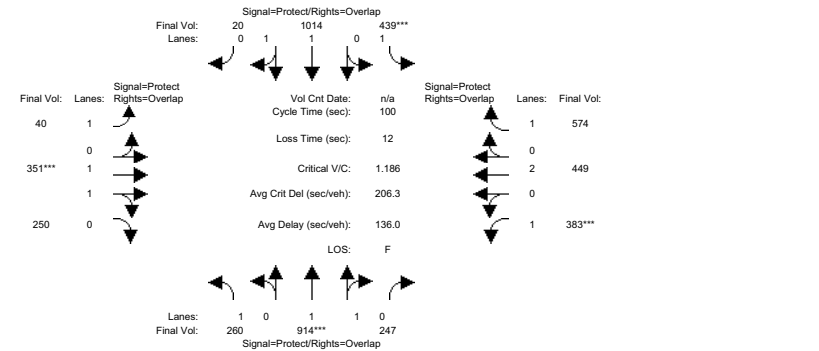
Capacity Analysis Module:												
Vol/Sat:	0.16	0.41	0.41	0.33	0.29	0.29	0.02	0.16	0.16	0.11	0.11	0.19
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.45	0.57	0.12	0.45	0.51	0.06	0.20	0.31	0.12	0.25	0.37
Volume/Cap:	1.40	0.91	0.72	2.79	0.65	0.58	0.30	0.81	0.51	0.97	0.42	0.51
Delay/Veh:	252.7	36.4	18.7	863.5	24.0	18.8	53.3	49.9	30.4	101.9	33.2	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:	252.7	36.4	18.7	863.5	24.0	18.8	53.3	49.9	30.4	101.9	33.2	28.2
LOS by Move:	F	D	B	F	C	B	D	D	C	F	C	C
HCM2kAvgQ:	17	19	14	59	12	11	1	8	6	10	5	7

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project PM

Intersection #1004: 3rd St / Evans Ave



Street Name:	3rd St						Evans Ave					
	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	12	46	46	12	46	46	6	20	20	12	26	26
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:	260	914	247	439	1014	20	40	351	250	383	449	574
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:	260	914	247	439	1014	20	40	351	250	383	449	574
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:	260	914	247	439	1014	20	40	351	250	383	449	574
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:	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 Volume:	260	914	247	439	1014	20	40	351	250	383	449	574
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	260	914	247	439	1014	20	40	351	250	383	449	574
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:	260	914	247	439	1014	20	40	351	250	383	449	574

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.84	0.84	0.86	0.86	0.86	0.90	0.83	0.83	0.90	0.90	0.78
Lanes:	1.00	1.57	0.43	1.00	1.96	0.04	1.00	1.17	0.83	1.00	2.00	1.00
Final Sat.:	1641	2501	676	1641	3208	63	1718	1845	1314	1718	3437	1476

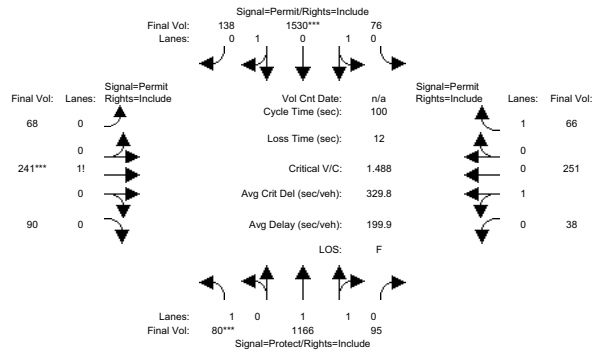
Capacity Analysis Module:												
Vol/Sat:	0.16	0.37	0.37	0.27	0.32	0.32	0.02	0.19	0.19	0.22	0.13	0.39
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.45	0.57	0.12	0.45	0.51	0.06	0.20	0.31	0.12	0.25	0.37
Volume/Cap:	1.35	0.81	0.64	2.27	0.70	0.62	0.40	0.97	0.61	1.89	0.51	1.04
Delay/Veh:	231.4	29.3	16.7	634.6	25.3	19.7	57.5	70.2	32.4	465.6	34.7	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:	231.4	29.3	16.7	634.6	25.3	19.7	57.5	70.2	32.4	465.6	34.7	82.3
LOS by Move:	F	C	B	F	C	B	E	E	C	F	C	F
HCM2kAvgQ:	16	17	13	44	14	12	1	11	8	35	7	26

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project PM

Intersection #1006: 3rd St / Palou Ave



Street Name:	3rd St				Palou Ave				
	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Min. Green:	15	69	69	0	49	49	21	21	21
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Volume Module:	3rd St NB		3rd St SB		Palou Ave EB		Palou Ave WB	
Base Vol:	80	1166	95	76	1530	138	68	241
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	80	1166	95	76	1530	138	68	241
Added Vol:	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0
Initial Fut:	80	1166	95	76	1530	138	68	241
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	80	1166	95	76	1530	138	68	241
Reduct Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	80	1166	95	76	1530	138	68	241
PCE Adj:	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
FinalVolume:	80	1166	95	76	1530	138	68	241

Saturation Flow Module:	3rd St NB		3rd St SB		Palou Ave EB		Palou Ave WB	
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.78	0.78	0.57	0.57	0.45	0.45	0.79
Lanes:	1.00	1.85	0.15	0.09	1.75	0.16	0.17	0.60
Final Sat.:	1718	2744	224	95	1914	173	146	516

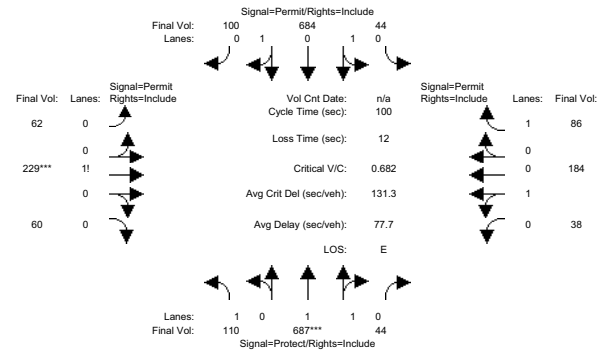
Capacity Analysis Module:	3rd St NB		3rd St SB		Palou Ave EB		Palou Ave WB	
Vol/Sat:	0.05	0.42	0.42	0.80	0.80	0.47	0.47	0.19
Crit Moves:	****			****		****		****
Green/Cycle:	0.15	0.64	0.64	0.49	0.49	0.24	0.24	0.24
Volume/Cap:	0.32	0.66	0.66	1.62	1.62	1.92	1.92	1.92
Delay/Veh:	42.2	13.4	13.4	310.6	311	310.6	471.0	471.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.2	13.4	13.4	310.6	311	310.6	471.0	471.0
LOS by Move:	D	B	B	F	F	F	F	D
HCM2kAvgQ:	2	13	13	71	71	37	37	10

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project Sunday

Intersection #1006: 3rd St / Palou Ave



Street Name:	3rd St				Palou Ave				
	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Min. Green:	15	69	69	0	49	49	21	21	21
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Volume Module:	3rd St NB		3rd St SB		Palou Ave EB		Palou Ave WB	
Base Vol:	110	687	44	44	684	100	62	229
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	110	687	44	44	684	100	62	229
Added Vol:	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0
Initial Fut:	110	687	44	44	684	100	62	229
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	110	687	44	44	684	100	62	229
Reduct Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	110	687	44	44	684	100	62	229
PCE Adj:	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
FinalVolume:	110	687	44	44	684	100	62	229

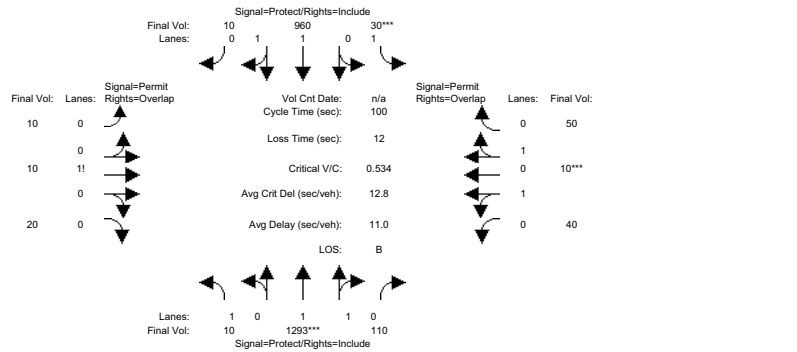
Saturation Flow Module:	3rd St NB		3rd St SB		Palou Ave EB		Palou Ave WB	
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.78	0.78	0.70	0.70	0.52	0.52	0.73
Lanes:	1.00	1.88	0.12	0.11	1.65	0.24	0.18	0.65
Final Sat.:	1718	2794	179	141	2188	320	174	643

Capacity Analysis Module:	3rd St NB		3rd St SB		Palou Ave EB		Palou Ave WB	
Vol/Sat:	0.06	0.25	0.25	0.31	0.31	0.36	0.36	0.16
Crit Moves:	****			****		****		****
Green/Cycle:	0.20	0.68	0.68	0.48	0.48	0.21	0.21	0.21
Volume/Cap:	0.33	0.36	0.36	0.65	0.65	1.73	1.73	1.73
Delay/Veh:	37.8	7.6	7.6	22.6	22.6	388.9	389	388.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.8	7.6	7.6	22.6	22.6	388.9	389	388.9
LOS by Move:	D	A	A	C	C	C	F	F
HCM2kAvgQ:	3	5	5	11	11	31	31	7

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

No Action Alternative (1993 Baseline)
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project AM

Intersection #1008: 3rd St / Carroll Ave



Street Name: 3rd St, Carroll Ave
Approach: North Bound, South Bound, East Bound, West Bound
Movement: L - T - R
Min. Green: 1 65 65 5 69 69 15 15 15 15 15 15
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: 10 1293 110 30 960 10 10 10 20 40 10 50
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 1293 110 30 960 10 10 10 20 40 10 50

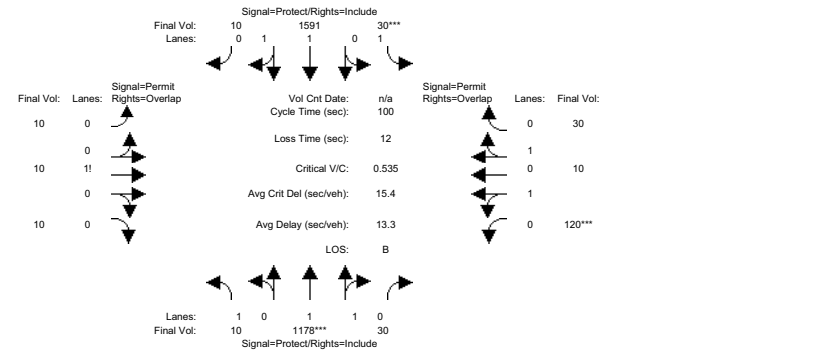
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.89 0.89 0.90 0.90 0.90 0.84 0.84 0.84 0.66 0.66 0.66
Lanes: 1.00 1.84 0.16 1.00 1.98 0.02 0.25 0.25 0.50 0.80 0.20 1.00

Capacity Analysis Module:
Vol/Sat: 0.01 0.41 0.41 0.02 0.28 0.28 0.02 0.02 0.02 0.04 0.04 0.04
Crit Moves: ****
Green/Cycle: 0.01 0.68 0.68 0.05 0.72 0.72 0.15 0.15 0.16 0.15 0.15 0.20

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

No Action Alternative (1993 Baseline)
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project PM

Intersection #1008: 3rd St / Carroll Ave



Street Name: 3rd St, Carroll Ave
Approach: North Bound, South Bound, East Bound, West Bound
Movement: L - T - R
Min. Green: 1 65 65 5 69 69 15 15 15 15 15 15
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: 10 1178 30 30 1591 10 10 10 10 120 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 1178 30 30 1591 10 10 10 10 120 10 30

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.90 0.90 0.90 0.90 0.90 0.84 0.84 0.84 0.63 0.63 0.63
Lanes: 1.00 1.95 0.05 1.00 1.99 0.01 0.34 0.33 0.33 1.00 0.25 0.75

Capacity Analysis Module:
Vol/Sat: 0.01 0.35 0.35 0.02 0.47 0.47 0.02 0.02 0.02 0.10 0.03 0.03
Crit Moves: ****
Green/Cycle: 0.01 0.65 0.65 0.05 0.69 0.69 0.18 0.18 0.19 0.18 0.18 0.23

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project AM

Intersection #1016: Evans Ave / Cesar Chavez

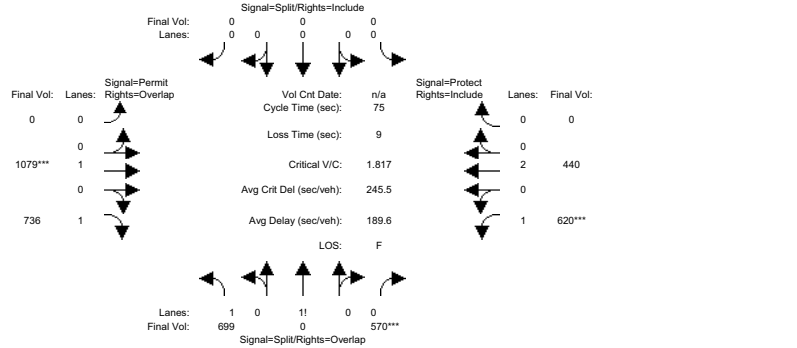


Table with 4 columns: Street Name, Approach, Movement, and Volume. Rows include Min. Green, Y+R, and Volume Module data.

Table with 14 columns representing different lane movements and 10 rows of Volume Module data including Base Vol, Growth Adj, Initial Bse, etc.

Table with 14 columns representing different lane movements and 4 rows of Saturation Flow Module data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Table with 14 columns representing different lane movements and 11 rows of Capacity Analysis Module data including Vol/Sat, Crit Moves, Green/Cycle, etc.

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project PM

Intersection #1016: Evans Ave / Cesar Chavez

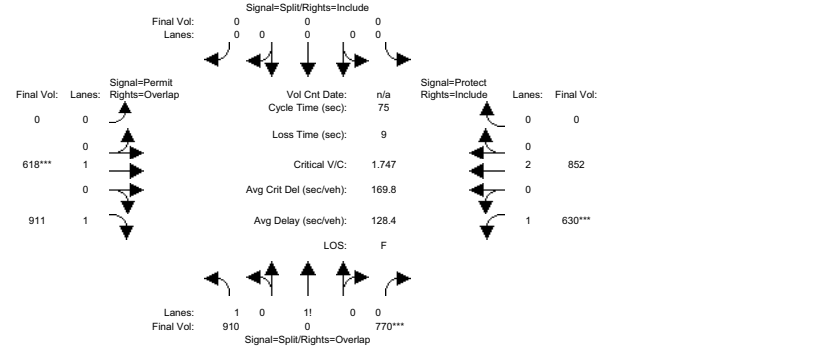


Table with 4 columns: Street Name, Approach, Movement, and Volume. Rows include Min. Green, Y+R, and Volume Module data.

Table with 14 columns representing different lane movements and 10 rows of Volume Module data including Base Vol, Growth Adj, Initial Bse, etc.

Table with 14 columns representing different lane movements and 4 rows of Saturation Flow Module data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Table with 14 columns representing different lane movements and 11 rows of Capacity Analysis Module data including Vol/Sat, Crit Moves, Green/Cycle, etc.

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project Sunday

Intersection #1016: Evans Ave / Cesar Chavez

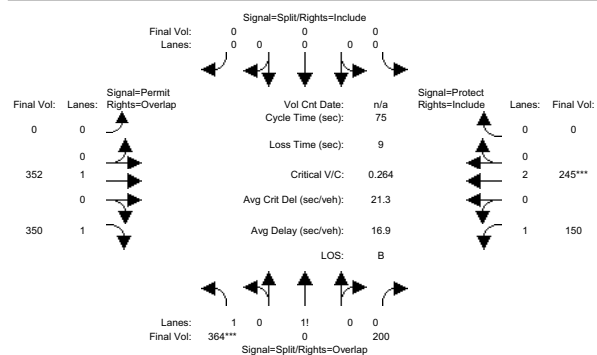


Table with columns for Street Name, Approach, Movement, and traffic volume data for Evans Ave and Cesar Chavez. Includes metrics like Min. Green, Y+R, and Volume Module.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. values.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, and other performance metrics.

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project AM

Intersection #1048: Middle Point Rd / Evans Ave

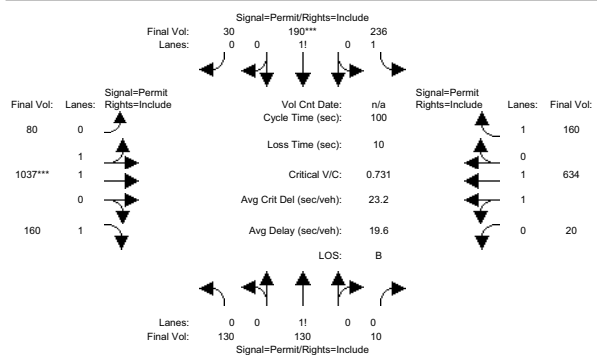


Table with columns for Street Name, Approach, Movement, and traffic volume data for Middle Point Rd and Evans Ave. Includes metrics like Min. Green, Y+R, and Volume Module.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. values.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, and other performance metrics.

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

No Action Alternative (1993 Baseline) Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) No Project PM

Intersection #1048: Middle Point Rd / Evans Ave

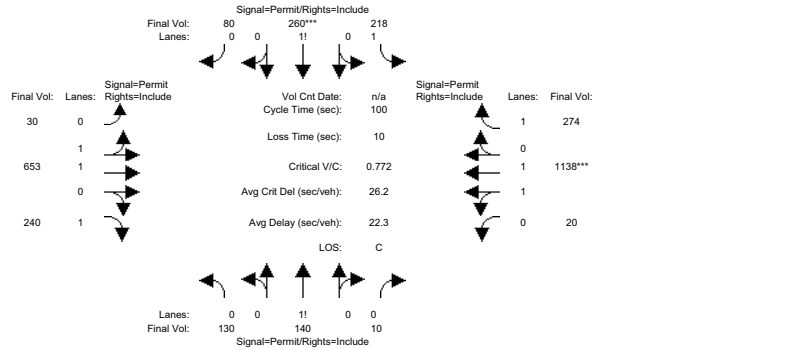


Table with columns: Street Name, Approach, Movement, Min. Green, Y+R.

Volume Module table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

No Action Alternative (1993 Baseline) Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) No Project Sunday

Intersection #1048: Middle Point Rd / Evans Ave

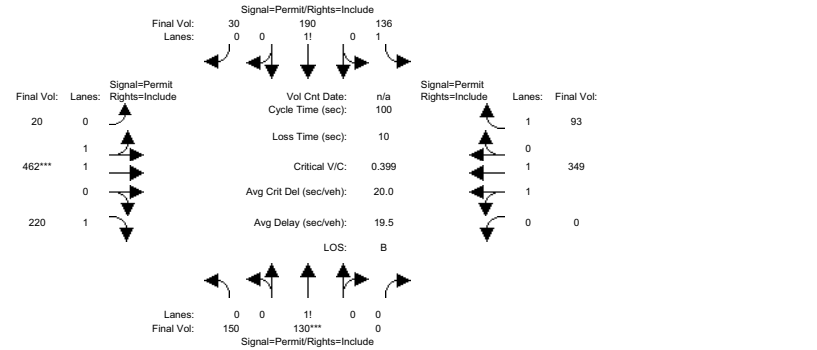


Table with columns: Street Name, Approach, Movement, Min. Green, Y+R.

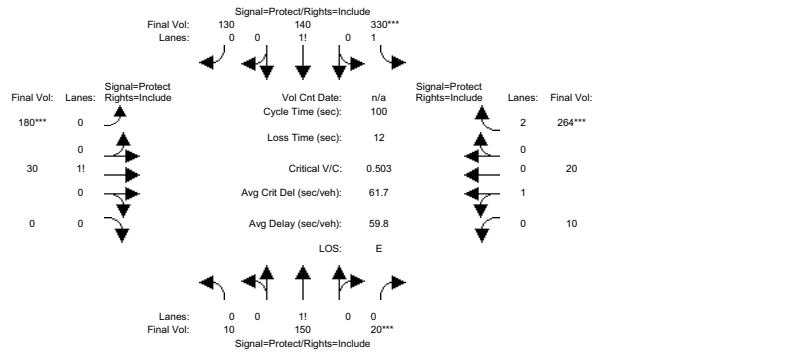
Volume Module table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Level of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 No Project Sunday

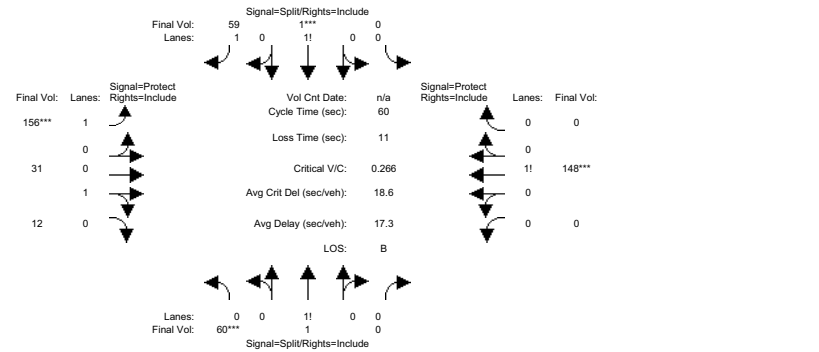
Intersection #1058: Evans Ave/Napolean Ave/Toland



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	19	19	19	40	40	40	12	12	12	13	13	40
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	150	20	330	140	130	180	30	0	10	20	264
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	150	20	330	140	130	180	30	0	10	20	264
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	150	20	330	140	130	180	30	0	10	20	264
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:	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 Volume:	10	150	20	330	140	130	180	30	0	10	20	264
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	150	20	330	140	130	180	30	0	10	20	264
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	150	20	330	140	130	180	30	0	10	20	264
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	0.90	0.90	0.94	0.94	1.00	0.94	0.94	0.71
Lanes:	0.06	0.83	0.11	1.38	0.32	0.30	0.86	0.14	0.00	0.33	0.67	2.00
Final Sat.:	102	1524	203	2347	548	509	1531	255	0	593	1187	2706
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.10	0.14	0.26	0.26	0.12	0.12	0.00	0.02	0.02	0.10
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.15	0.15	0.15	0.33	0.33	0.33	0.10	0.22	0.00	0.20	0.33	0.33
Volume/Cap:	0.64	0.64	0.64	0.43	0.79	0.79	1.21	0.53	0.00	0.08	0.05	0.30
Delay/Veh:	53.5	53.5	53.5	32.8	43.0	43.0	189.7	43.4	0.0	40.1	28.5	31.2
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:	53.5	53.5	53.5	32.8	43.0	43.0	189.7	43.4	0.0	40.1	28.5	31.2
LOS by Move:	D	D	D	C	D	D	F	D	A	D	C	C
HCM2kAvgQ:	7	7	7	7	15	15	7	0	1	1	1	4

Level of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 No Project AM

Intersection #110: Innes Ave/Donahue St

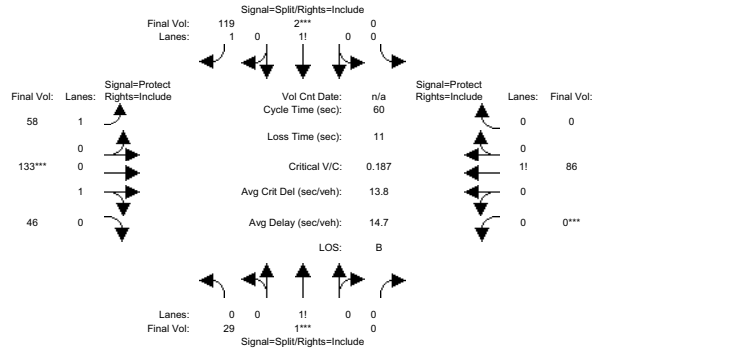


Street Name:	Donahue St			Innes Ave								
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	60	1	0	0	1	59	156	31	12	0	148	0
Growth 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:	60	1	0	0	1	59	156	31	12	0	148	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:	60	1	0	0	1	59	156	31	12	0	148	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:	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 Volume:	60	1	0	0	1	59	156	31	12	0	148	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	1	0	0	1	59	156	31	12	0	148	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:	60	1	0	0	1	59	156	31	12	0	148	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.85	0.85	0.95	0.96	0.96	1.00	1.00	1.00
Lanes:	0.98	0.02	0.00	0.00	0.03	1.97	1.00	0.72	0.28	0.00	1.00	0.00
Final Sat.:	1781	30	0	0	53	3188	1805	1312	508	0	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.00	0.00	0.02	0.02	0.09	0.02	0.02	0.00	0.08	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.13	0.13	0.00	0.00	0.07	0.07	0.33	0.62	0.62	0.00	0.29	0.00
Volume/Cap:	0.27	0.27	0.00	0.00	0.27	0.26	0.27	0.04	0.04	0.00	0.27	0.00
Delay/Veh:	24.3	24.3	0.0	0.0	27.0	27.0	15.2	4.5	4.5	0.0	16.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.3	24.3	0.0	0.0	27.0	27.0	15.2	4.5	4.5	0.0	16.5	0.0
LOS by Move:	C	C	A	A	C	C	B	A	A	A	B	A
HCM2kAvgQ:	1	1	0	0	1	1	2	0	0	0	2	0

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project PM

Intersection #110: Innes Ave/Donahue St



Street Name:	Donahue St				Innes Ave			
	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
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:											
Base Vol:	29	1	0	0	2	119	58	133	46	0	86
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	1	0	0	2	119	58	133	46	0	86
Added Vol:	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	29	1	0	0	2	119	58	133	46	0	86
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	29	1	0	0	2	119	58	133	46	0	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	1	0	0	2	119	58	133	46	0	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	29	1	0	0	2	119	58	133	46	0	86

Saturation Flow Module:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.85	0.85	0.95	0.96	0.96	1.00
Lanes:	0.97	0.03	0.00	0.00	0.03	1.97	1.00	0.74	0.26	0.00
Final Sat.:	1752	60	0	0	53	3189	1805	1357	469	0

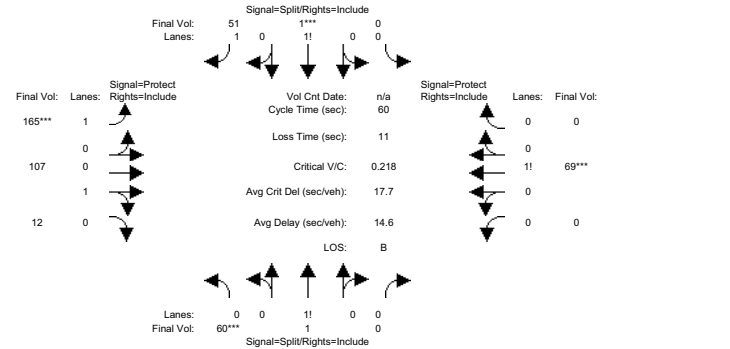
Capacity Analysis Module:										
Vol/Sat:	0.02	0.02	0.00	0.00	0.04	0.04	0.03	0.10	0.10	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.09	0.09	0.00	0.00	0.20	0.20	0.22	0.52	0.52	0.00
Volume/Cap:	0.19	0.19	0.00	0.00	0.19	0.18	0.15	0.19	0.19	0.00
Delay/Veh:	25.9	25.9	0.0	0.0	19.9	19.9	19.1	7.6	7.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.9	25.9	0.0	0.0	19.9	19.9	19.1	7.6	7.6	0.0
LOS by Move:	C	C	A	A	B	B	B	A	A	A
HCM2kAvgQ:	1	1	0	0	1	1	1	2	2	0

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Project Sunday

Intersection #110: Innes Ave/Donahue St



Street Name:	Donahue St				Innes Ave			
	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
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:										
Base Vol:	60	1	0	0	1	51	165	107	12	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	60	1	0	0	1	51	165	107	12	0
Added Vol:	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0
Initial Fut:	60	1	0	0	1	51	165	107	12	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	60	1	0	0	1	51	165	107	12	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	1	0	0	1	51	165	107	12	0
PCE Adj:	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
FinalVolume:	60	1	0	0	1	51	165	107	12	0

Saturation Flow Module:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.85	0.85	0.95	0.99	0.99	1.00
Lanes:	0.98	0.02	0.00	0.00	0.04	1.96	1.00	0.90	0.10	0.00
Final Sat.:	1781	30	0	0	61	3180	1805	1683	189	0

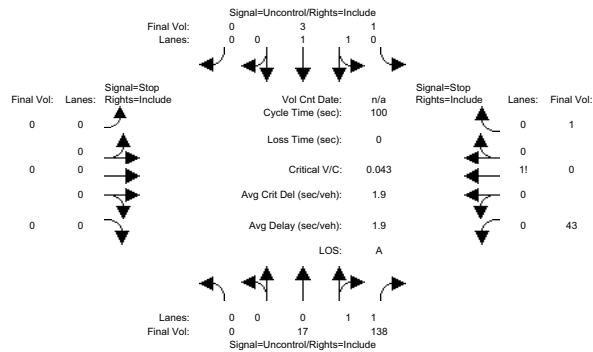
Capacity Analysis Module:										
Vol/Sat:	0.03	0.03	0.00	0.00	0.02	0.02	0.09	0.06	0.06	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.15	0.15	0.00	0.00	0.08	0.08	0.42	0.59	0.59	0.00
Volume/Cap:	0.22	0.22	0.00	0.00	0.22	0.21	0.22	0.11	0.11	0.00
Delay/Veh:	22.6	22.6	0.0	0.0	26.5	26.5	11.3	5.5	5.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.6	22.6	0.0	0.0	26.5	26.5	11.3	5.5	5.5	0.0
LOS by Move:	C	C	A	A	C	C	B	A	A	A
HCM2kAvgQ:	1	1	0	0	1	1	2	1	1	0

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project Sunday

Intersection #111: Donahue St/Galvez Ave



Street Name: Donahue St Galvez 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	17	138	1	3	0	0	0	0	43	0	1
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	17	138	1	3	0	0	0	0	43	0	1
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	17	138	1	3	0	0	0	0	43	0	1
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:	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 Volume:	0	17	138	1	3	0	0	0	0	43	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	17	138	1	3	0	0	0	0	43	0	1

Critical Gap Module:

Critical Gp:	xxxx	xxxx	xxxx	4.1	xxxx	xxxx	xxxx	xxxx	xxxx	6.4	6.5	6.2
FollowUpTim:	xxxx	xxxx	xxxx	2.2	xxxx	xxxx	xxxx	xxxx	xxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxx	155	xxxx	xxxx	xxxx	xxxx	xxxx	21	22	17
Potent Cap.:	xxxx	xxxx	xxxx	1438	xxxx	xxxx	xxxx	xxxx	xxxx	1002	876	1068
Move Cap.:	xxxx	xxxx	xxxx	1438	xxxx	xxxx	xxxx	xxxx	xxxx	1001	875	1068
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	0.00	0.00

Level Of Service Module:

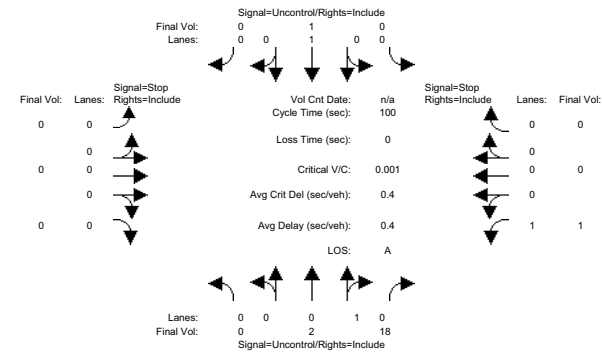
2Way95thQ:	xxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	7.5	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1003	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxx	xxxx	xxxx	0.1	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	7.5	xxxx	xxxx	xxxx	xxxx	xxxx	8.8	xxxx	xxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	8.8	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	A	*	*

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project AM

Intersection #112: Donahue St/Lockwood St



Street Name: Donahue St Lockwood St
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	2	18	0	1	0	0	0	0	1	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	2	18	0	1	0	0	0	0	1	0	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:	0	2	18	0	1	0	0	0	0	1	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	0	2	18	0	1	0	0	0	0	1	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	2	18	0	1	0	0	0	0	1	0	0

Critical Gap Module:

Critical Gp:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	6.4	xxxx	xxxx
FollowUpTim:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	3.5	xxxx	xxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	12	xxxx	xxxx
Potent Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1013	xxxx	xxxx
Move Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1013	xxxx	xxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

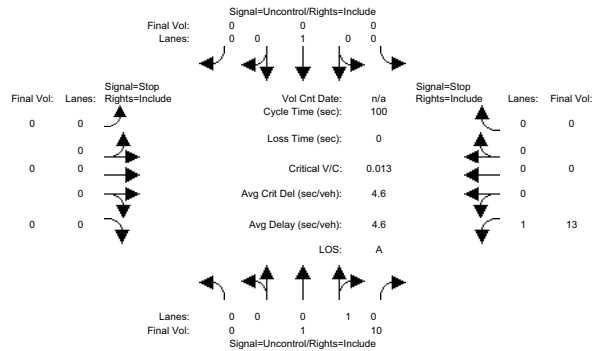
2Way95thQ:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.0	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	8.6	xxxx	xxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	8.6	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	A	*	*

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project PM

Intersection #112: Donahue St/Lockwood St



Street Name: Donahue St Lockwood St
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:	Donahue St			Lockwood St		
	North	South	East	West	North	South
Base Vol:	0	10	0	0	13	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	10	0	0	13	0
Added Vol:	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0
Initial Fut:	0	10	0	0	13	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	10	0	0	13	0
Reduct Vol:	0	0	0	0	0	0
FinalVolume:	0	10	0	0	13	0

Critical Gap Module:

Critical Gp:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	6.4	xxxx	xxxx
FollowUpTim:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	3.5	xxxx	xxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	6	xxxx	xxxx
Potent Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1021	xxxx	xxxx
Move Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1021	xxxx	xxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx

Level of Service Module:

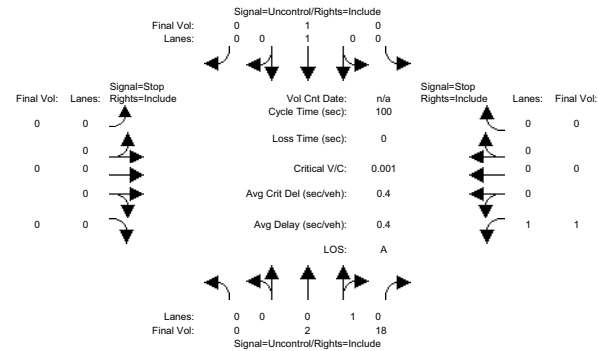
2Way95thQ:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.0	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	8.6	xxxx	xxxx
LOS by Move:	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	8.6		
ApproachLOS:	*	*	*	*	*	*	A		

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project Sunday

Intersection #112: Donahue St/Lockwood St



Street Name: Donahue St Lockwood St
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:	Donahue St			Lockwood St		
	North	South	East	West	North	South
Base Vol:	0	18	0	0	1	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	18	0	0	1	0
Added Vol:	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0
Initial Fut:	0	18	0	0	1	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	18	0	0	1	0
Reduct Vol:	0	0	0	0	0	0
FinalVolume:	0	18	0	0	1	0

Critical Gap Module:

Critical Gp:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	6.4	xxxx	xxxx
FollowUpTim:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	3.5	xxxx	xxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	12	xxxx	xxxx
Potent Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1013	xxxx	xxxx
Move Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1013	xxxx	xxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level of Service Module:

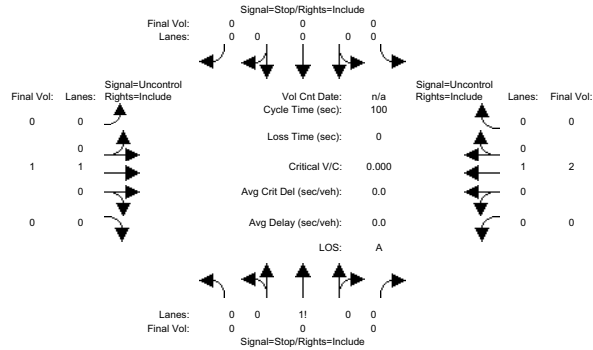
2Way95thQ:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.0	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	8.6	xxxx	xxxx
LOS by Move:	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	8.6		
ApproachLOS:	*	*	*	*	*	*	A		

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project AM

Intersection #113: Crisp Ave/I St



Street Name: Crisp Ave I St
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	0	0	0	0	0	0	1	0	0	2	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	1	0	0	2	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:	0	0	0	0	0	0	0	1	0	0	2	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:	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 Volume:	0	0	0	0	0	0	0	1	0	0	2	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	0	1	0	0	2	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	3	3	1	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	1025	897	1090	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	1025	897	1090	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	xxxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

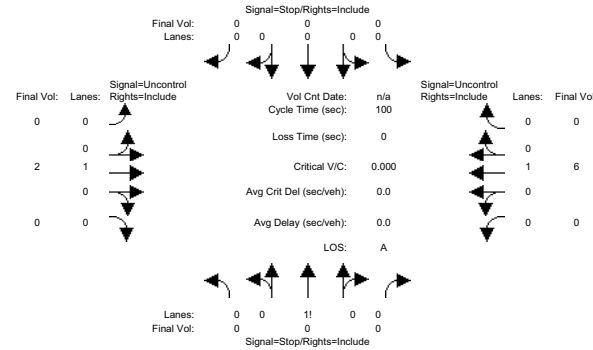
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	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:	xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx	
ApproachLOS:	*		*		*		*		*		*	

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project PM

Intersection #113: Crisp Ave/I St



Street Name: Crisp Ave I St
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	0	0	0	0	0	0	2	0	0	6	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	2	0	0	6	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:	0	0	0	0	0	0	0	2	0	0	6	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:	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 Volume:	0	0	0	0	0	0	0	2	0	0	6	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	0	2	0	0	6	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	8	8	2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	1018	891	1088	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Move Cap.:	1018	891	1088	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx

Level Of Service Module:

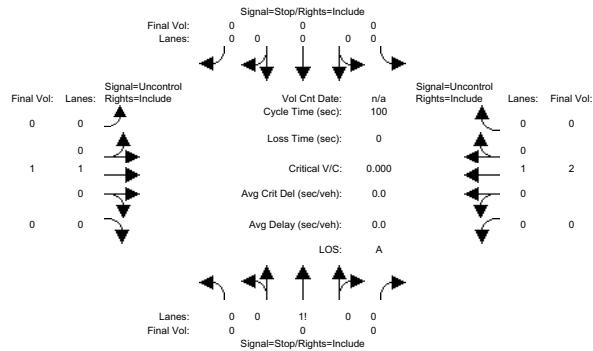
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	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:	xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx	
ApproachLOS:	*		*		*		*		*		*	

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project Sunday

Intersection #113: Crisp Ave/I St



Street Name:	Crisp Ave				I St				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R

Volume Module:	North Bound		South Bound		East Bound		West Bound			
Base Vol:	0	0	0	0	0	1	0	0	2	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	1	0	0	2	0
Added Vol:	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	1	0	0	2	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	1	0	0	2	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	1	0	0	2	0

Critical Gap Module:	North Bound		South Bound		East Bound		West Bound			
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

Capacity Module:	North Bound		South Bound		East Bound		West Bound			
Cnflct Vol:	3	3	1	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Potent Cap.:	1025	897	1090	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Move Cap.:	1025	897	1090	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx

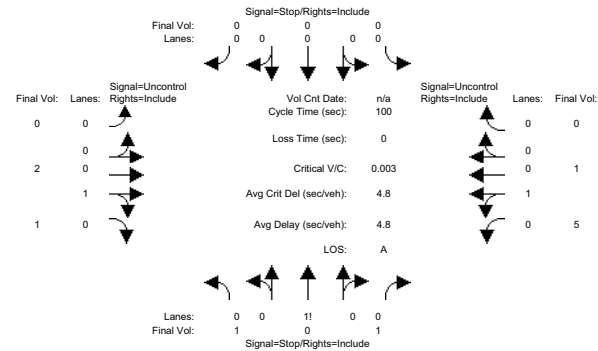
Level Of Service Module:	North Bound		South Bound		East Bound		West Bound					
2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx		
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx		
LOS by Move:	*	*	*	*	*	*	*	*	*	*		
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxxx	0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	
SharedQueue:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	
ApproachDel:	xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx	
ApproachLOS:	*		*		*		*		*		*	

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project AM

Intersection #114: Crisp Ave/Spear Ave



Street Name:	Spear Ave				Crisp Ave-Spear Ave				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R

Volume Module:	North Bound		South Bound		East Bound		West Bound					
Base Vol:	1	0	1	0	0	0	0	2	1	5	1	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	0	1	0	0	0	0	2	1	5	1	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:	1	0	1	0	0	0	0	2	1	5	1	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:	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 Volume:	1	0	1	0	0	0	0	2	1	5	1	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	0	1	0	0	0	0	2	1	5	1	0

Critical Gap Module:	North Bound		South Bound		East Bound		West Bound					
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx	xxxxx

Capacity Module:	North Bound		South Bound		East Bound		West Bound					
Cnflct Vol:	14	14	3	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	3	xxxxx	xxxxx	xxxxx
Potent Cap.:	1011	885	1087	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	1632	xxxxx	xxxxx	xxxxx
Move Cap.:	1008	882	1087	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	1632	xxxxx	xxxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.00	xxxxx	xxxxx	xxxxx

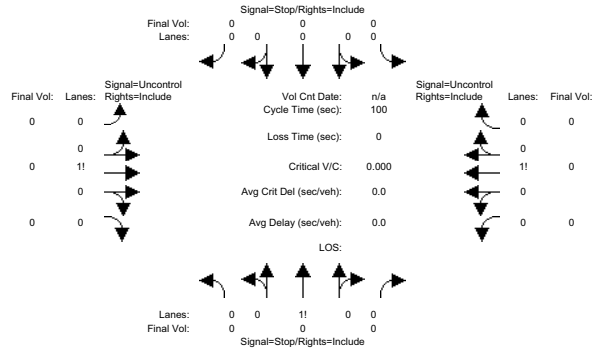
Level Of Service Module:	North Bound		South Bound		East Bound		West Bound					
2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.2	xxxxx	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	A	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxxx	1046	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	8.4	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.2	xxxxx	xxxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	A	*	*	*
ApproachDel:	8.4		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx	
ApproachLOS:	A		*		*		*		*		*	

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project AM

Intersection #115: Galvez Ave/Spear Ave



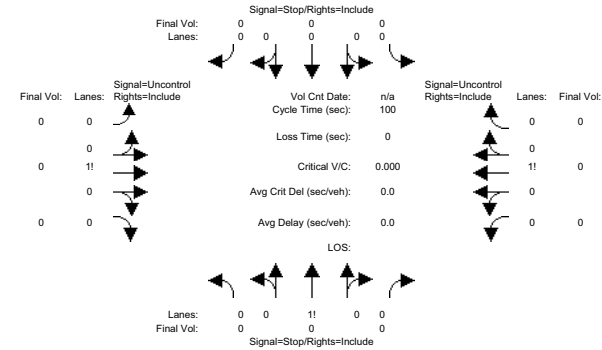
Street Name:	Galvez Ave				Spear Ave							
Approach:	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:	0	0	0	0	0	0	0	0	0	0	0	0
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	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:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	0	0	0	0	0	0
Critical Gap Module:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capacity Module:	0	0	0	0	0	0	0	0	0	0	0	0
Cnflct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Potent Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
Move Cap.:	1	1	1	1	1	1	1	1	1	1	1	1
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Level Of Service Module:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Shared LOS:												
ApproachDel:	0.0			0.0			0.0			0.0		
ApproachLOS:												

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project PM

Intersection #115: Galvez Ave/Spear Ave



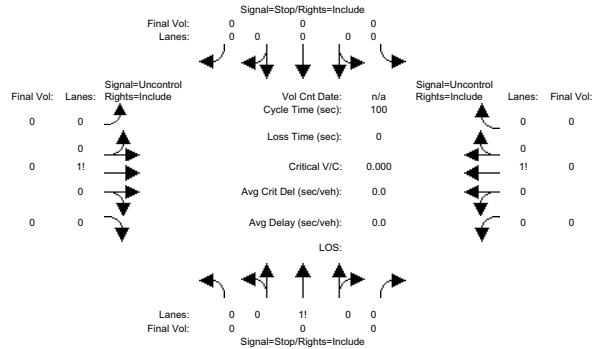
Street Name:	Galvez Ave				Spear Ave							
Approach:	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:	0	0	0	0	0	0	0	0	0	0	0	0
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	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:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	0	0	0	0	0	0
Critical Gap Module:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capacity Module:	0	0	0	0	0	0	0	0	0	0	0	0
Cnflct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Potent Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
Move Cap.:	1	1	1	1	1	1	1	1	1	1	1	1
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Level Of Service Module:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Shared LOS:												
ApproachDel:	0.0			0.0			0.0			0.0		
ApproachLOS:												

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project Sunday

Intersection #115: Galvez Ave/Spear Ave



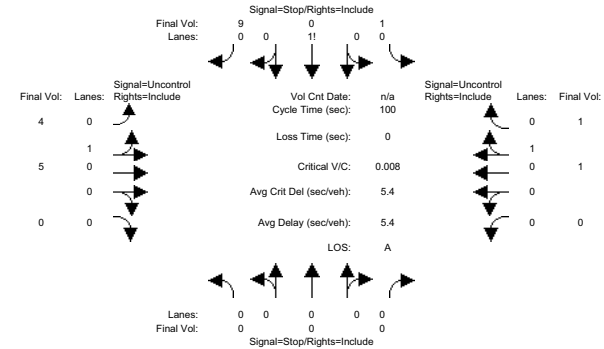
Street Name:	Galvez Ave				Spear Ave							
Approach:	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0		
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Initial Bse:	0	0	0	0	0	0	0	0	0	0		
Added Vol:	0	0	0	0	0	0	0	0	0	0		
PasserByVol:	0	0	0	0	0	0	0	0	0	0		
Initial Fut:	0	0	0	0	0	0	0	0	0	0		
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
PHF Volume:	0	0	0	0	0	0	0	0	0	0		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0		
FinalVolume:	0	0	0	0	0	0	0	0	0	0		
Critical Gap Module:												
Critical Gp:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Capacity Module:												
Cnflct Vol:	0	0	0	0	0	0	0	0	0	0		
Potent Cap.:	0	0	0	0	0	0	0	0	0	0		
Move Cap.:	1	1	1	1	1	1	1	1	1	1		
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Level of Service Module:												
2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
LOS by Move:												
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	0	0	0	0	0	0	0	0	0	0	0	
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Shared LOS:												
ApproachDel:	0.0				0.0				0.0			
ApproachLOS:												

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project AM

Intersection #116: Lockwood St/Spear Ave



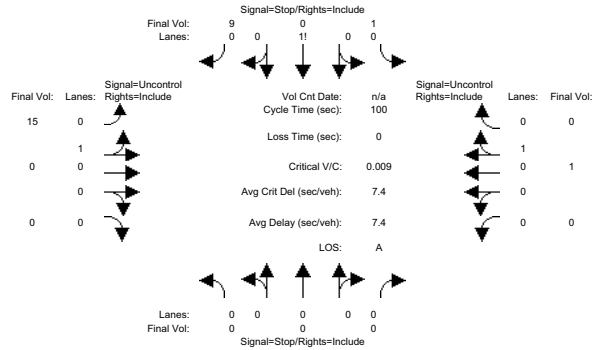
Street Name:	Lockwood St				Spear Ave							
Approach:	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Volume Module:												
Base Vol:	0	0	0	1	0	9	4	5	0	0	1	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1	0	9	4	5	0	0	1	1
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	1	0	9	4	5	0	0	1	1
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:	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 Volume:	0	0	0	1	0	9	4	5	0	0	1	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	1	0	9	4	5	0	0	1	1
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:												
Cnflct Vol:	xxxxx	xxxx	xxxxx	15	15	2	2	xxxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxxx	xxxx	xxxxx	1009	884	1089	1634	xxxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxxx	xxxx	xxxxx	1008	882	1089	1634	xxxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxxx	xxxx	xxxxx	0.00	0.00	0.01	0.00	xxxxx	xxxxx	xxxx	xxxx	xxxxx
Level of Service Module:												
2Way95thQ:	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxxx	xxxx	xxxxx	xxxx	1080	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	8.4	xxxxx	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx				8.4				xxxxxxx			xxxxxxx
ApproachLOS:	*				A				*			*

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project PM

Intersection #116: Lockwood St/Spear Ave



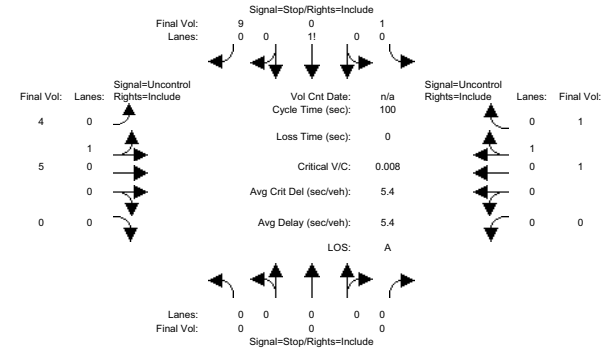
Street Name:	Lockwood St						Spear Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:	----- ----- ----- ----- ----- -----											
Base Vol:	0	0	0	1	0	9	15	0	0	0	1	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1	0	9	15	0	0	0	1	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:	0	0	0	1	0	9	15	0	0	0	1	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:	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 Volume:	0	0	0	1	0	9	15	0	0	0	1	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	1	0	9	15	0	0	0	1	0
Critical Gap Module:	----- ----- ----- ----- ----- -----											
Critical Gp:	xxxx	xxxx	xxxx	6.4	6.5	6.2	4.1	xxxx	xxxx	xxxx	xxxx	xxxx
FollowUpTim:	xxxx	xxxx	xxxx	3.5	4.0	3.3	2.2	xxxx	xxxx	xxxx	xxxx	xxxx
Capacity Module:	----- ----- ----- ----- ----- -----											
Cnflct Vol:	xxxx	xxxx	xxxx	31	31	1	1	xxxx	xxxx	xxxx	xxxx	xxxx
Potent Cap.:	xxxx	xxxx	xxxx	988	866	1090	1635	xxxx	xxxx	xxxx	xxxx	xxxx
Move Cap.:	xxxx	xxxx	xxxx	981	858	1090	1635	xxxx	xxxx	xxxx	xxxx	xxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	0.00	0.01	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:	----- ----- ----- ----- ----- -----											
2Way95thQ:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxx	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	7.2	xxxx	xxxx	xxxx	xxxx	xxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	1078	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	xxxx	8.4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			8.4			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

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

No Action Alternative (1993 Baseline)

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Project Sunday

Intersection #116: Lockwood St/Spear Ave



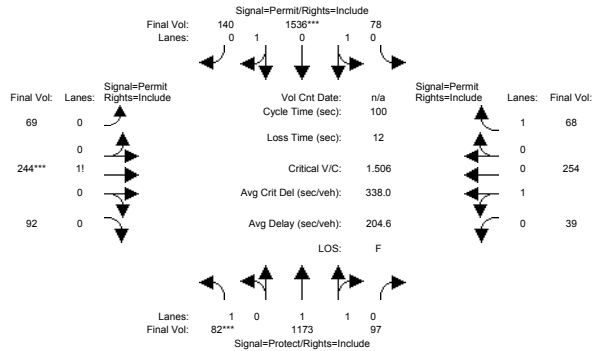
Street Name:	Lockwood St						Spear Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:	----- ----- ----- ----- ----- -----											
Base Vol:	0	0	0	1	0	9	4	5	0	0	1	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1	0	9	4	5	0	0	1	1
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	1	0	9	4	5	0	0	1	1
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:	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 Volume:	0	0	0	1	0	9	4	5	0	0	1	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	1	0	9	4	5	0	0	1	1
Critical Gap Module:	----- ----- ----- ----- ----- -----											
Critical Gp:	xxxx	xxxx	xxxx	6.4	6.5	6.2	4.1	xxxx	xxxx	xxxx	xxxx	xxxx
FollowUpTim:	xxxx	xxxx	xxxx	3.5	4.0	3.3	2.2	xxxx	xxxx	xxxx	xxxx	xxxx
Capacity Module:	----- ----- ----- ----- ----- -----											
Cnflct Vol:	xxxx	xxxx	xxxx	15	15	2	2	xxxx	xxxx	xxxx	xxxx	xxxx
Potent Cap.:	xxxx	xxxx	xxxx	1009	884	1089	1634	xxxx	xxxx	xxxx	xxxx	xxxx
Move Cap.:	xxxx	xxxx	xxxx	1008	882	1089	1634	xxxx	xxxx	xxxx	xxxx	xxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	0.00	0.01	0.00	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:	----- ----- ----- ----- ----- -----											
2Way95thQ:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxx	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	7.2	xxxx	xxxx	xxxx	xxxx	xxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	1080	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	xxxx	8.4	xxxx	7.2	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			8.4			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Action Alternative Weekday PM

Intersection #1006: 3rd St / Palou Ave



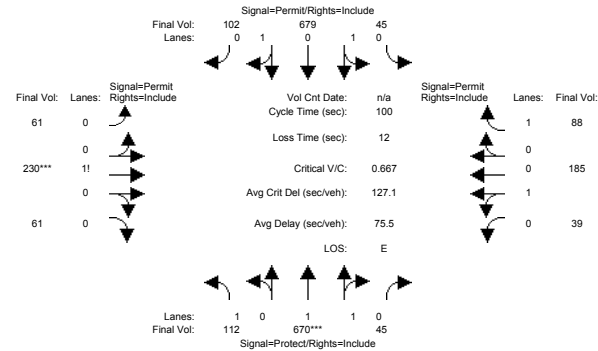
Street Name:	3rd St				Palou Ave				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Min. Green:	15	69	69	0	49	49	21	21	21
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:									
Base Vol:	80	1150	95	76	1505	137	68	239	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	80	1150	95	76	1505	137	68	239	90
Added Vol:	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0
Initial Fut:	80	1150	95	76	1505	137	68	239	90
User Adj:	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
PHF Volume:	82	1173	97	78	1536	140	69	244	92
Reduct Vol:	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	1173	97	78	1536	140	69	244	92
PCE Adj:	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
Final Volume:	82	1173	97	78	1536	140	69	244	92
Saturation Flow Module:									
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.78	0.78	0.57	0.57	0.57	0.45	0.45	0.45
Lanes:	1.00	1.85	0.15	0.09	1.75	0.16	0.17	0.60	0.23
Final Sat.:	1718	2741	226	96	1903	173	146	514	194
Capacity Analysis Module:									
Vol/Sat:	0.05	0.43	0.43	0.81	0.81	0.81	0.47	0.47	0.47
Crit Moves:	****			****			****		
Green/Cycle:	0.15	0.64	0.64	0.49	0.49	0.49	0.24	0.24	0.24
Volume/Cap:	0.32	0.67	0.67	1.64	1.64	1.64	1.95	1.95	1.95
Delay/Veh:	42.3	13.5	13.5	318.6	319	318.6	481.4	481	481.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.3	13.5	13.5	318.6	319	318.6	481.4	481	481.4
LOS by Move:	D	B	B	F	F	F	F	F	F
HCM2kAvgQ:	2	13	13	72	72	72	38	38	38

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Action Alternative Sunday

Intersection #1006: 3rd St / Palou Ave



Street Name:	3rd St				Palou Ave				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Min. Green:	15	69	69	0	49	49	21	21	21
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:									
Base Vol:	110	657	44	44	665	100	60	225	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	110	657	44	44	665	100	60	225	60
Added Vol:	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0
Initial Fut:	110	657	44	44	665	100	60	225	60
User Adj:	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
PHF Volume:	112	670	45	45	679	102	61	230	61
Reduct Vol:	0	0	0	0	0	0	0	0	0
Reduced Vol:	112	670	45	45	679	102	61	230	61
PCE Adj:	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
Final Volume:	112	670	45	45	679	102	61	230	61
Saturation Flow Module:									
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.78	0.78	0.69	0.69	0.69	0.53	0.53	0.53
Lanes:	1.00	1.87	0.13	0.11	1.64	0.25	0.17	0.66	0.17
Final Sat.:	1718	2787	187	143	2167	326	176	661	176
Capacity Analysis Module:									
Vol/Sat:	0.07	0.24	0.24	0.31	0.31	0.31	0.35	0.35	0.35
Crit Moves:	****			****			****		
Green/Cycle:	0.20	0.68	0.68	0.48	0.48	0.48	0.21	0.21	0.21
Volume/Cap:	0.33	0.36	0.36	0.65	0.65	0.65	1.69	1.69	1.69
Delay/Veh:	37.9	7.5	7.5	22.7	22.7	22.7	370.0	370	370.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.9	7.5	7.5	22.7	22.7	22.7	370.0	370	370.0
LOS by Move:	D	A	A	C	C	C	F	F	F
HCM2kAvgQ:	3	5	5	11	11	11	30	30	30

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Action Alternative Sunday

Intersection #1008: 3rd St / Carroll Ave

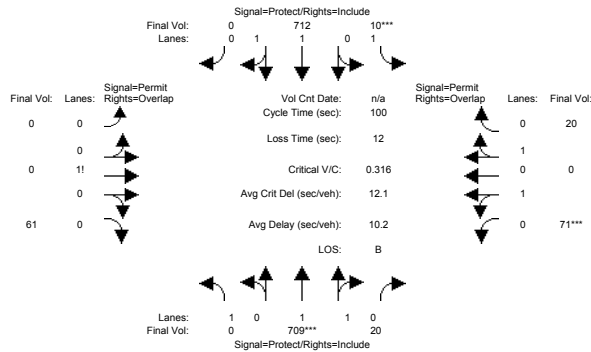


Table with columns for Street Name, Approach, Movement, and traffic volume data for 3rd St and Carroll Ave.

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Action Alternative Weekday AM

Intersection #1009: 3rd St / Paul Ave / Gilman Ave

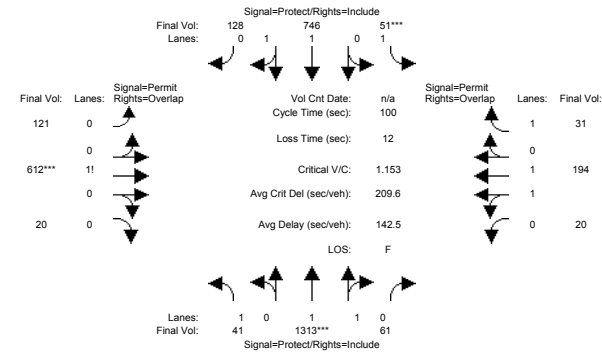
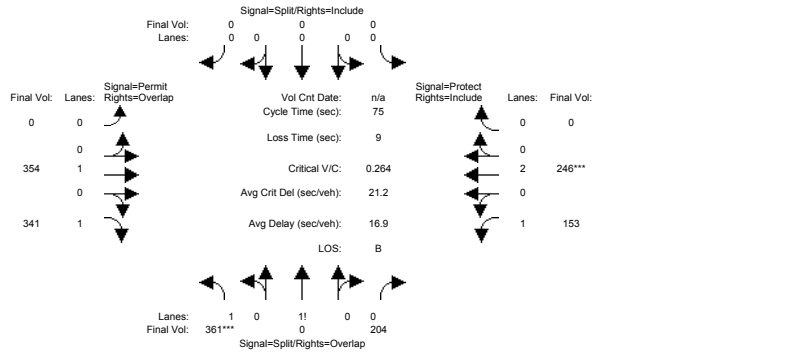


Table with columns for Street Name, Approach, Movement, and traffic volume data for 3rd St and Paul Ave / Gilman Ave.

No Action Alternative (2007 Baseline)

Level of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 No Action Alternative Sunday

Intersection #1016: Evans Ave / Cesar Chavez



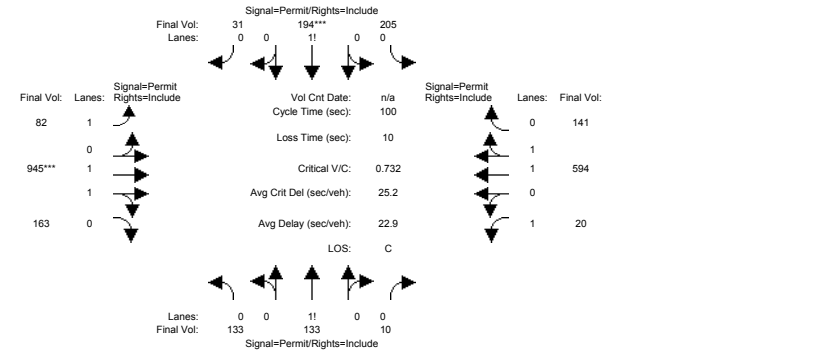
Street Name:	Evans Ave						Cesar Chavez					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	19	0	19	0	0	0	0	21	21	22	47	47
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:	Base Vol: 354 0 200 0 0 0 0 0 347 334 150 241 0 Growth 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: 354 0 200 0 0 0 0 0 347 334 150 241 0 Added Vol: 0 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 0 Initial Fut: 354 0 200 0 0 0 0 0 347 334 150 241 0 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 PHF Volume: 361 0 204 0 0 0 0 0 354 341 153 246 0 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 361 0 204 0 0 0 0 0 354 341 153 246 0 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Final Volume: 361 0 204 0 0 0 0 0 354 341 153 246 0											
Saturation Flow Module:	Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 Adjustment: 0.82 1.00 0.82 1.00 1.00 1.00 1.00 0.91 0.77 0.86 0.86 1.00 Lanes: 1.47 0.00 0.53 0.00 0.00 0.00 0.00 1.00 1.00 1.00 2.00 0.00 Final Sat.: 2299 0 827 0 0 0 0 0 1727 1468 1641 3281 0											
Capacity Analysis Module:	Vol/Sat: 0.16 0.00 0.25 0.00 0.00 0.00 0.00 0.21 0.23 0.09 0.07 0.00 Crit Moves: **** Green/Cycle: 0.25 0.00 0.47 0.00 0.00 0.00 0.00 0.41 0.67 0.21 0.63 0.00 Volume/Cap: 0.62 0.00 0.53 0.00 0.00 0.00 0.00 0.50 0.35 0.44 0.12 0.00 Delay/Veh: 28.0 0.0 16.0 0.0 0.0 0.0 0.0 18.7 6.4 29.5 5.8 0.0 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 AdjDel/Veh: 28.0 0.0 16.0 0.0 0.0 0.0 0.0 18.7 6.4 29.5 5.8 0.0 LOS by Move: C A B A A A A B A C A A HCM2kAvgQ: 5 0 6 0 0 0 0 6 4 3 1 0											

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 No Action Alternative Weekday AM

Intersection #1048: Middle Point Rd / Evans Ave



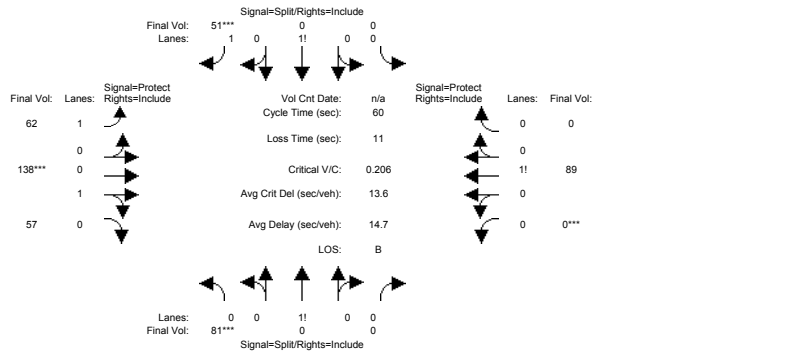
Street Name:	Middle Point Rd						Evans Ave					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:	Base Vol: 130 130 10 201 190 30 80 926 160 20 582 138 Growth 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: 130 130 10 201 190 30 80 926 160 20 582 138 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: 130 130 10 201 190 30 80 926 160 20 582 138 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: 133 133 10 205 194 31 82 945 163 20 594 141 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 133 133 10 205 194 31 82 945 163 20 594 141 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 Final Volume: 133 133 10 205 194 31 82 945 163 20 594 141											
Saturation Flow Module:	Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 Adjustment: 0.64 0.64 0.64 0.69 0.69 0.69 0.27 0.88 0.88 0.13 0.88 0.88 Lanes: 0.48 0.48 0.04 0.48 0.45 0.07 1.00 1.71 0.29 1.00 1.62 0.38 Final Sat.: 589 589 45 624 590 93 514 2866 495 246 2697 640											
Capacity Analysis Module:	Vol/Sat: 0.23 0.23 0.23 0.33 0.33 0.33 0.16 0.33 0.33 0.08 0.22 0.22 Crit Moves: **** Green/Cycle: 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.45 Volume/Cap: 0.50 0.50 0.50 0.73 0.73 0.73 0.35 0.73 0.73 0.18 0.49 0.49 Delay/Veh: 20.3 20.3 20.3 27.3 27.3 27.3 18.9 24.4 24.4 17.3 19.6 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: 20.3 20.3 20.3 27.3 27.3 27.3 18.9 24.4 24.4 17.3 19.6 19.6 LOS by Move: C C C C C C B C B B B HCM2kAvgQ: 6 6 6 12 12 12 2 16 16 1 9 9											

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Action Alternative PM

Intersection #110: Innes Ave/Donahue St



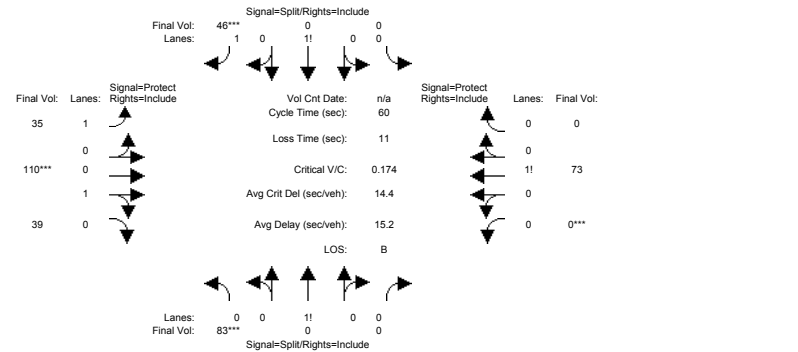
Street Name:	Donahue St				Innes Ave				
	North Bound		South Bound		East Bound		West Bound		
Approach:	L	T	R	L	T	R	L	T	R
Movement:									
Min. Green:	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:									
Base Vol:	81	0	0	0	0	51	62	138	57
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	81	0	0	0	0	51	62	138	57
Added Vol:	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0
Initial Fut:	81	0	0	0	0	51	62	138	57
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	81	0	0	0	0	51	62	138	57
Reduct Vol:	0	0	0	0	0	0	0	0	0
Reduced Vol:	81	0	0	0	0	51	62	138	57
PCE Adj:	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
Final Volume:	81	0	0	0	0	51	62	138	57
Saturation Flow Module:									
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	1.00	1.00	0.85	0.95	0.96	0.96
Lanes:	1.00	0.00	0.00	0.00	0.00	2.00	1.00	0.71	0.29
Final Sat.:	1805	0	0	0	0	3230	1805	1285	531
Capacity Analysis Module:									
Vol/Sat:	0.04	0.00	0.00	0.00	0.00	0.02	0.03	0.11	0.11
Crit Moves:	****					****			****
Green/Cycle:	0.22	0.00	0.00	0.00	0.00	0.08	0.22	0.52	0.52
Volume/Cap:	0.21	0.00	0.00	0.00	0.00	0.21	0.16	0.21	0.21
Delay/Veh:	19.5	0.0	0.0	0.0	0.0	26.4	19.0	7.8	7.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.5	0.0	0.0	0.0	0.0	26.4	19.0	7.8	7.8
LOS by Move:	B	A	A	A	A	C	B	A	A
HCM2kAvgQ:	1	0	0	0	0	1	1	2	2

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
No Action Alternative Sunday

Intersection #110: Innes Ave/Donahue St



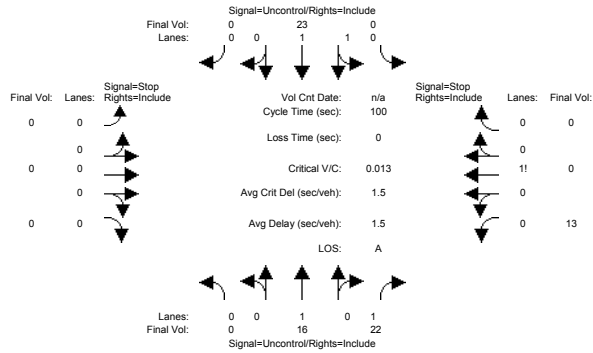
Street Name:	Donahue St				Innes Ave				
	North Bound		South Bound		East Bound		West Bound		
Approach:	L	T	R	L	T	R	L	T	R
Movement:									
Min. Green:	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:									
Base Vol:	83	0	0	0	0	46	35	110	39
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	83	0	0	0	0	46	35	110	39
Added Vol:	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0
Initial Fut:	83	0	0	0	0	46	35	110	39
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	83	0	0	0	0	46	35	110	39
Reduct Vol:	0	0	0	0	0	0	0	0	0
Reduced Vol:	83	0	0	0	0	46	35	110	39
PCE Adj:	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
Final Volume:	83	0	0	0	0	46	35	110	39
Saturation Flow Module:									
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	1.00	1.00	0.85	0.95	0.96	0.96
Lanes:	1.00	0.00	0.00	0.00	0.00	2.00	1.00	0.74	0.26
Final Sat.:	1805	0	0	0	0	3230	1805	1348	478
Capacity Analysis Module:									
Vol/Sat:	0.05	0.00	0.00	0.00	0.00	0.01	0.02	0.08	0.08
Crit Moves:	****					****			****
Green/Cycle:	0.26	0.00	0.00	0.00	0.00	0.08	0.16	0.47	0.47
Volume/Cap:	0.17	0.00	0.00	0.00	0.00	0.17	0.12	0.17	0.17
Delay/Veh:	17.2	0.0	0.0	0.0	0.0	26.0	21.9	9.3	9.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.2	0.0	0.0	0.0	0.0	26.0	21.9	9.3	9.3
LOS by Move:	B	A	A	A	A	C	C	A	A
HCM2kAvgQ:	1	0	0	0	0	1	1	2	2

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative AM

Intersection #111: Donahue St/Galvez Ave



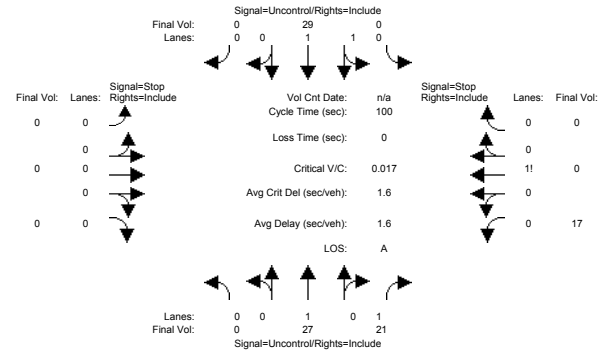
Street Name:	Donahue St					Galvez Ave						
	North Bound		South Bound			East Bound		West Bound				
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	16	22	0	23	0	0	0	0	13	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	16	22	0	23	0	0	0	0	13	0	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:	0	16	22	0	23	0	0	0	0	13	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	0	16	22	0	23	0	0	0	0	13	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	16	22	0	23	0	0	0	0	13	0	0
Critical Gap Module:												
Critical Gp:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	6.4	xxxx	xxxx
FollowUpTim:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	3.5	xxxx	xxxx
Capacity Module:												
Cnflct Vol:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	28	xxxx	xxxx
Potent Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	993	xxxx	xxxx
Move Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	993	xxxx	xxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx
Level of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.0	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	8.7	xxxx	xxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	7.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	*	*
ApproachDel:	xxxx			xxxx			xxxx			8.7		
ApproachLOS:	*			*			*			A		

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative PM

Intersection #111: Donahue St/Galvez Ave



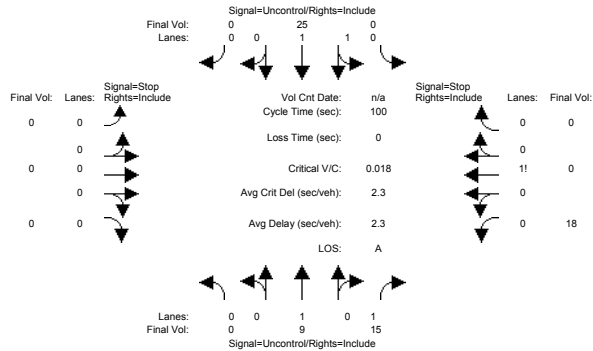
Street Name:	Donahue St					Galvez Ave						
	North Bound		South Bound			East Bound		West Bound				
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	27	21	0	29	0	0	0	0	17	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	27	21	0	29	0	0	0	0	17	0	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:	0	27	21	0	29	0	0	0	0	17	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	0	27	21	0	29	0	0	0	0	17	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	27	21	0	29	0	0	0	0	17	0	0
Critical Gap Module:												
Critical Gp:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	6.4	xxxx	xxxx
FollowUpTim:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	3.5	xxxx	xxxx
Capacity Module:												
Cnflct Vol:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	42	xxxx	xxxx
Potent Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	975	xxxx	xxxx
Move Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	975	xxxx	xxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.1	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	8.8	xxxx	xxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	7.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	*	*
ApproachDel:	xxxx			xxxx			xxxx			8.8		
ApproachLOS:	*			*			*			A		

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative Sunday

Intersection #111: Donahue St/Galvez Ave



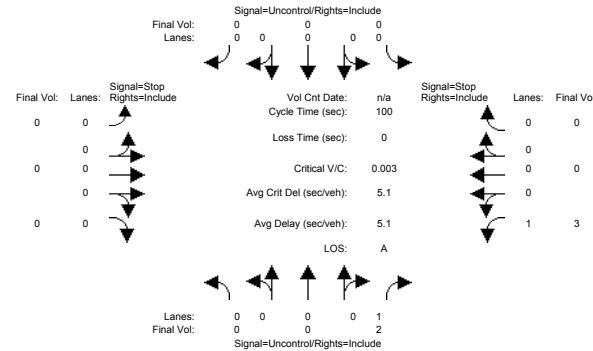
Street Name:	Donahue St					Galvez Ave						
	North Bound		South Bound			East Bound		West Bound				
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	9	15	0	25	0	0	0	0	18	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	9	15	0	25	0	0	0	0	18	0	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:	0	9	15	0	25	0	0	0	0	18	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	0	9	15	0	25	0	0	0	0	18	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	9	15	0	25	0	0	0	0	18	0	0
Critical Gap Module:	Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.4 xxxxx xxxxx											
FollowUpTim:	FollowUpTim:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx xxxxx											
Capacity Module:	Conflict Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 22 xxxxx xxxxx											
Potent Cap.:	Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1000 xxxxx xxxxx											
Move Cap.:	Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1000 xxxxx xxxxx											
Volume/Cap:	Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.02 xxxxx xxxxx											
Level of Service Module:	2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx xxxxx											
Control Del:	Control Del:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 8.7 xxxxx xxxxx											
LOS by Move:	LOS by Move: * * * * * * * * * * * * * * * * A * * * *											
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxxx	xxxxxx	xxxxxx	0.0	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxxxx	xxxxxx	7.2	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shared LOS:	* * *	* * *	* * *	A * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			8.7		
ApproachLOS:	*			*			*			A		

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative AM

Intersection #112: Donahue St/Lockwood St



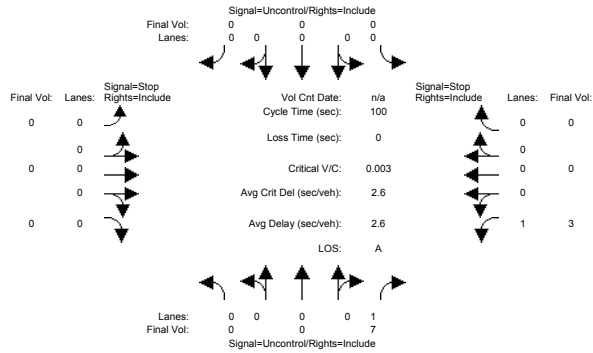
Street Name:	Donahue St					Lockwood St						
	North Bound		South Bound			East Bound		West Bound				
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	0	2	0	0	0	0	0	0	3	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	2	0	0	0	0	0	0	3	0	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:	0	0	2	0	0	0	0	0	0	3	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	0	0	2	0	0	0	0	0	0	3	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	2	0	0	0	0	0	0	3	0	0
Critical Gap Module:	Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.4 xxxxx xxxxx											
FollowUpTim:	FollowUpTim:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx xxxxx											
Capacity Module:	Conflict Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0 xxxxx xxxxx											
Potent Cap.:	Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1029 xxxxx xxxxx											
Move Cap.:	Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1029 xxxxx xxxxx											
Volume/Cap:	Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.00 xxxxx xxxxx											
Level of Service Module:	2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx											
Control Del:	Control Del:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 8.5 xxxxx xxxxx											
LOS by Move:	LOS by Move: * * * * * * * * * * * * * * * * A * * * *											
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shared LOS:	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			8.5		
ApproachLOS:	*			*			*			A		

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative PM

Intersection #112: Donahue St/Lockwood St

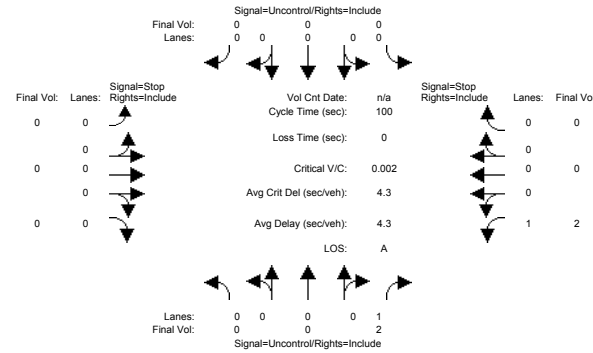


Street Name:	Donahue St						Lockwood St					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Movement:												
Volume Module:												
Base Vol:	0	0	7	0	0	0	0	0	0	3	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	7	0	0	0	0	0	0	3	0	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:	0	0	7	0	0	0	0	0	0	3	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	0	0	7	0	0	0	0	0	0	3	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	7	0	0	0	0	0	0	3	0	0
Critical Gap Module:	Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.4 xxxxx xxxxx											
FollowUpTim:	FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx xxxxx											
Capacity Module:	Conflict Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0 xxxxx xxxxx											
Potent Cap.:	Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1029 xxxxx xxxxx											
Move Cap.:	Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1029 xxxxx xxxxx											
Volume/Cap:	Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.00 xxxxx xxxxx											
Level of Service Module:	2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx											
Control Del:	Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 8.5 xxxxx xxxxx											
LOS by Move:	LOS by Move: * * * * * * * * * * * * * * * * * * A * * *											
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx
SharedQueue:	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx
Shrd ConDel:	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx
Shared LOS:	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	*	*	A

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative Sunday

Intersection #112: Donahue St/Lockwood St

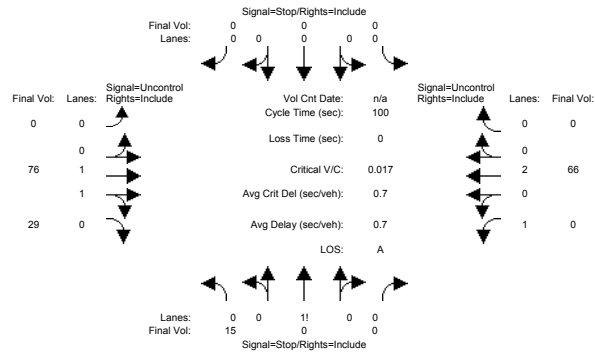


Street Name:	Donahue St						Lockwood St					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Movement:												
Volume Module:												
Base Vol:	0	0	2	0	0	0	0	0	0	2	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	2	0	0	0	0	0	0	2	0	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:	0	0	2	0	0	0	0	0	0	2	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	0	0	2	0	0	0	0	0	0	2	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	2	0	0	0	0	0	0	2	0	0
Critical Gap Module:	Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.4 xxxxx xxxxx											
FollowUpTim:	FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx xxxxx											
Capacity Module:	Conflict Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0 xxxxx xxxxx											
Potent Cap.:	Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1029 xxxxx xxxxx											
Move Cap.:	Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1029 xxxxx xxxxx											
Volume/Cap:	Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.00 xxxxx xxxxx											
Level of Service Module:	2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx											
Control Del:	Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 8.5 xxxxx xxxxx											
LOS by Move:	LOS by Move: * * * * * * * * * * * * * * * * * * A * * *											
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx
SharedQueue:	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx
Shrd ConDel:	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx
Shared LOS:	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	*	*	A

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative AM

Intersection #113: Crisp Ave/I St



Street Name: Crisp Ave I St
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: 15 0 0 0 0 0 0 76 29 0 66 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: 15 0 0 0 0 0 0 76 29 0 66 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: 15 0 0 0 0 0 0 76 29 0 66 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: 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 Volume: 15 0 0 0 0 0 0 76 29 0 66 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 15 0 0 0 0 0 0 76 29 0 66 0

Critical Gap Module:
Critical Gp: 6.8
FollowUpTim: 3.5

Capacity Module:
Conflict Vol: 124
Potent Cap.: 864
Move Cap.: 864
Volume/Cap: 0.02

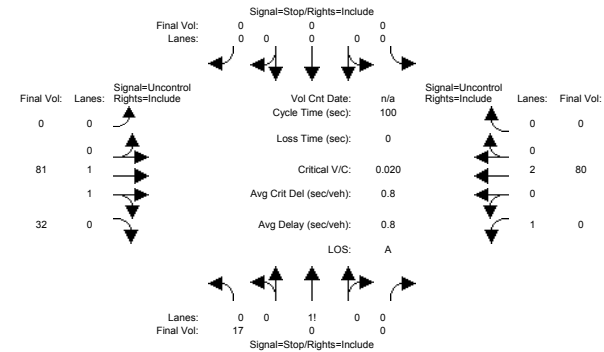
Level of Service Module:
2Way95thQ: 0.1
Control Del: 9.2
LOS by Move: A
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:
SharedQueue:
Shrd ConDel:
Shared LOS:
ApproachDel: 9.2
ApproachLOS: A

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative PM

Intersection #113: Crisp Ave/I St



Street Name: Crisp Ave I St
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: 17 0 0 0 0 0 0 81 32 0 80 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: 17 0 0 0 0 0 0 81 32 0 80 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: 17 0 0 0 0 0 0 81 32 0 80 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: 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 Volume: 17 0 0 0 0 0 0 81 32 0 80 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 17 0 0 0 0 0 0 81 32 0 80 0

Critical Gap Module:
Critical Gp: 6.8
FollowUpTim: 3.5

Capacity Module:
Conflict Vol: 137
Potent Cap.: 848
Move Cap.: 848
Volume/Cap: 0.02

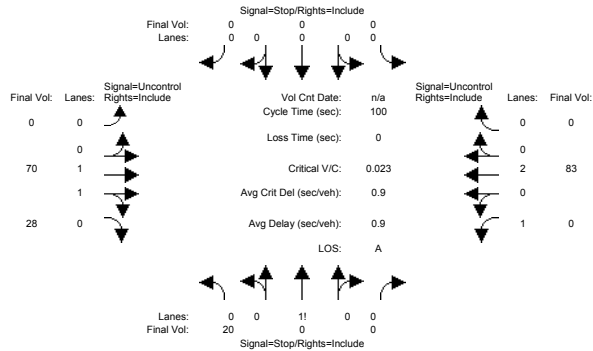
Level of Service Module:
2Way95thQ: 0.1
Control Del: 9.3
LOS by Move: A
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:
SharedQueue:
Shrd ConDel:
Shared LOS:
ApproachDel: 9.3
ApproachLOS: A

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative Sunday

Intersection #113: Crisp Ave/I St



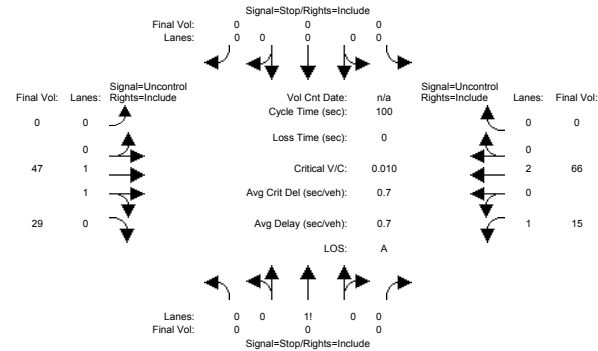
Street Name:	Crisp Ave								I St			
Approach:	North Bound			South Bound			East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	20	0	0	0	0	0	0	70	28	0	83	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	0	0	0	0	0	0	70	28	0	83	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:	20	0	0	0	0	0	0	70	28	0	83	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:	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 Volume:	20	0	0	0	0	0	0	70	28	0	83	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	20	0	0	0	0	0	0	70	28	0	83	0
Critical Gap Module:												
Critical Gp:	6.8	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
FollowUpTim:	3.5	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Capacity Module:												
Cnflct Vol:	126	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Potent Cap.:	862	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Move Cap.:	862	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Volume/Cap:	0.02	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Level of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Control Del:	9.3	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
SharedQueue:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	9.3		xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx	
ApproachLOS:	A		*		*		*		*		*	

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative AM

Intersection #114: Crisp Ave/Spear Ave



Street Name:	Spear Ave						Crisp Ave-Spear 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	0	0	0	0	47	29	15	66	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	47	29	15	66	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:	0	0	0	0	0	0	0	47	29	15	66	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:	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 Volume:	0	0	0	0	0	0	0	47	29	15	66	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	0	47	29	15	66	0
Critical Gap Module:												
Critical Gp:	6.8	6.5	6.9	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	2.2	xxxxxx	xxxxxx
Capacity Module:												
Cnflct Vol:	125	158	38	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	76	xxxxx	xxxxx
Potent Cap.:	863	738	1032	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	1536	xxxxx	xxxxx
Move Cap.:	857	731	1032	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	1536	xxxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.01	xxxxx	xxxxx
Level of Service Module:												
2Way95thQ:	xxxxx	xxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	0.0	xxxxx	xxxxxx
Control Del:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	7.4	xxxxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxxx	0	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
SharedQueue:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx	
ApproachLOS:	*		*		*		*		*		*	

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative AM

Intersection #115: Robinson St/Spear Ave

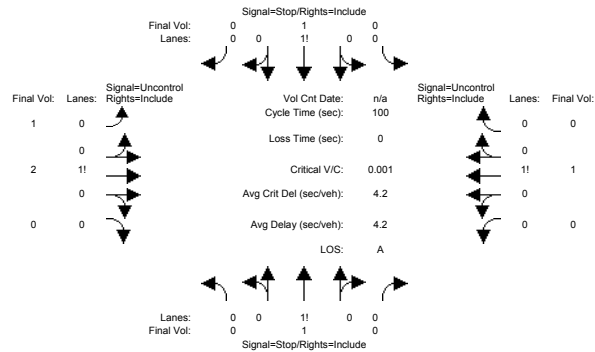


Table showing traffic volume data for Intersection #115 (AM). Columns include Street Name, Approach, Movement, Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table showing Critical Gap Module data for Intersection #115 (AM), including Critical Gp and FollowUpTim values.

Table showing Capacity Module data for Intersection #115 (AM), including Conflict Vol, Potent Cap., Move Cap., and Volume/Cap.

Table showing Level of Service Module data for Intersection #115 (AM), including 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative PM

Intersection #115: Robinson St/Spear Ave

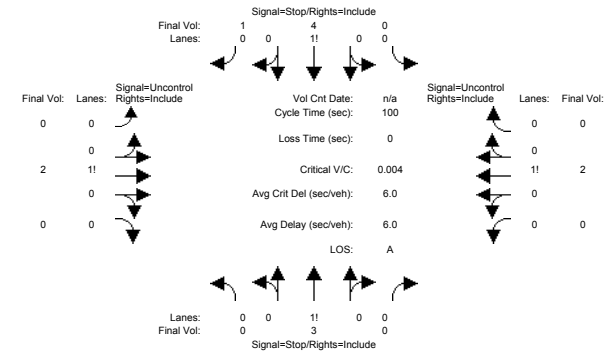


Table showing traffic volume data for Intersection #115 (PM). Columns include Street Name, Approach, Movement, Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table showing Critical Gap Module data for Intersection #115 (PM), including Critical Gp and FollowUpTim values.

Table showing Capacity Module data for Intersection #115 (PM), including Conflict Vol, Potent Cap., Move Cap., and Volume/Cap.

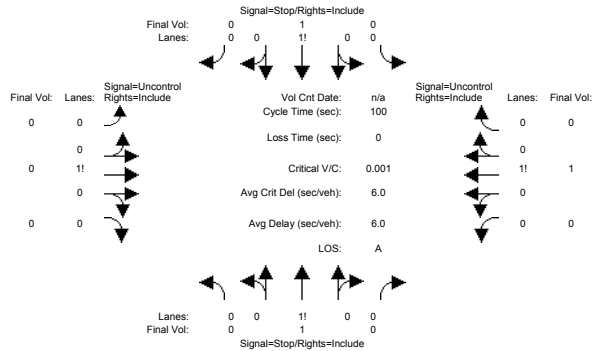
Table showing Level of Service Module data for Intersection #115 (PM), including 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative Sunday

Intersection #115: Robinson St/Spear Ave



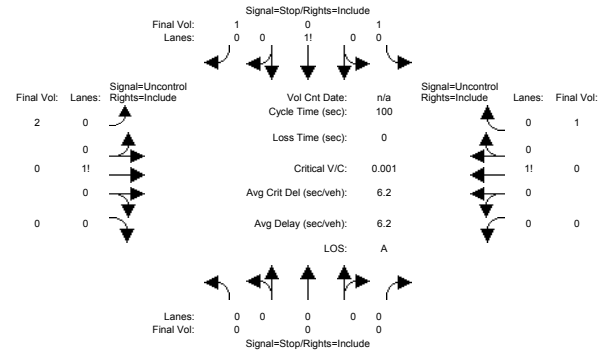
Street Name:	Robinson St				Spear Ave				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Volume Module:									
Base Vol:	0	1	0	0	1	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1	0	0	1	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1	0	0	1	0	0	0	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1	0	0	1	0	0	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0
FinalVolume:	0	1	0	0	1	0	0	0	1
Critical Gap Module:									
Critical Gp:	xxxxx	6.5	xxxxx	xxxxx	6.5	xxxxx	xxxxx	xxxxx	xxxxx
FollowUpTim:	xxxxxx	4.0	xxxxxx	xxxxxx	4.0	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Capacity Module:									
Cnflct Vol:	xxxx	1	xxxxx	xxxx	1	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	899	xxxxx	xxxx	899	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	899	xxxxx	xxxx	899	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	0.00	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx
Level of Service Module:									
2Way95thQ:	xxxx	0.0	xxxxx	xxxx	0.0	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	9.0	xxxxxx	xxxxx	9.0	xxxxxx	xxxxx	xxxxx	xxxxxx
LOS by Move:	*	A	*	*	A	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*
ApproachDel:	9.0			9.0			xxxxxx		xxxxxx
ApproachLOS:	A			A			*		*

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

No Action Alternative (2007 Baseline)

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
No Action Alternative AM

Intersection #116: Lockwood St/Spear Ave



Street Name:	Lockwood St				Spear Ave				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Volume Module:									
Base Vol:	0	0	0	1	0	1	2	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1	0	1	2	0	0
Added Vol:	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	1	0	1	2	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	1	0	1	2	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	1	0	1	2	0	0
Critical Gap Module:									
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx
FollowUpTim:	xxxxxx	xxxx	xxxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxxx
Capacity Module:									
Cnflct Vol:	xxxx	xxxx	xxxxx	4	4	0	1	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	1023	896	1091	1635	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	1022	894	1091	1635	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	0.00	0.00	0.00	xxxx	xxxxx
Level of Service Module:									
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxxx	xxxxx	xxxx	xxxxxx	7.2	xxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1055	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	8.4	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			8.4			xxxxxx		xxxxxx
ApproachLOS:	*			A			*		*

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

No Action Alternative (2007 Baseline) Level of Service Computation Report 2000 HCM Unsignalized (Future Volume Alternative) No Action Alternative PM

Intersection #116: Lockwood St/Spear Ave

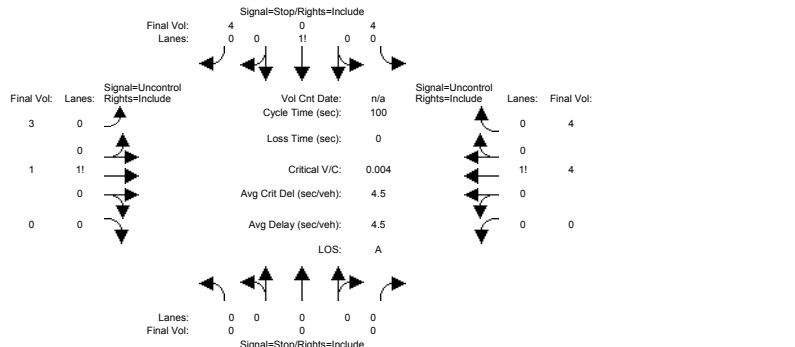


Table with columns for Street Name (Lockwood St, Spear Ave), Approach (North Bound, South Bound, East Bound, West Bound), and Movement (L, T, R). Rows include Volume Module (Base Vol, Growth Adj, etc.) and Critical Gap Module.

Table with columns for Movement (LT-LTR-RT, LT-LTR-RT, LT-LTR-RT) and rows for Capacity Module (Conflict Vol, Potent Cap., etc.) and Level of Service Module (2Way95thQ, Control Del, etc.).

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

No Action Alternative (2007 Baseline) Level of Service Computation Report 2000 HCM Unsignalized (Future Volume Alternative) No Action Alternative Sunday

Intersection #116: Lockwood St/Spear Ave

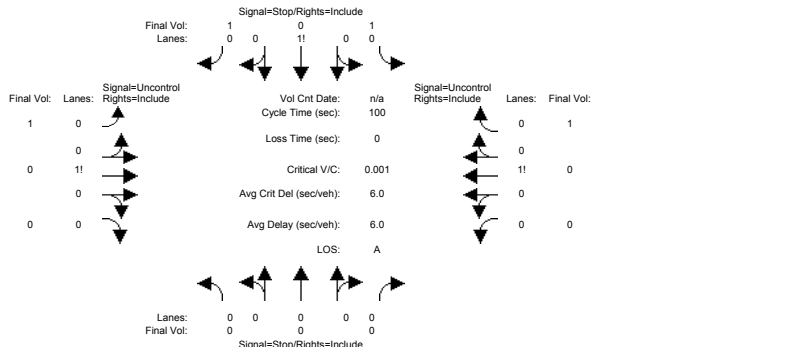


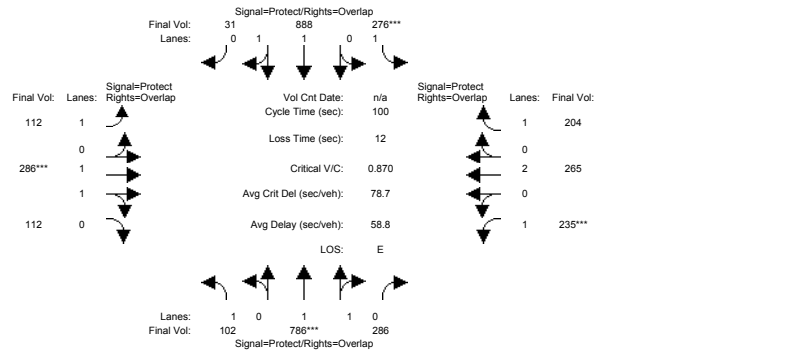
Table with columns for Street Name (Lockwood St, Spear Ave), Approach (North Bound, South Bound, East Bound, West Bound), and Movement (L, T, R). Rows include Volume Module (Base Vol, Growth Adj, etc.) and Critical Gap Module.

Table with columns for Movement (LT-LTR-RT, LT-LTR-RT, LT-LTR-RT) and rows for Capacity Module (Conflict Vol, Potent Cap., etc.) and Level of Service Module (2Way95thQ, Control Del, etc.).

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Sunday

Intersection #1004: 3rd St / Evans Ave



Street Name:	3rd St						Evans Ave					
	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	12	46	46	12	46	46	6	20	20	12	26	26
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:	100	770	280	270	870	30	110	280	110	230	260	200
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:	100	770	280	270	870	30	110	280	110	230	260	200
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:	100	770	280	270	870	30	110	280	110	230	260	200
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:	102	786	286	276	888	31	112	286	112	235	265	204
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	786	286	276	888	31	112	286	112	235	265	204
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	102	786	286	276	888	31	112	286	112	235	265	204

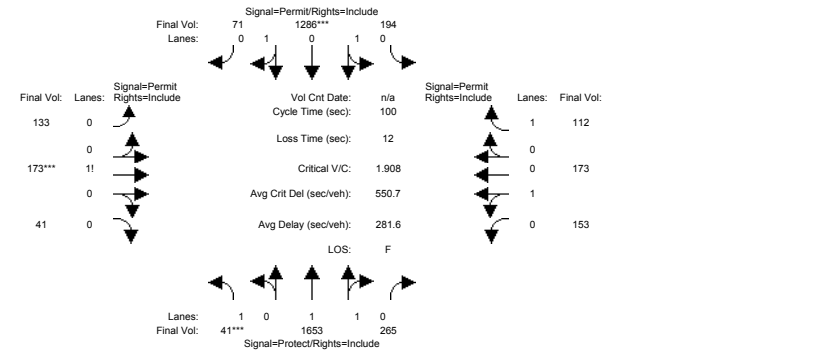
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.83	0.83	0.86	0.86	0.86	0.90	0.85	0.85	0.90	0.90	0.78
Lanes:	1.00	1.47	0.53	1.00	1.93	0.07	1.00	1.44	0.56	1.00	2.00	1.00
Final Sat.:	1641	2310	840	1641	3156	109	1718	2316	910	1718	3437	1476

Capacity Analysis Module:												
Vol/Sat:	0.06	0.34	0.34	0.17	0.28	0.28	0.07	0.12	0.12	0.14	0.08	0.14
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.45	0.57	0.12	0.45	0.51	0.06	0.20	0.31	0.12	0.25	0.37
Volume/Cap:	0.53	0.75	0.60	1.43	0.62	0.55	1.11	0.63	0.39	1.16	0.30	0.37
Uniform Del:	42.3	23.3	14.4	45.0	21.4	17.1	48.0	37.6	27.4	45.0	30.7	23.3
IncrementDel:	10.0	3.8	1.5	219.6	2.0	1.3	122.4	4.7	1.1	113.4	0.9	1.9
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	52.3	27.1	15.9	264.6	23.4	18.4	170.4	42.3	28.5	158.4	31.6	25.2
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:	52.3	27.1	15.9	264.6	23.4	18.4	170.4	42.3	28.5	158.4	31.6	25.2
LOS by Move:	D	C	B	F	C	B	F	D	C	F	C	C
HCM2kAvgQ:	3	15	11	19	12	10	6	6	5	14	4	5

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Weekday AM

Intersection #1006: 3rd St / Palou Ave



Street Name:	3rd St						Palou Ave					
	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	69	69	0	49	49	21	21	21	21	21	21
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:	40	1620	260	190	1260	70	130	170	40	150	170	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:	40	1620	260	190	1260	70	130	170	40	150	170	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:	40	1620	260	190	1260	70	130	170	40	150	170	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:	41	1653	265	194	1286	71	133	173	41	153	173	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	1653	265	194	1286	71	133	173	41	153	173	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
Final Volume:	41	1653	265	194	1286	71	133	173	41	153	173	112

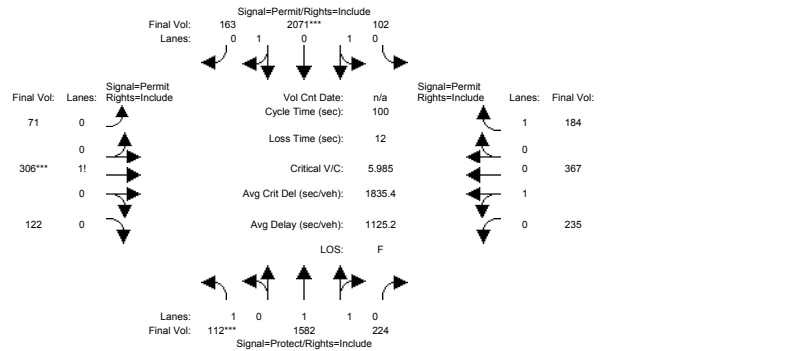
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.77	0.77	0.41	0.41	0.41	0.28	0.28	0.28	0.28	0.60	0.60
Lanes:	1.00	1.72	0.28	0.25	1.66	0.09	0.38	0.50	0.12	0.47	0.53	1.00
Final Sat.:	1718	2531	406	193	1283	71	202	264	62	533	604	1190

Capacity Analysis Module:												
Vol/Sat:	0.02	0.65	0.65	1.00	1.00	1.00	0.66	0.66	0.66	0.29	0.29	0.09
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.15	0.63	0.63	0.49	0.49	0.49	0.25	0.25	0.25	0.25	0.25	0.25
Volume/Cap:	0.16	1.03	1.03	2.06	2.06	2.06	2.63	2.63	2.63	1.15	1.15	0.38
Uniform Del:	38.0	18.8	18.8	26.2	26.2	26.2	38.3	38.3	38.3	38.3	38.3	31.7
IncrementDel:	1.4	29.9	29.9	483.7	484	483.7	754.9	755	754.9	99.5	99.5	3.6
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	39.4	48.6	48.6	509.9	510	509.9	793.1	793.1	793.1	137.7	138	35.3
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:	39.4	48.6	48.6	509.9	510	509.9	793.1	793.1	793.1	137.7	138	35.3
LOS by Move:	D	D	D	F	F	F	F	F	F	F	F	D
HCM2kAvgQ:	1	35	35	76	76	76	38	38	38	17	17	3

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Weekday PM

Intersection #1006: 3rd St / Palou Ave



Street Name:	3rd St			Palou Ave								
	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	69	69	0	49	49	21	21	21	21	21	21
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:	110	1550	220	100	2030	160	70	300	120	230	360	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:	110	1550	220	100	2030	160	70	300	120	230	360	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:	110	1550	220	100	2030	160	70	300	120	230	360	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:	112	1582	224	102	2071	163	71	306	122	235	367	184
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	112	1582	224	102	2071	163	71	306	122	235	367	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
Final Volume:	112	1582	224	102	2071	163	71	306	122	235	367	184

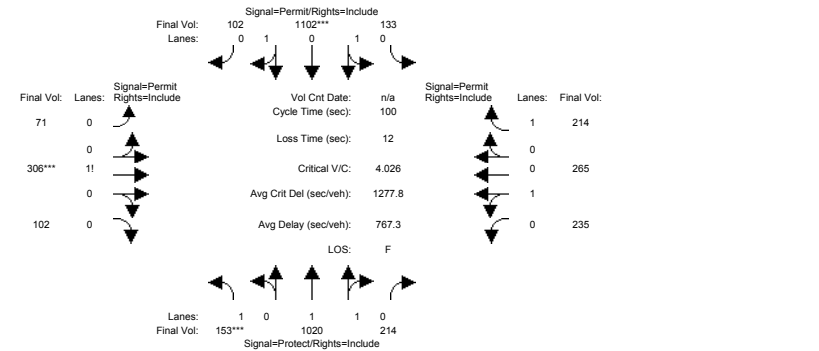
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.77	0.77	0.43	0.43	0.43	0.07	0.07	0.07	0.35	0.35	0.63
Lanes:	1.00	1.75	0.25	0.09	1.77	0.14	0.14	0.62	0.24	0.39	0.61	1.00
Final Sat.:	1718	2577	366	71	1436	113	19	81	32	261	409	1190

Capacity Analysis Module:												
Vol/Sat:	0.07	0.61	0.61	1.44	1.44	1.44	3.77	3.77	3.77	0.90	0.90	0.15
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.15	0.64	0.64	0.49	0.49	0.49	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.44	0.96	0.96	2.94	2.94	2.94	15.4615	15.46	15.46	3.68	3.68	0.63
Uniform Del:	39.7	17.3	17.3	25.9	25.9	25.9	38.6	38.6	38.6	38.6	38.6	34.5
IncrcmentDel:	5.6	13.4	13.4	874.7	875	874.7	6567	6567	6567	1221	1221	10.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	45.3	30.7	30.7	900.6	901	900.6	6606	6606	6606	1260	1260	44.5
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:	45.3	30.7	30.7	900.6	901	900.6	6606	6606	6606	1260	1260	44.5
LOS by Move:	D	C	C	F	F	F	F	F	F	F	F	D
HCM2kAvgQ:	3	27	27	136	136	136	74	74	74	72	72	5

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Sunday

Intersection #1006: 3rd St / Palou Ave



Street Name:	3rd St			Palou Ave								
	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	69	69	0	49	49	21	21	21	21	21	21
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:	150	1000	210	130	1080	100	70	300	100	230	260	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:	150	1000	210	130	1080	100	70	300	100	230	260	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:	150	1000	210	130	1080	100	70	300	100	230	260	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:	153	1020	214	133	1102	102	71	306	102	235	265	214
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	153	1020	214	133	1102	102	71	306	102	235	265	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
Final Volume:	153	1020	214	133	1102	102	71	306	102	235	265	214

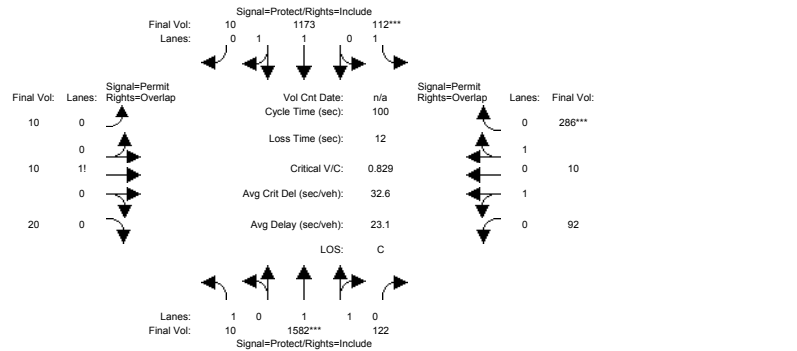
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.77	0.77	0.46	0.46	0.46	0.09	0.09	0.09	0.35	0.35	0.63
Lanes:	1.00	1.65	0.35	0.20	1.65	0.15	0.15	0.64	0.21	0.47	0.53	1.00
Final Sat.:	1718	2415	507	173	1435	133	26	114	38	314	355	1190

Capacity Analysis Module:												
Vol/Sat:	0.09	0.42	0.42	0.77	0.77	0.77	2.70	2.70	2.70	0.75	0.75	0.18
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.15	0.63	0.63	0.48	0.48	0.48	0.25	0.25	0.25	0.25	0.25	0.25
Volume/Cap:	0.61	0.67	0.67	1.60	1.60	1.60	10.5810	10.58	10.58	2.93	2.93	0.71
Uniform Del:	40.7	12.3	12.3	26.5	26.5	26.5	38.0	38.0	38.0	38.0	38.0	34.5
IncrcmentDel:	10.3	2.0	2.0	275.0	275	275.0	4352	4352	4352	886.2	886	13.0
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	51.1	14.3	14.3	301.5	302	301.5	4390	4390	4390	924.2	924	47.5
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:	51.1	14.3	14.3	301.5	302	301.5	4390	4390	4390	924.2	924	47.5
LOS by Move:	D	B	B	F	F	F	F	F	F	F	F	D
HCM2kAvgQ:	4	13	13	54	54	54	69	69	69	56	56	7

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Weekday AM

Intersection #1008: 3rd St / Carroll Ave



Street Name:	3rd St						Carroll Ave					
	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:	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:	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
Final Volume:	10	1582	122	112	1173	10	10	10	20	92	10	286

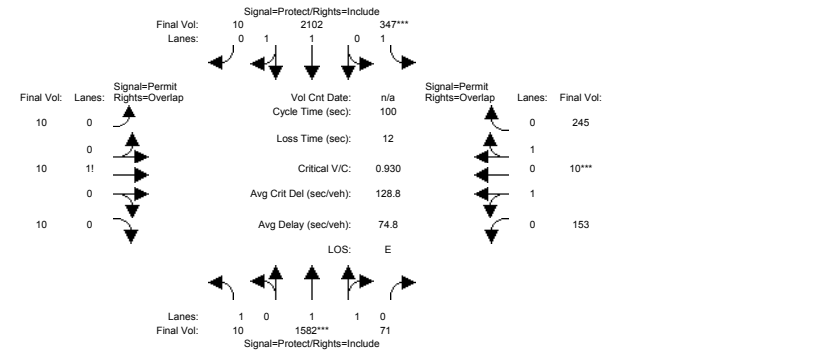
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.90	0.90	0.90	0.81	0.81	0.81	0.66	0.66	0.66
Lanes:	1.00	1.86	0.14	1.00	1.98	0.02	0.25	0.25	0.50	0.90	0.10	1.00
Final Sat.:	1718	3155	244	1718	3404	30	386	386	772	1126	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
Uniform Del:	49.3	12.3	12.3	46.7	6.6	6.6	35.9	35.9	35.0	38.0	38.0	38.4
IncrementDel:	94.5	2.7	2.7	82.8	0.7	0.7	1.4	1.4	1.2	2.3	2.3	43.8
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	3	3	12

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Weekday PM

Intersection #1008: 3rd St / Carroll Ave



Street Name:	3rd St						Carroll Ave					
	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:	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:	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
Final Volume:	10	1582	71	347	2102	10	10	10	10	153	10	245

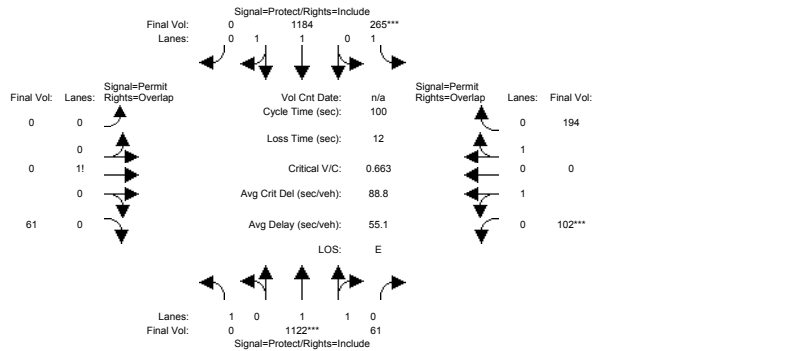
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.90	0.90	0.71	0.71	0.71	0.65	0.65	0.65
Lanes:	1.00	1.91	0.09	1.00	1.99	0.01	0.34	0.33	0.33	0.94	0.06	1.00
Final Sat.:	1718	3268	148	1718	3417	17	452	452	452	1156	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
Uniform Del:	49.3	11.9	11.9	46.0	10.2	10.2	37.0	37.0	36.1	41.6	41.6	37.0
IncrementDel:	90.5	2.3	2.3	706.7	4.0	4.0	1.6	1.6	1.3	21.0	21.0	18.5
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	6	6	8

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Sunday

Intersection #1008: 3rd St / Carroll Ave



Street Name:	3rd St						Carroll Ave					
	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:	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:												
	3rd St NB			3rd St SB			Carroll Ave EB			Carroll Ave WB		
Base Vol:	0	1100	60	260	1160	0	0	0	0	60	100	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1100	60	260	1160	0	0	0	0	60	100	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:	0	1100	60	260	1160	0	0	0	0	60	100	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	1122	61	265	1184	0	0	0	0	61	102	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1122	61	265	1184	0	0	0	0	61	102	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	1122	61	265	1184	0	0	0	0	61	102	0

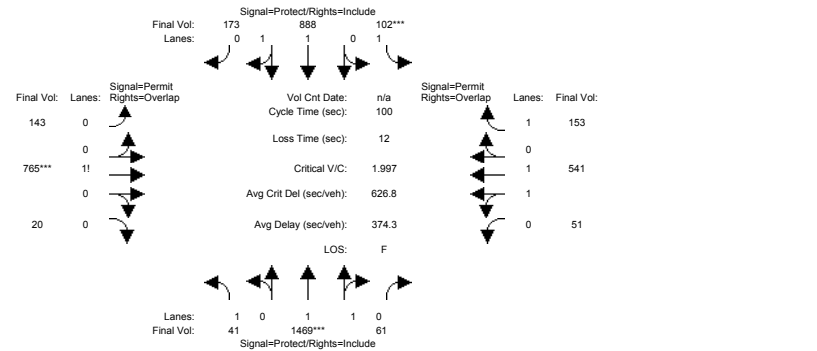
Saturation Flow Module:												
Sat/Lane:	3rd St NB			3rd St SB			Carroll Ave EB			Carroll Ave WB		
Adjustment:	1.00	0.90	0.90	0.90	0.90	0.95	1.00	1.00	0.85	0.66	0.95	0.66
Lanes:	1.00	1.90	0.10	1.00	2.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1900	3233	176	1718	3437	0	0	0	1611	1250	0	1250

Capacity Analysis Module:												
Vol/Sat:	3rd St NB			3rd St SB			Carroll Ave EB			Carroll Ave WB		
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.00	0.65	0.65	0.08	0.73	0.00	0.00	0.00	0.15	0.15	0.00	0.23
Volume/Cap:	0.00	0.53	0.53	1.93	0.47	0.00	0.00	0.00	0.25	0.54	0.00	0.67
Uniform Del:	0.0	9.4	9.4	46.0	5.6	0.0	0.0	0.0	37.6	39.3	0.0	35.1
IncrementDel:	0.0	0.9	0.9	444.1	0.6	0.0	0.0	0.0	2.5	3.9	0.0	8.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Delay/Veh:	0.0	10.3	10.3	490.1	6.2	0.0	0.0	0.0	40.1	43.2	0.0	43.1
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	10.3	10.3	490.1	6.2	0.0	0.0	0.0	40.1	43.2	0.0	43.1
LOS by Move:	A	B	B	F	A	A	A	A	D	D	A	D
HCM2kAvqQ:	0	10	10	25	8	0	0	0	2	3	0	6

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Weekday AM

Intersection #1009: 3rd St / Paul Ave / Gilman Ave



Street Name:	3rd St						Paul Ave / Gilman Ave					
	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:												
	3rd St NB			3rd St SB			Paul Ave EB			Paul Ave WB		
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
Final Volume:	41	1469	61	102	888	173	143	765	20	51	541	153

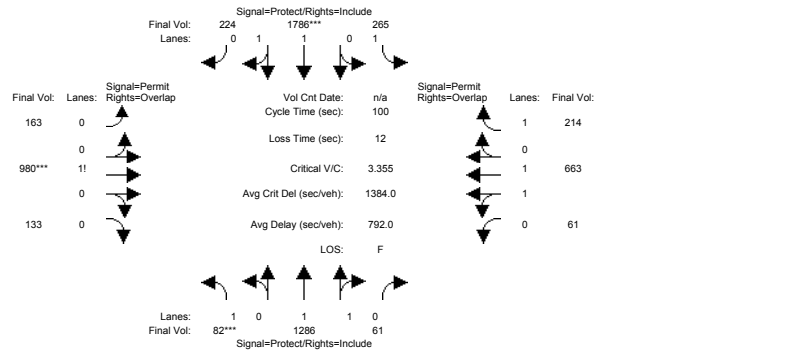
Saturation Flow Module:												
Sat/Lane:	3rd St NB			3rd St SB			Paul Ave EB			Paul Ave WB		
Adjustment:	0.90	0.88	0.88	0.90	0.88	0.88	0.39	0.39	0.39	0.65	0.65	0.80
Lanes:	1.00	1.92	0.08	1.00	1.67	0.33	0.15	0.83	0.02	0.17	1.83	1.00
Final Sat.:	1718	3214	134	1718	2806	548	115	617	16	212	2250	1519

Capacity Analysis Module:												
Vol/Sat:	3rd St NB			3rd St SB			Paul Ave EB			Paul Ave WB		
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	0.93	0.93	0.49	0.65	0.65	4.59	4.59	3.18	0.89	0.89	0.26
Uniform Del:	39.7	24.0	24.0	41.2	19.0	19.0	36.5	36.5	30.5	35.1	35.1	20.7
IncrementDel:	2.1	11.2	11.2	8.3	2.0	2.0	1629	1629	990.3	16.5	16.5	1.1
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	41.8	35.1	35.1	49.4	21.0	21.0	1665	1665	1021	51.5	51.5	21.7
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:	41.8	35.1	35.1	49.4	21.0	21.0	1665	1665	1021	51.5	51.5	21.7
LOS by Move:	D	D	D	D	C	C	F	F	F	D	D	C
HCM2kAvqQ:	1	27	27	4	13	13	117	117	106	13	13	3

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

Level of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 ALT 1 Weekday PM

Intersection #1009: 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:	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
Final Volume:	82	1286	61	265	1786	224	163	980	133	61	663	214

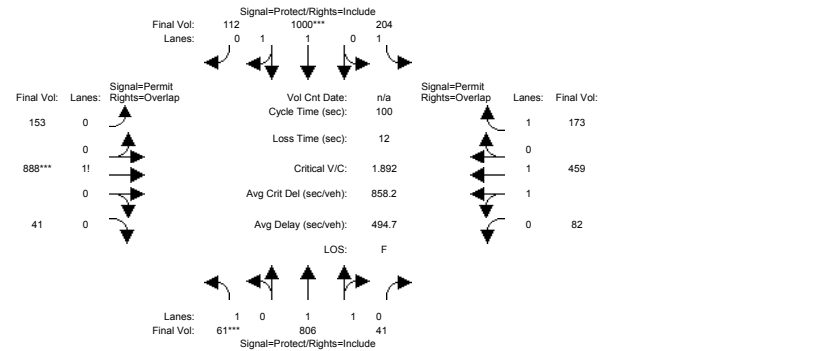
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.88	0.88	0.90	0.89	0.89	0.29	0.29	0.29	0.61	0.61	0.80
Lanes:	1.00	1.91	0.09	1.00	1.78	0.22	0.13	0.77	0.10	0.17	1.83	1.00
Final Sat.:	1718	3192	152	1718	3001	377	71	424	57	196	2121	1519

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	0.82	0.82	1.29	1.21	1.21	8.55	8.55	5.92	1.16	1.16	0.36
Uniform Del:	40.7	21.8	21.8	44.0	25.5	25.5	36.5	36.5	30.5	36.5	36.5	21.7
IncrementDel:	5.6	4.8	4.8	160.5	102	102.3	3413	3413	2225	88.1	88.1	1.7
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	46.3	26.6	26.6	204.5	128	127.8	3450	3450	2256	124.6	125	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:	46.3	26.6	26.6	204.5	128	127.8	3450	3450	2256	124.6	125	23.4
LOS by Move:	D	C	C	F	F	F	F	F	F	F	F	C
HCM2AvgQ:	2	20	20	18	57	57	176	176	168	21	21	5

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

Level of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 ALT 1 Sunday

Intersection #1009: 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:	60	790	40	200	980	110	150	870	40	80	450	170
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:	60	790	40	200	980	110	150	870	40	80	450	170
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:	60	790	40	200	980	110	150	870	40	80	450	170
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:	61	806	41	204	1000	112	153	888	41	82	459	173
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	806	41	204	1000	112	153	888	41	82	459	173
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	61	806	41	204	1000	112	153	888	41	82	459	173

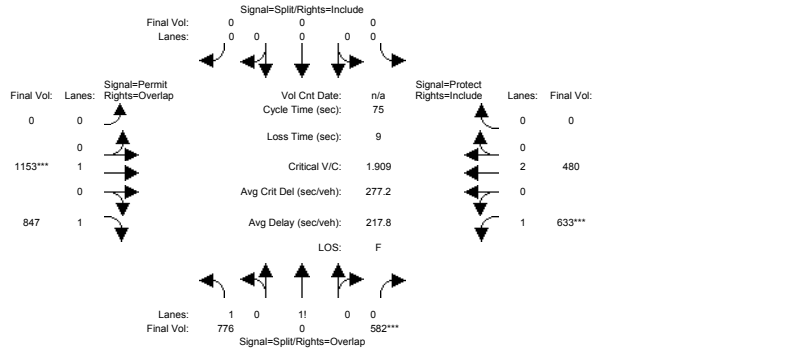
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.88	0.88	0.90	0.89	0.89	0.44	0.44	0.44	0.53	0.53	0.80
Lanes:	1.00	1.90	0.10	1.00	1.80	0.20	0.14	0.82	0.04	0.30	1.70	1.00
Final Sat.:	1718	3183	161	1718	3044	342	118	682	31	303	1703	1519

Capacity Analysis Module:												
Vol/Sat:	0.04	0.25	0.25	0.12	0.33	0.33	1.30	1.30	1.30	0.27	0.27	0.11
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:	0.30	0.52	0.52	0.99	0.67	0.67	4.82	4.82	3.34	1.00	1.00	0.29
Uniform Del:	40.2	17.4	17.4	43.9	19.4	19.4	36.5	36.5	30.5	36.5	36.5	21.0
IncrementDel:	3.6	1.2	1.2	60.1	2.2	2.2	1728	1728	1059	38.3	38.3	1.3
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	43.8	18.6	18.6	104.0	21.5	21.5	1765	1765	1089	74.8	74.8	22.3
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:	43.8	18.6	18.6	104.0	21.5	21.5	1765	1765	1089	74.8	74.8	22.3
LOS by Move:	D	B	B	F	C	C	F	F	F	E	E	C
HCM2AvgQ:	2	10	10	11	14	14	137	137	125	14	14	4

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Weekday AM

Intersection #1016: Evans Ave / Cesar Chavez



Street Name:	Evans Ave				Cesar Chavez							
	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Min. Green:	19	0	19	0	0	0	0	21	21	22	47	47
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:	Evans Ave				Cesar Chavez							
	North Bound		South Bound		East Bound		West Bound					
	L	T	R	L	T	R	L	T	R			
Base Vol:	760	0	570	0	0	0	0	1130	830	620	470	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:	760	0	570	0	0	0	0	1130	830	620	470	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:	760	0	570	0	0	0	0	1130	830	620	470	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	776	0	582	0	0	0	0	1153	847	633	480	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	776	0	582	0	0	0	0	1153	847	633	480	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:	776	0	582	0	0	0	0	1153	847	633	480	0

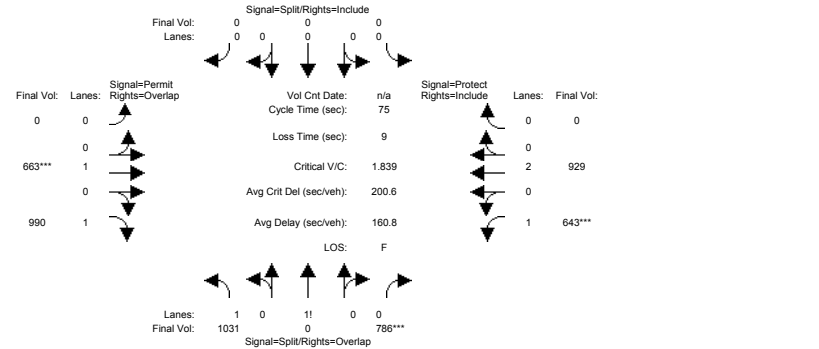
Saturation Flow Module:	Evans Ave				Cesar Chavez							
Sat/Lane:	North Bound		South Bound		East Bound		West Bound					
	L	T	R	L	T	R	L	T	R			
Adjustment:	0.82	1.00	0.81	1.00	1.00	1.00	1.00	0.91	0.77	0.86	0.86	1.00
Lanes:	1.40	0.00	0.60	0.00	0.00	0.00	0.00	1.00	1.00	1.00	2.00	0.00
Final Sat.:	2174	0	928	0	0	0	0	1727	1468	1641	3281	0

Capacity Analysis Module:	Evans Ave				Cesar Chavez							
Vol/Sat:	North Bound		South Bound		East Bound		West Bound					
	L	T	R	L	T	R	L	T	R			
Vol/Sat:	0.36	0.00	0.63	0.00	0.00	0.00	0.00	0.67	0.58	0.39	0.15	0.00
Crit Moves:	****		****					****	****			
Green/Cycle:	0.28	0.00	0.58	0.00	0.00	0.00	0.00	0.30	0.59	0.29	0.60	0.00
Volume/Cap:	1.26	0.00	1.09	0.00	0.00	0.00	0.00	2.21	0.98	1.31	0.25	0.00
Uniform Del:	26.8	0.0	15.8	0.0	0.0	0.0	0.0	26.2	15.1	26.5	7.2	0.0
IncrementDel:	122.7	0.0	52.1	0.0	0.0	0.0	0.0	54.9	26.9	155.8	0.3	0.0
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	149.5	0.0	67.9	0.0	0.0	0.0	0.0	576	42.0	182.3	7.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	149.5	0.0	67.9	0.0	0.0	0.0	0.0	576	42.0	182.3	7.5	0.0
LOS by Move:	F	A	E	A	A	A	A	F	D	F	A	A
HCM2kAvgQ:	26	0	31	0	0	0	0	105	27	34	3	0

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Weekday PM

Intersection #1016: Evans Ave / Cesar Chavez



Street Name:	Evans Ave				Cesar Chavez							
	North Bound		South Bound		East Bound		West Bound					
Movement:	L	T	R	L	T	R	L	T	R			
Min. Green:	19	0	19	0	0	0	0	21	21	22	47	47
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:	Evans Ave				Cesar Chavez							
	North Bound		South Bound		East Bound		West Bound					
	L	T	R	L	T	R	L	T	R			
Base Vol:	1010	0	770	0	0	0	0	650	970	630	910	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:	1010	0	770	0	0	0	0	650	970	630	910	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:	1010	0	770	0	0	0	0	650	970	630	910	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	1031	0	786	0	0	0	0	663	990	643	929	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1031	0	786	0	0	0	0	663	990	643	929	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:	1031	0	786	0	0	0	0	663	990	643	929	0

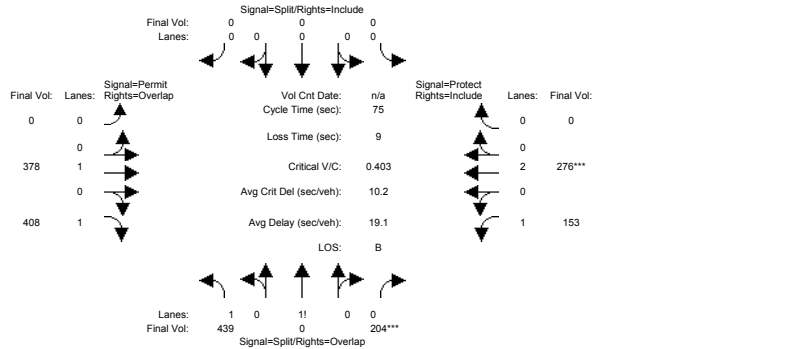
Saturation Flow Module:	Evans Ave				Cesar Chavez							
Sat/Lane:	North Bound		South Bound		East Bound		West Bound					
	L	T	R	L	T	R	L	T	R			
Adjustment:	0.82	1.00	0.81	1.00	1.00	1.00	1.00	0.91	0.77	0.86	0.86	1.00
Lanes:	1.39	0.00	0.61	0.00	0.00	0.00	0.00	1.00	1.00	1.00	2.00	0.00
Final Sat.:	2166	0	933	0	0	0	0	1727	1468	1641	3281	0

Capacity Analysis Module:	Evans Ave				Cesar Chavez							
Vol/Sat:	North Bound		South Bound		East Bound		West Bound					
	L	T	R	L	T	R	L	T	R			
Vol/Sat:	0.48	0.00	0.84	0.00	0.00	0.00	0.00	0.38	0.67	0.39	0.28	0.00
Crit Moves:	****		****					****	****			
Green/Cycle:	0.31	0.00	0.60	0.00	0.00	0.00	0.00	0.28	0.59	0.29	0.57	0.00
Volume/Cap:	1.55	0.00	1.40	0.00	0.00	0.00	0.00	1.37	1.15	1.34	0.49	0.00
Uniform Del:	26.0	0.0	15.0	0.0	0.0	0.0	0.0	27.0	15.5	26.5	9.5	0.0
IncrementDel:	252.5	0.0	186.5	0.0	0.0	0.0	0.0	180	80.6	164.8	0.9	0.0
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	278.5	0.0	201.5	0.0	0.0	0.0	0.0	207	96.1	191.3	10.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	278.5	0.0	201.5	0.0	0.0	0.0	0.0	207	96.1	191.3	10.5	0.0
LOS by Move:	F	A	F	A	A	A	A	F	F	F	B	A
HCM2kAvgQ:	48	0	74	0	0	0	0	40	42	34	6	0

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

Level Of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 ALT 1 Sunday

Intersection #1016: Evans Ave / Cesar Chavez



Street Name:	Evans Ave						Cesar Chavez					
	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	19	0	19	0	0	0	0	21	21	22	47	47
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:	430	0	200	0	0	0	0	370	400	150	270	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:	430	0	200	0	0	0	0	370	400	150	270	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:	430	0	200	0	0	0	0	370	400	150	270	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	439	0	204	0	0	0	0	378	408	153	276	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	439	0	204	0	0	0	0	378	408	153	276	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	439	0	204	0	0	0	0	378	408	153	276	0

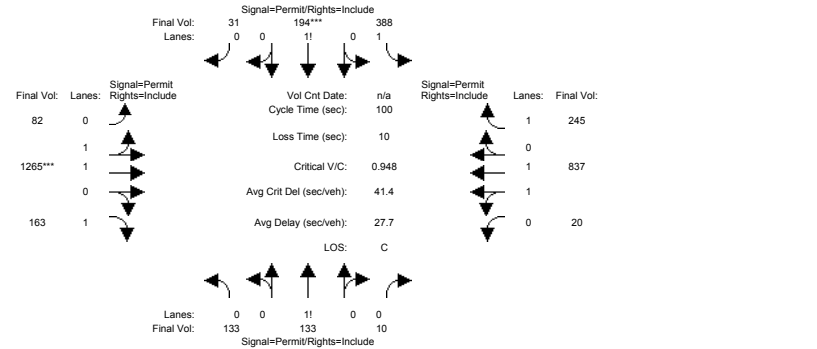
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.82	1.00	1.00	1.00	1.00	0.91	0.77	0.86	0.86	1.00
Lanes:	1.52	0.00	0.48	0.00	0.00	0.00	0.00	1.00	1.00	1.00	2.00	0.00
Final Sat.:	2386	0	755	0	0	0	0	1727	1468	1641	3281	0

Capacity Analysis Module:												
Vol/Sat:	0.18	0.00	0.27	0.00	0.00	0.00	0.00	0.22	0.28	0.09	0.08	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.25	0.00	0.54	0.00	0.00	0.00	0.00	0.34	0.59	0.29	0.63	0.00
Volume/Cap:	0.73	0.00	0.50	0.00	0.00	0.00	0.00	0.65	0.47	0.32	0.13	0.00
Uniform Del:	25.6	0.0	10.7	0.0	0.0	0.0	0.0	21.2	8.8	20.8	5.7	0.0
IncrementDel:	5.2	0.0	1.4	0.0	0.0	0.0	0.0	5.6	1.8	1.8	0.1	0.0
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	30.8	0.0	12.0	0.0	0.0	0.0	0.0	26.8	10.6	22.6	5.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.8	0.0	12.0	0.0	0.0	0.0	0.0	26.8	10.6	22.6	5.8	0.0
LOS by Move:	C	A	B	A	A	A	A	C	B	C	A	A
HCM2kAvqQ:	6	0	6	0	0	0	0	8	6	3	1	0

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

Level Of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 ALT 1 Weekday AM

Intersection #1048: Middle Point Rd / Evans Ave



Street Name:	Middle Point Rd						Evans Ave					
	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:	130	130	10	380	190	30	80	1240	160	20	820	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:	130	130	10	380	190	30	80	1240	160	20	820	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:	130	130	10	380	190	30	80	1240	160	20	820	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:	133	133	10	388	194	31	82	1265	163	20	837	245
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	133	10	388	194	31	82	1265	163	20	837	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
Final Volume:	133	133	10	388	194	31	82	1265	163	20	837	245

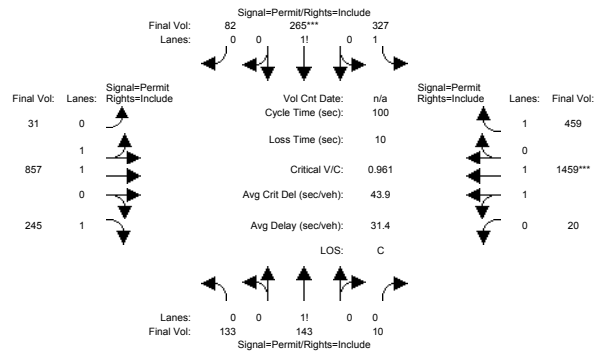
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.65	0.65	0.65	0.63	0.63	0.63	0.71	0.71	0.81	0.81	0.81	0.81
Lanes:	0.48	0.48	0.04	1.47	0.46	0.07	0.12	1.88	1.00	0.05	1.95	1.00
Final Sat.:	596	596	46	1744	552	87	163	2521	1537	73	2999	1537

Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.22	0.22	0.35	0.35	0.50	0.50	0.11	0.28	0.28	0.16
Crit Moves:	****			****			****			****		
Green/Cycle:	0.37	0.37	0.37	0.37	0.37	0.37	0.53	0.53	0.53	0.53	0.53	0.53
Volume/Cap:	0.60	0.60	0.50	0.60	0.95	0.95	0.95	0.95	0.20	0.53	0.53	0.30
Uniform Del:	25.5	25.5	25.5	25.5	30.5	30.5	22.2	22.2	12.4	15.4	15.4	13.2
IncrementDel:	2.2	2.2	2.2	1.0	23.3	23.3	13.5	13.5	0.1	0.3	0.3	0.2
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	27.7	27.7	27.7	26.5	53.9	53.9	35.7	35.7	12.5	15.7	15.7	13.4
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:	27.7	27.7	27.7	26.5	53.9	53.9	35.7	35.7	12.5	15.7	15.7	13.4
LOS by Move:	C	C	C	C	D	D	D	D	B	B	B	B
HCM2kAvqQ:	8	8	8	7	17	17	26	26	3	9	9	4

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Weekday PM

Intersection #1048: Middle Point Rd / Evans Ave



Street Name: Middle Point Rd, Evans Ave
Approach: North Bound, South Bound, East Bound, West Bound
Movement: 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: 130 140 10 320 260 80 30 840 240 20 1430 450
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: 130 140 10 320 260 80 30 840 240 20 1430 450
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: 130 140 10 320 260 80 30 840 240 20 1430 450
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: 133 143 10 327 265 82 31 857 245 20 1459 459
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 133 143 10 327 265 82 31 857 245 20 1459 459
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: 133 143 10 327 265 82 31 857 245 20 1459 459

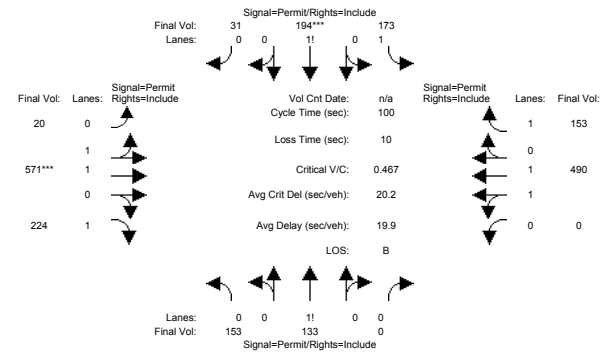
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.55 0.55 0.55 0.65 0.67 0.67 0.66 0.66 0.81 0.85 0.85 0.81
Lanes: 0.46 0.50 0.04 1.33 0.51 0.16 0.07 1.93 1.00 0.03 1.97 1.00
Final Sat.: 489 527 38 1641 655 202 86 2406 1537 44 3172 1537

Capacity Analysis Module:
Vol/Sat: 0.27 0.27 0.27 0.20 0.40 0.40 0.36 0.36 0.16 0.46 0.46 0.30
Crit Moves: ****
Green/Cycle: 0.42 0.42 0.42 0.42 0.42 0.42 0.48 0.48 0.48 0.48 0.48 0.48
Volume/Cap: 0.64 0.64 0.64 0.47 0.96 0.96 0.74 0.74 0.33 0.96 0.96 0.62
Uniform Del: 23.0 23.0 23.0 20.9 28.1 28.1 21.1 21.1 16.2 25.2 25.2 19.4
IncrementDel: 3.2 3.2 3.2 0.2 24.7 24.7 2.6 2.6 0.3 14.7 14.7 1.7
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 26.2 26.2 26.2 21.1 52.8 52.8 23.7 23.7 16.4 39.9 39.9 21.1
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: 26.2 26.2 26.2 21.1 52.8 52.8 23.7 23.7 16.4 39.9 39.9 21.1
LOS by Move: C C C C D D C C B D D C
HCM2kAvgQ: 8 8 8 6 21 21 13 13 5 29 29 11

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Sunday

Intersection #1048: Middle Point Rd / Evans Ave



Street Name: Middle Point Rd, Evans Ave
Approach: North Bound, South Bound, East Bound, West Bound
Movement: 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: 150 130 0 170 190 30 20 560 220 0 480 150
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: 150 130 0 170 190 30 20 560 220 0 480 150
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: 150 130 0 170 190 30 20 560 220 0 480 150
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: 153 133 0 173 194 31 20 571 224 0 490 153
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 153 133 0 173 194 31 20 571 224 0 490 153
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: 153 133 0 173 194 31 20 571 224 0 490 153

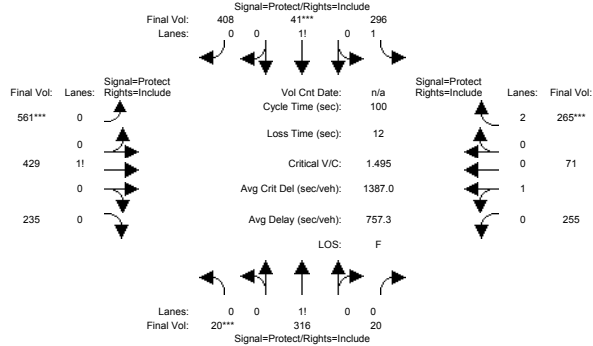
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.69 0.69 1.00 0.68 0.70 0.70 0.84 0.84 0.81 0.95 0.90 0.81
Lanes: 0.54 0.46 0.00 1.29 0.61 0.10 0.07 1.93 1.00 0.00 2.00 1.00
Final Sat.: 702 609 0 1657 825 130 110 3079 1537 0 3437 1537

Capacity Analysis Module:
Vol/Sat: 0.22 0.22 0.00 0.10 0.23 0.23 0.19 0.19 0.15 0.00 0.14 0.10
Crit Moves: ****
Green/Cycle: 0.50 0.50 0.00 0.50 0.50 0.50 0.40 0.40 0.40 0.00 0.40 0.40
Volume/Cap: 0.43 0.43 0.00 0.21 0.47 0.47 0.47 0.47 0.37 0.00 0.36 0.25
Uniform Del: 15.8 15.8 0.0 13.8 16.2 16.2 22.3 22.3 21.3 0.0 21.2 20.2
IncrementDel: 0.5 0.5 0.0 0.1 0.4 0.4 0.3 0.3 0.4 0.0 0.2 0.2
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00
Delay/Veh: 16.3 16.3 0.0 13.9 16.6 16.6 22.6 22.6 21.7 0.0 21.4 20.4
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: 16.3 16.3 0.0 13.9 16.6 16.6 22.6 22.6 21.7 0.0 21.4 20.4
LOS by Move: B B A B B B C C C A C C
HCM2kAvgQ: 6 6 0 2 7 7 7 7 7 5 0 6 3

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Weekday AM

Intersection #1058: Evans Ave/Napolean Ave/Toland



Approach Movement table for Intersection #1058 showing North Bound, South Bound, East Bound, and West Bound movements with columns L, T, and R. Values include Min. Green and Y+R.

Volume Module table for Intersection #1058 showing various traffic volume inputs and outputs across four approaches (North, South, East, West).

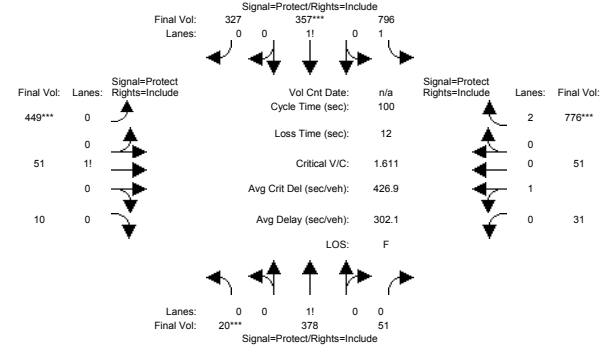
Saturation Flow Module table for Intersection #1058 showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for each approach.

Capacity Analysis Module table for Intersection #1058 showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, Incremental Del, Init Queue Del, Delay Adj, Delay/Veh, User Del Adj, Adj Del/Veh, LOS by Move, and HCM2k Avg Q.

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 1 Weekday PM

Intersection #1058: Evans Ave/Napolean Ave/Toland



Approach Movement table for Intersection #1058 showing North Bound, South Bound, East Bound, and West Bound movements with columns L, T, and R. Values include Min. Green and Y+R.

Volume Module table for Intersection #1058 showing various traffic volume inputs and outputs across four approaches (North, South, East, West).

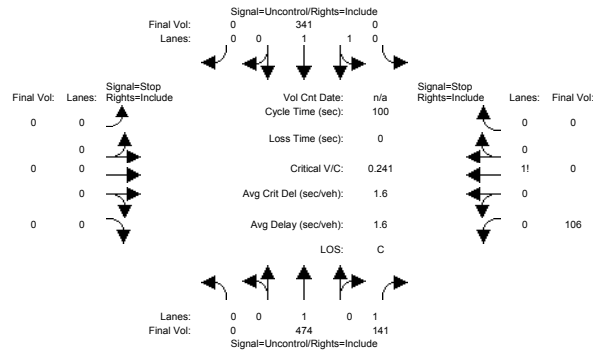
Saturation Flow Module table for Intersection #1058 showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for each approach.

Capacity Analysis Module table for Intersection #1058 showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, Incremental Del, Init Queue Del, Delay Adj, Delay/Veh, User Del Adj, Adj Del/Veh, LOS by Move, and HCM2k Avg Q.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 AM

Intersection #111: Donahue St/Galvez Ave



Street Name: Donahue St Galvez 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: 0 465 138 0 334 0 0 0 0 104 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 465 138 0 334 0 0 0 0 104 0 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: 0 465 138 0 334 0 0 0 0 104 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 0 474 141 0 341 0 0 0 0 106 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 474 141 0 341 0 0 0 0 106 0 0

Critical Gap Module:
Critical Gp: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.4 xxxxx xxxxx
FollowUpTim: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx xxxxx

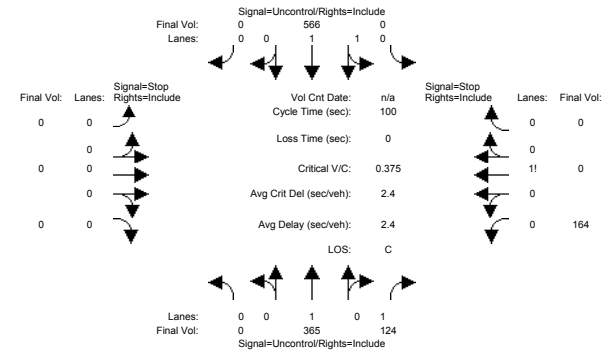
Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 645 xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 440 xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 440 xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.24 xxxxx xxxxx

Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.9 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 15.8 xxxxx xxxxx
LOS by Move: * C * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
SharedCap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx xxxxx xxxxx 7.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * A *
ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 15.8
ApproachLOS: * * * * * C

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 PM

Intersection #111: Donahue St/Galvez Ave



Street Name: Donahue St Galvez 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: 0 358 122 0 555 0 0 0 0 161 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 358 122 0 555 0 0 0 0 161 0 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: 0 358 122 0 555 0 0 0 0 161 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 0 365 124 0 566 0 0 0 0 164 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 365 124 0 566 0 0 0 0 164 0 0

Critical Gap Module:
Critical Gp: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.4 xxxxx xxxxx
FollowUpTim: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx xxxxx

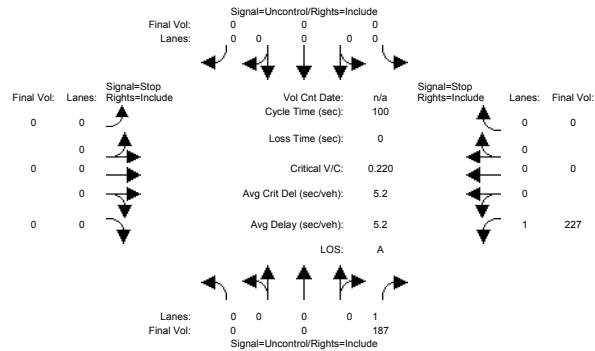
Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 648 xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 438 xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 438 xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.38 xxxxx xxxxx

Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1.7 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 18.1 xxxxx xxxxx
LOS by Move: * C * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
SharedCap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: xxxxx xxxxx xxxxx 7.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * A *
ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 18.1
ApproachLOS: * * * * * C

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 PM

Intersection #112: Donahue St/Lockwood St

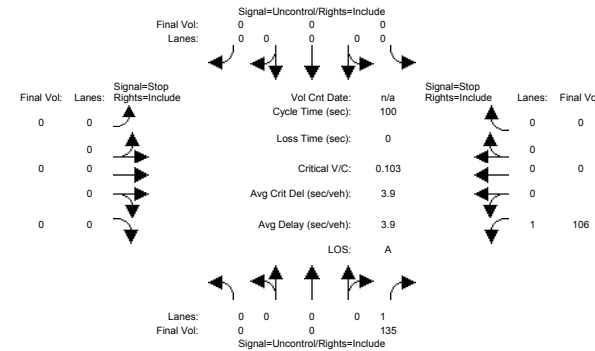


Street Name:	Donahue St						Lockwood St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:	0	0	183	0	0	0	0	0	0	227	0	0
Base Vol:	0	0	183	0	0	0	0	0	0	227	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	183	0	0	0	0	0	0	227	0	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:	0	0	183	0	0	0	0	0	0	227	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	0	187	0	0	0	0	0	0	227	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	187	0	0	0	0	0	0	227	0	0
Critical Gap Module:	Critical Gp: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 6.4 xxxxxx xxxxxx											
FollowUpTim:	FollowUpTim: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 3.5 xxxxxx xxxxxx											
Capacity Module:	Cnflct Vol: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0 xxxxxx xxxxxx											
Potent Cap.:	Potent Cap.: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 1029 xxxxxx xxxxxx											
Move Cap.:	Move Cap.: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 1029 xxxxxx xxxxxx											
Volume/Cap:	Volume/Cap: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.22 xxxxxx xxxxxx											
Level of Service Module:	2Way95thQ: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.8 xxxxxx xxxxxx											
Control Del:	Control Del: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 9.5 xxxxxx xxxxxx											
LOS by Move:	LOS by Move: * A * * * *											
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd Condel:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	9.5	xxxxxxx	xxxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	A	*	*

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 Sunday

Intersection #112: Donahue St/Lockwood St



Street Name:	Donahue St						Lockwood St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:	0	0	132	0	0	0	0	0	0	104	0	0
Base Vol:	0	0	132	0	0	0	0	0	0	104	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	132	0	0	0	0	0	0	104	0	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:	0	0	132	0	0	0	0	0	0	104	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	0	135	0	0	0	0	0	0	106	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	135	0	0	0	0	0	0	106	0	0
Critical Gap Module:	Critical Gp: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 6.4 xxxxxx xxxxxx											
FollowUpTim:	FollowUpTim: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 3.5 xxxxxx xxxxxx											
Capacity Module:	Cnflct Vol: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0 xxxxxx xxxxxx											
Potent Cap.:	Potent Cap.: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 1029 xxxxxx xxxxxx											
Move Cap.:	Move Cap.: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 1029 xxxxxx xxxxxx											
Volume/Cap:	Volume/Cap: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.10 xxxxxx xxxxxx											
Level of Service Module:	2Way95thQ: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.3 xxxxxx xxxxxx											
Control Del:	Control Del: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 8.9 xxxxxx xxxxxx											
LOS by Move:	LOS by Move: * A * * * *											
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd Condel:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	8.9	xxxxxxx	xxxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	A	*	*

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 AM

Intersection #113: Crisp Ave/I St (Outer Ring Road)

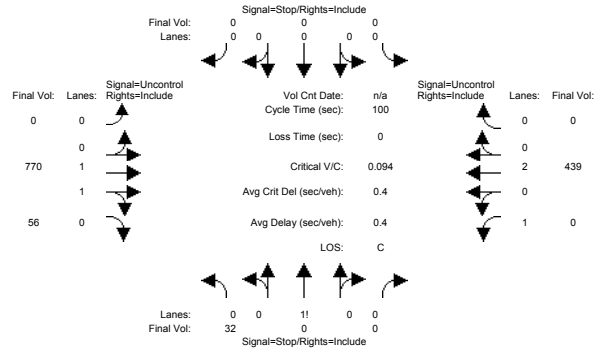


Table with columns for Street Name, Approach, Movement, Volume Module, and Final Volume. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Critical Gap Module table with columns for Critical Gap and FollowUpTime.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., Total Cap., and Volume/Cap.

Level of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 PM

Intersection #113: Crisp Ave/I St (Outer Ring Road)

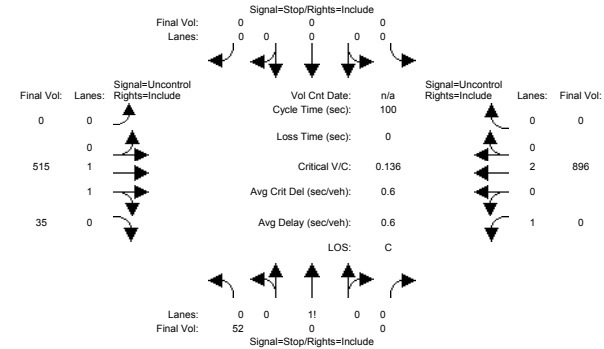


Table with columns for Street Name, Approach, Movement, Volume Module, and Final Volume. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Critical Gap Module table with columns for Critical Gap and FollowUpTime.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., Total Cap., and Volume/Cap.

Level of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 Sunday

Intersection #113: Crisp Ave/I St (Outer Ring Road)

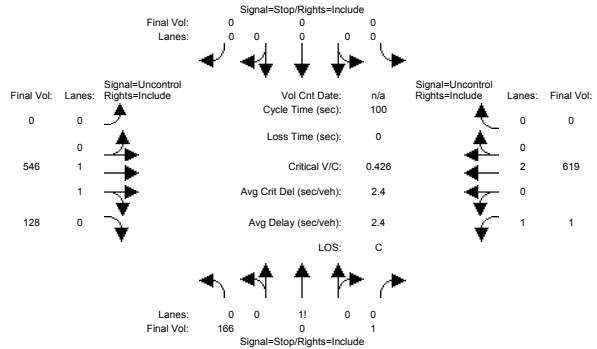


Table with columns for Street Name, Approach, Movement, and various performance metrics (Volume, Critical Gap, Capacity, LOS). Includes sub-sections for Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 AM

Intersection #114: Crisp Ave/Spear Ave (Inner Ring Road)

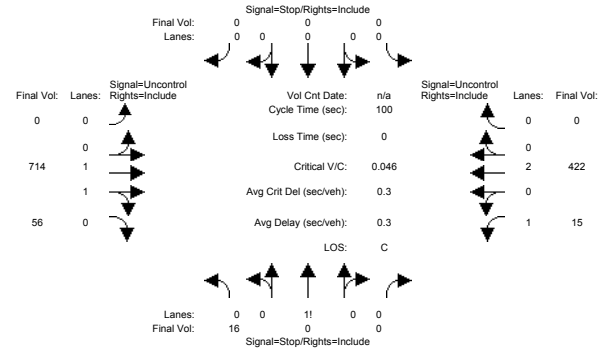
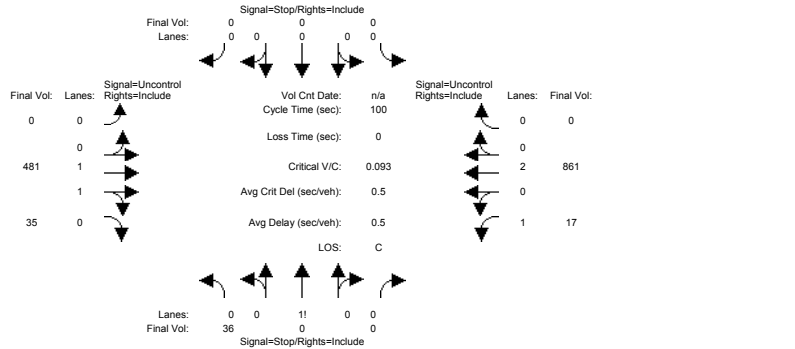


Table with columns for Street Name, Approach, Movement, and various performance metrics (Volume, Critical Gap, Capacity, LOS). Includes sub-sections for Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 PM

Intersection #114: Crisp Ave/Spear Ave (Inner Ring Road)

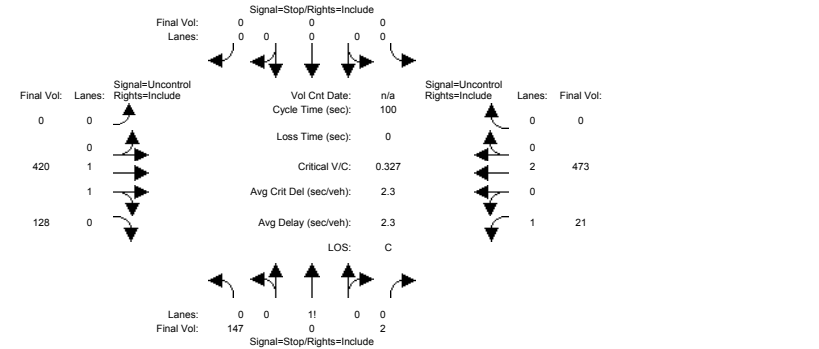


Street Name:	Inner Ring Road						Crisp Ave-Spear Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:	35	0	0	0	0	0	0	471	34	17	844	0
Base Vol:	35	0	0	0	0	0	0	471	34	17	844	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	35	0	0	0	0	0	0	471	34	17	844	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:	35	0	0	0	0	0	0	471	34	17	844	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	36	0	0	0	0	0	0	481	35	17	861	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	36	0	0	0	0	0	0	481	35	17	861	0
Critical Gap Module:	6.8	xxxx	xxxx	xxxx	xxxx	xxxx	4.1	xxxx	xxxx	xxxx	xxxx	xxxx
FollowUpTim:	3.5	xxxx	xxxx	xxxx	xxxx	xxxx	2.2	xxxx	xxxx	xxxx	xxxx	xxxx
Capacity Module:	Cnflct Vol:	963	xxxx	xxxx	xxxx	xxxx	515	xxxx	xxxx	xxxx	xxxx	xxxx
Potent Cap.:	257	xxxx	xxxx	xxxx	xxxx	xxxx	1061	xxxx	xxxx	xxxx	xxxx	xxxx
Move Cap.:	254	xxxx	xxxx	xxxx	xxxx	xxxx	1061	xxxx	xxxx	xxxx	xxxx	xxxx
Total Cap:	384	257	xxxx	248	252	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Volume/Cap:	0.09	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx	xxxx	xxxx	xxxx
Level of Service Module:	2Way95thQ:	0.3	xxxx	xxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxx	xxxx	xxxx
Control Del:	15.3	xxxx	xxxx	xxxx	xxxx	xxxx	8.5	xxxx	xxxx	xxxx	xxxx	xxxx
LOS by Move:	C	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	-LTR	-RT	LT	-LTR	-RT	LT	-LTR	-RT	LT	-LTR	-RT
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	15.3		xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx	
ApproachLOS:	C		*		*		*		*		*	

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 Sunday

Intersection #114: Crisp Ave/Spear Ave (Inner Ring Road)



Street Name:	Inner Ring Road						Crisp Ave-Spear 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:	144	0	2	0	0	0	0	412	125	21	464	0
Base Vol:	144	0	2	0	0	0	0	412	125	21	464	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:	144	0	2	0	0	0	0	412	125	21	464	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:	144	0	2	0	0	0	0	412	125	21	464	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	147	0	2	0	0	0	0	420	128	21	473	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	147	0	2	0	0	0	0	420	128	21	473	0
Critical Gap Module:	6.8	6.5	6.9	xxxx	xxxx	xxxx	4.1	xxxx	xxxx	xxxx	xxxx	xxxx
FollowUpTim:	3.5	4.0	3.3	xxxx	xxxx	xxxx	2.2	xxxx	xxxx	xxxx	xxxx	xxxx
Capacity Module:	Cnflct Vol:	764	1001	274	xxxx	xxxx	548	xxxx	xxxx	xxxx	xxxx	xxxx
Potent Cap.:	344	245	730	xxxx	xxxx	xxxx	1032	xxxx	xxxx	xxxx	xxxx	xxxx
Move Cap.:	339	240	730	xxxx	xxxx	xxxx	1032	xxxx	xxxx	xxxx	xxxx	xxxx
Total Cap:	450	356	xxxx	406	334	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Volume/Cap:	0.33	0.00	0.00	xxxx	xxxx	xxxx	0.02	xxxx	xxxx	xxxx	xxxx	xxxx
Level of Service Module:	2Way95thQ:	xxxx	xxxx	xxxx	xxxx	xxxx	0.1	xxxx	xxxx	xxxx	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	8.6	xxxx	xxxx	xxxx	xxxx	xxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	-LTR	-RT	LT	-LTR	-RT	LT	-LTR	-RT	LT	-LTR	-RT
Shared Cap.:	xxxx	452	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	1.4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	16.8	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	*	*	*
ApproachDel:	16.8		xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx	
ApproachLOS:	C		*		*		*		*		*	

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

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 AM

Intersection #115: Robinson St/Spear Ave

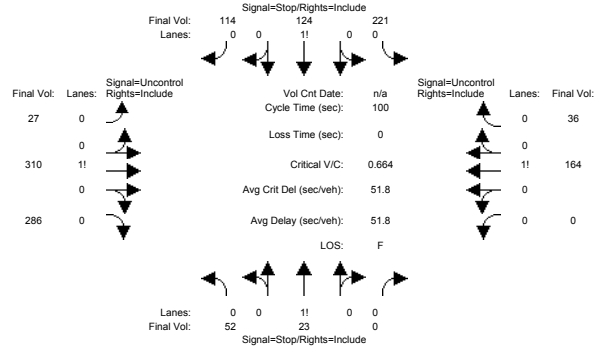


Table with columns for Street Name, Approach, and Movement (L, T, R for North and South Bound). Rows include Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module, providing detailed performance metrics.

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 PM

Intersection #115: Robinson St/Spear Ave

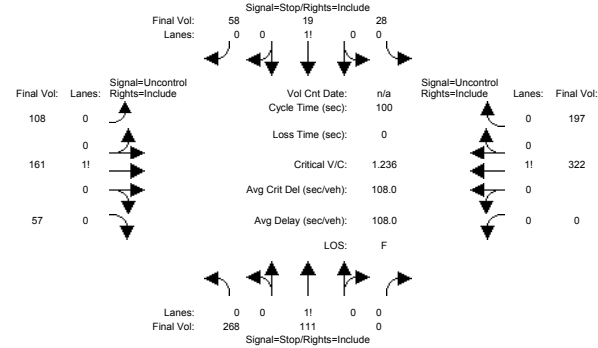
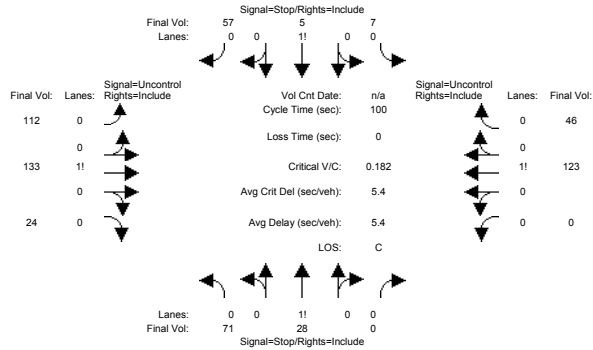


Table with columns for Street Name, Approach, and Movement (L, T, R for North and South Bound). Rows include Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module, providing detailed performance metrics.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 Sunday

Intersection #115: Robinson St/Spear Ave

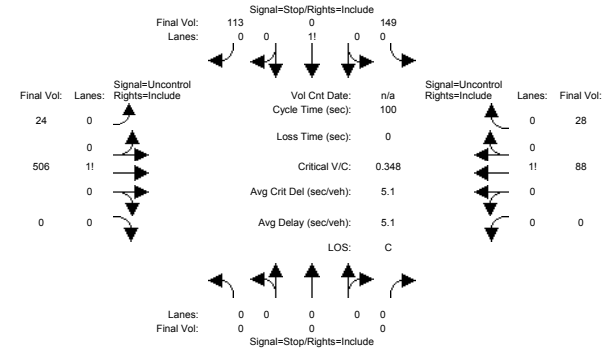


Street Name: Galvez Ave, Spear Ave
Approach: North Bound, South Bound, East Bound, West Bound
Movement: L - T - R
Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume
Critical Gap Module: Critical Gp, FollowUpTim
Capacity Module: Cnflct Vol, Potent Cap, Move Cap, Volume/Cap
Level of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Queue, Shrd Condel, Shared LOS, ApproachDel, ApproachLOS

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 AM

Intersection #116: Lockwood St/Spear Ave

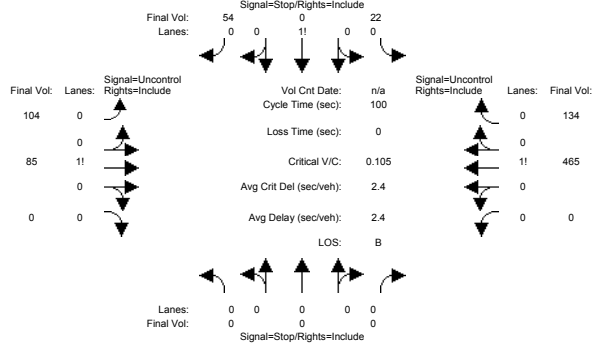


Street Name: Lockwood St, Spear Ave
Approach: North Bound, South Bound, East Bound, West Bound
Movement: L - T - R
Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume
Critical Gap Module: Critical Gp, FollowUpTim
Capacity Module: Cnflct Vol, Potent Cap, Move Cap, Volume/Cap
Level of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Queue, Shrd Condel, Shared LOS, ApproachDel, ApproachLOS

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 PM

Intersection #116: Lockwood St/Spear Ave

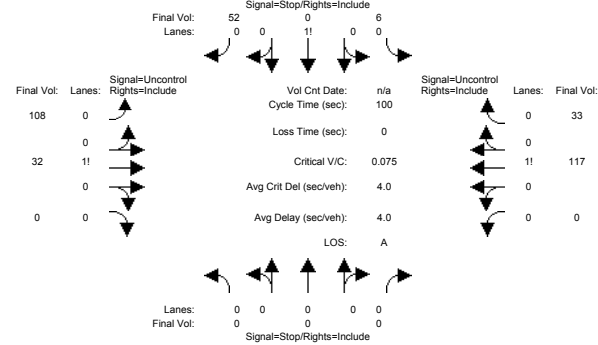


Street Name:	Lockwood St				Spear Ave				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Volume Module:									
Base Vol:	0	0	0	22	0	53	102	83	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	22	0	53	102	83	0
Added Vol:	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	22	0	53	102	83	0
User Adj:	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
PHF Volume:	0	0	0	22	0	54	104	85	0
Reduct Vol:	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	22	0	54	104	85	0
Critical Gap Module:									
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx
FollowUpTim:	xxxxxx	xxxxx	xxxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxxx
Capacity Module:									
Cnflct Vol:	xxxxx	xxxxx	xxxxx	825	825	532	599	xxxxx	xxxxx
Potent Cap.:	xxxxx	xxxxx	xxxxx	345	310	551	988	xxxxx	xxxxx
Move Cap.:	xxxxx	xxxxx	xxxxx	315	275	551	988	xxxxx	xxxxx
Volume/Cap:	xxxxx	xxxxx	xxxxx	0.07	0.00	0.10	0.11	xxxxx	xxxxx
Level Of Service Module:									
2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.4	xxxxx	xxxxx
Control Del:	xxxxxx	xxxxx	xxxxxx	xxxxxx	xxxxx	xxxxxx	9.1	xxxxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxxx	xxxxx	xxxxx	xxxxx	452	xxxxx	xxxxx	xxxxx	xxxxx
Shared Queue:	xxxxxx	xxxxx	xxxxxx	xxxxxx	0.6	xxxxxx	0.4	xxxxxx	xxxxxx
Shrd Condel:	xxxxxx	xxxxx	xxxxxx	xxxxxx	14.6	xxxxxx	9.1	xxxxxx	xxxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*
ApproachDel:	xxxxxxx			14.6			xxxxxxx		xxxxxxx
ApproachLOS:	*			B			*		*

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 1 Sunday

Intersection #116: Lockwood St/Spear Ave

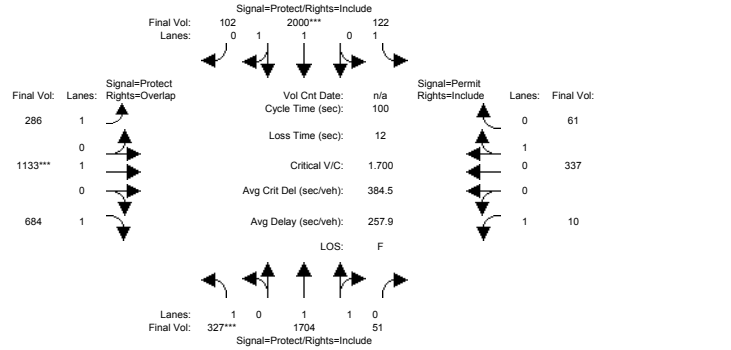


Street Name:	Lockwood St				Spear Ave				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Volume Module:									
Base Vol:	0	0	0	6	0	51	106	31	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	6	0	51	106	31	0
Added Vol:	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	6	0	51	106	31	0
User Adj:	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
PHF Volume:	0	0	0	6	0	52	108	32	0
Reduct Vol:	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	6	0	52	108	32	0
Critical Gap Module:									
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx
FollowUpTim:	xxxxxx	xxxxx	xxxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxxx
Capacity Module:									
Cnflct Vol:	xxxxx	xxxxx	xxxxx	382	382	134	150	xxxxx	xxxxx
Potent Cap.:	xxxxx	xxxxx	xxxxx	625	554	921	1444	xxxxx	xxxxx
Move Cap.:	xxxxx	xxxxx	xxxxx	587	510	921	1444	xxxxx	xxxxx
Volume/Cap:	xxxxx	xxxxx	xxxxx	0.01	0.00	0.06	0.07	xxxxx	xxxxx
Level Of Service Module:									
2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx
Control Del:	xxxxxx	xxxxx	xxxxxx	xxxxxx	xxxxx	xxxxxx	7.7	xxxxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxxx	xxxxx	xxxxx	xxxxx	869	xxxxx	xxxxx	xxxxx	xxxxx
Shared Queue:	xxxxxx	xxxxx	xxxxxx	xxxxxx	0.2	xxxxxx	0.2	xxxxxx	xxxxxx
Shrd Condel:	xxxxxx	xxxxx	xxxxxx	xxxxxx	9.4	xxxxxx	7.7	xxxxxx	xxxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*
ApproachDel:	xxxxxxx			9.4			xxxxxxx		xxxxxxx
ApproachLOS:	*			A			*		*

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

Level of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 ALT 2 Weekday AM

Intersection #1002: 3rd St / Cesar Chavez

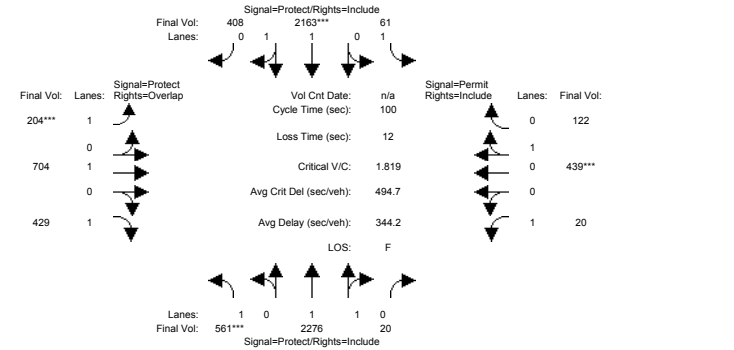


Street Name:	3rd St								Cesar Chavez									
	North Bound				South Bound				East Bound				West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	45	45	5	35	35	15	40	40	20	20	20	15	40	40	20	20	20
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:	Base Vol: 320 1670 50 120 1960 100 280 1110 670 10 330 60 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Initial Bse: 320 1670 50 120 1960 100 280 1110 670 10 330 60 Added Vol: 0 0 0 0 0 0 0 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 0 0 0 0 0 0 0 Initial Fut: 320 1670 50 120 1960 100 280 1110 670 10 330 60 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 PHF Volume: 327 1704 51 122 2000 102 286 1133 684 10 337 61 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 327 1704 51 122 2000 102 286 1133 684 10 337 61 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 FinalVolume: 327 1704 51 122 2000 102 286 1133 684 10 337 61																	
Saturation Flow Module:	Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 Adjustment: 0.86 0.86 0.86 0.86 0.86 0.86 0.86 0.91 0.77 0.18 0.89 0.89 Lanes: 1.00 1.94 0.06 1.00 1.90 0.10 1.00 1.00 1.00 1.00 0.85 0.15 Final Sat.: 1641 3173 95 1641 3100 158 1641 1727 1468 345 1428 260																	
Capacity Analysis Module:	Vol/Sat: 0.20 0.54 0.54 0.07 0.65 0.65 0.17 0.66 0.47 0.03 0.24 0.24 Crit Moves: **** Green/Cycle: 0.15 0.43 0.43 0.06 0.34 0.34 0.20 0.39 0.54 0.20 0.20 0.20 Volume/Cap: 1.35 1.25 1.25 1.25 1.88 1.88 0.89 1.67 0.86 0.14 1.20 1.20 Uniform Del: 43.5 29.0 29.0 48.0 33.5 33.5 39.9 31.0 20.3 33.9 41.0 41.0 IncremntDel: 183.5 118 117.6 171.6 399 399.5 28.4 309 12.0 4.3 116 116.5 InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Delay/Veh: 227.0 147 146.6 219.6 433 433.0 68.3 340 32.3 38.2 157 157.5 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: 227.0 147 146.6 219.6 433 433.0 68.3 340 32.3 38.2 157 157.5 LOS by Move: F F F F F F E F F HCM2kAvgQ: 20 50 50 7 96 96 10 90 20 0 22 22																	

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

Level of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 ALT 2 Weekday PM

Intersection #1002: 3rd St / Cesar Chavez



Street Name:	3rd St								Cesar Chavez									
	North Bound				South Bound				East Bound				West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	45	45	5	35	35	15	40	40	20	20	20	15	40	40	20	20	20
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	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:	Base Vol: 550 2230 20 60 2120 400 200 690 420 20 430 120 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: 550 2230 20 60 2120 400 200 690 420 20 430 120 Added Vol: 0 0 0 0 0 0 0 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 0 0 0 0 0 0 0 Initial Fut: 550 2230 20 60 2120 400 200 690 420 20 430 120 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: 561 2276 20 61 2163 408 204 704 429 20 439 122 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 561 2276 20 61 2163 408 204 704 429 20 439 122 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: 561 2276 20 61 2163 408 204 704 429 20 439 122																	
Saturation Flow Module:	Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 Adjustment: 0.86 0.86 0.86 0.86 0.84 0.84 0.86 0.91 0.77 0.18 0.88 0.88 Lanes: 1.00 1.98 0.02 1.00 1.68 0.32 1.00 1.00 1.00 1.00 0.78 0.22 Final Sat.: 1641 3249 29 1641 2694 508 1641 1727 1468 345 1306 364																	
Capacity Analysis Module:	Vol/Sat: 0.34 0.70 0.70 0.04 0.80 0.80 0.12 0.41 0.29 0.06 0.34 0.34 Crit Moves: **** Green/Cycle: 0.16 0.49 0.49 0.05 0.38 0.38 0.15 0.34 0.50 0.20 0.20 0.20 Volume/Cap: 2.12 1.43 1.43 0.76 2.12 2.12 0.85 1.19 0.58 0.29 1.71 1.71 Uniform Del: 42.8 26.0 26.0 47.9 31.7 31.7 42.4 33.5 17.7 34.9 41.0 41.0 IncremntDel: 518.0 197 196.6 49.1 508 508.4 28.9 101 3.3 10.1 334 333.8 InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Delay/Veh: 560.8 223 222.6 97.0 540 540.1 71.2 134 21.0 45.0 375 374.8 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: 560.8 223 222.6 97.0 540 540.1 71.2 134 21.0 45.0 375 374.8 LOS by Move: F F F F F F E F C D F F HCM2kAvgQ: 53 80 80 2 128 128 7 37 10 1 46 46																	

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2 Sunday

Intersection #1002: 3rd St / Cesar Chavez

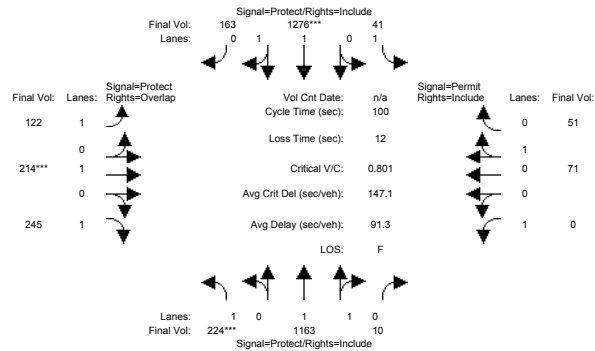


Table with columns for Street Name, Approach, Movement, and timing values (Min. Green, Y+R).

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume for each approach and movement.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2 Weekday AM

Intersection #1003: 3rd St / Cargo Way

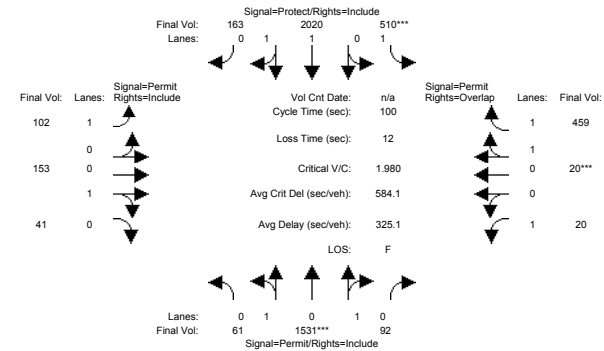


Table with columns for Street Name, Approach, Movement, and timing values (Min. Green, Y+R).

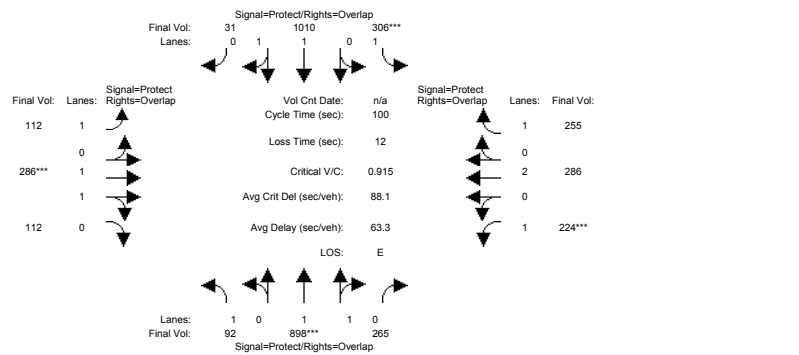
Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume for each approach and movement.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2 Sunday

Intersection #1004: 3rd St / Evans Ave



Street Name: 3rd St, Evans Ave
Approach: North Bound, South Bound, East Bound, West Bound
Movement: L - T - R
Min. Green: 12 46 46 | 12 46 46 | 6 20 20 | 12 26 26
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

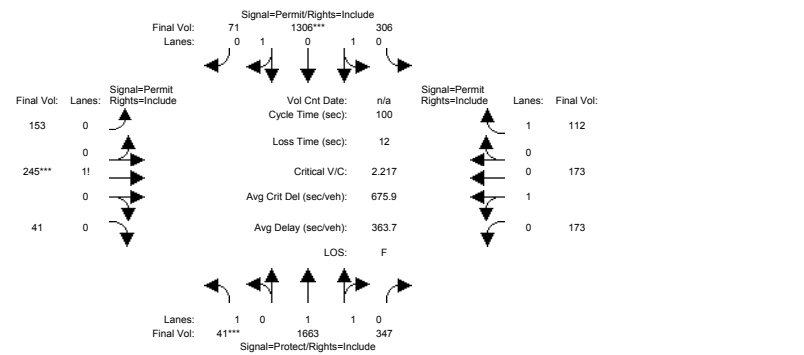
Volume Module:
Base Vol: 90 880 260 300 990 30 110 280 110 220 280 250
Initial Bse: 90 880 260 300 990 30 110 280 110 220 280 250
Final Volume: 92 898 265 306 1010 31 112 286 112 224 286 255

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.86 0.83 0.83 0.86 0.86 0.86 0.90 0.85 0.85 0.90 0.90 0.78
Final Sat.: 1641 2447 723 1641 3172 96 1718 2316 910 1718 3437 1476

Capacity Analysis Module:
Vol/Sat: 0.06 0.37 0.37 0.19 0.32 0.32 0.07 0.12 0.12 0.13 0.08 0.17
Green/Cycle: 0.12 0.45 0.57 0.12 0.45 0.51 0.06 0.20 0.31 0.12 0.25 0.37
LOS by Movement: D C B F C B F D C F C C
HCM2kAvgQ: 3 17 13 24 14 13 6 6 5 13 4 6

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2 Weekday AM

Intersection #1006: 3rd St / Palou Ave



Street Name: 3rd St, Palou Ave
Approach: North Bound, South Bound, East Bound, West Bound
Movement: L - T - R
Min. Green: 15 69 69 | 0 49 49 | 21 21 21 | 21 21 21
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: 40 1630 340 300 1280 70 150 240 40 170 170 110
Initial Bse: 40 1630 340 300 1280 70 150 240 40 170 170 110
Final Volume: 41 1663 347 306 1306 71 153 245 41 173 173 112

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.77 0.77 0.42 0.42 0.42 0.26 0.26 0.26 0.53 0.53 0.63
Final Sat.: 1718 2418 504 292 1245 68 173 277 46 506 506 1190

Capacity Analysis Module:
Vol/Sat: 0.02 0.69 0.69 1.05 1.05 1.05 0.88 0.88 0.88 0.34 0.34 0.09
Green/Cycle: 0.15 0.63 0.63 0.48 0.48 0.48 0.25 0.25 0.25 0.25 0.25 0.25
LOS by Movement: D E E F F F F F F F F F
HCM2kAvgQ: 1 43 43 86 86 86 53 53 53 22 22 3

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2 Weekday PM

Intersection #1048: Middle Point Rd / Evans Ave

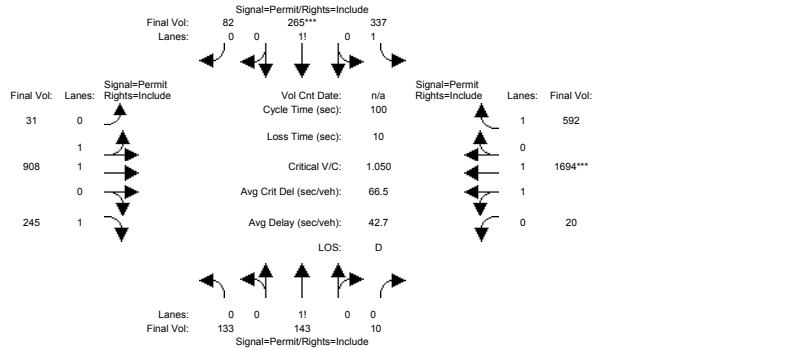


Table with columns for Street Name, Approach, Movement, and Volume Module. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2AvgQ.

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2 Sunday

Intersection #1048: Middle Point Rd / Evans Ave

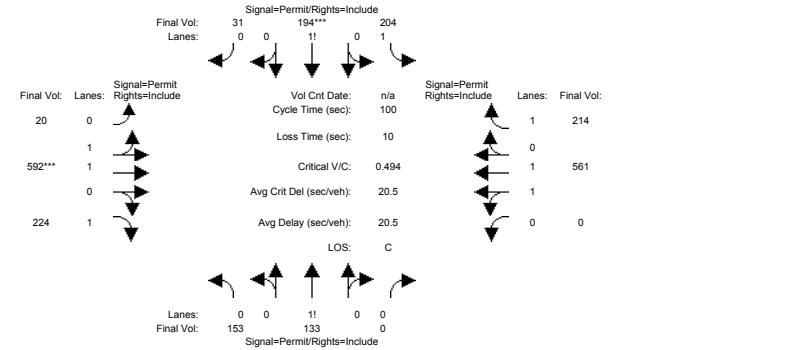


Table with columns for Street Name, Approach, Movement, and Volume Module. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2AvgQ.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 Sunday

Intersection #111: Donahue St/Galvez Ave

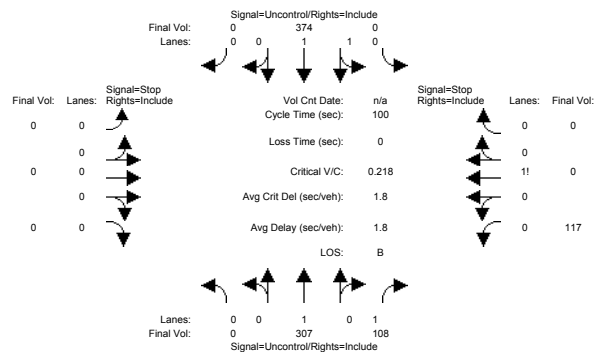


Table with columns for Street Name, Approach, Movement, and Volume Module. Includes data for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume, Critical Gap Module, Capacity Module, and Level of Service Module.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 AM

Intersection #112: Donahue St/Lockwood St

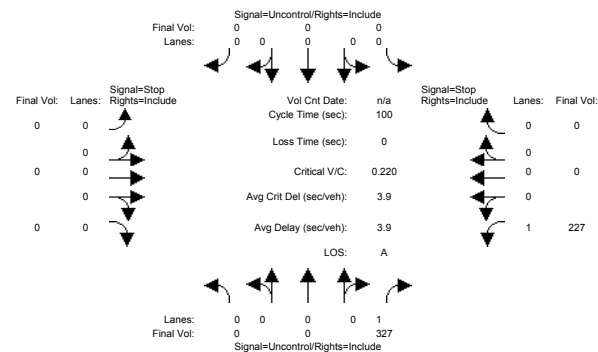


Table with columns for Street Name, Approach, Movement, and Volume Module. Includes data for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume, Critical Gap Module, Capacity Module, and Level of Service Module.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 AM

Intersection #113: Crisp Ave/I St (Outer Ring Road)

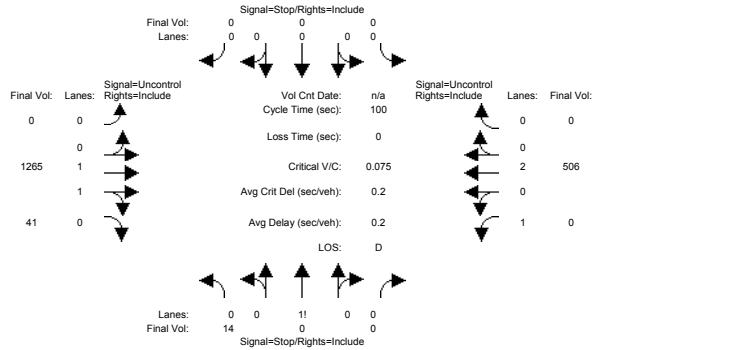


Table with columns for Street Name, Approach, and Movement. Rows include Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and FinalVolume.

Critical Gap Module table showing Critical Gap and FollowUpTim values for various movements.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., Total Cap., and Volume/Cap. for different movements.

Level of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 PM

Intersection #113: Crisp Ave/I St (Outer Ring Road)

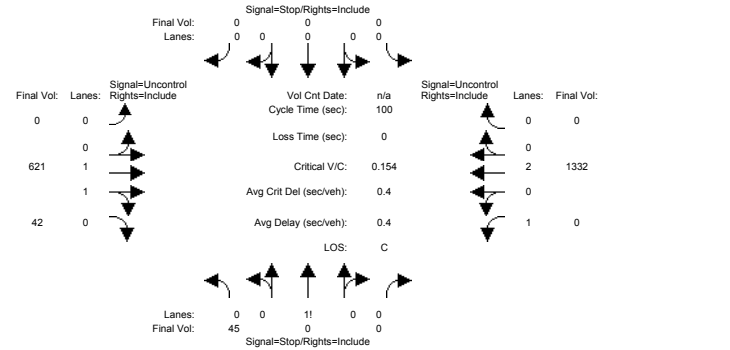


Table with columns for Street Name, Approach, and Movement. Rows include Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and FinalVolume.

Critical Gap Module table showing Critical Gap and FollowUpTim values for various movements.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., Total Cap., and Volume/Cap. for different movements.

Level of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 Sunday

Intersection #113: Crisp Ave/I St (Outer Ring Road)

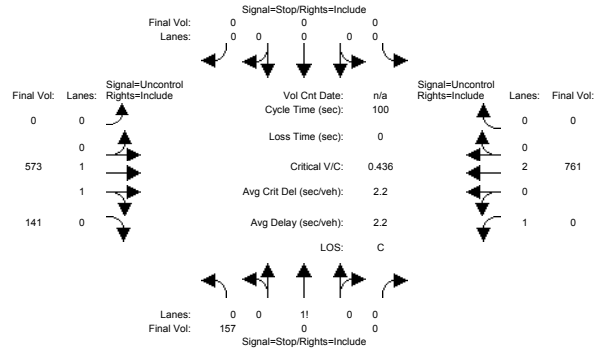


Table with columns for Street Name, Approach, Movement, Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module. Includes data for I St (Outer Ring Road) and Crisp Ave.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 AM

Intersection #114: Crisp Ave/Spear Ave (Inner Ring Road)

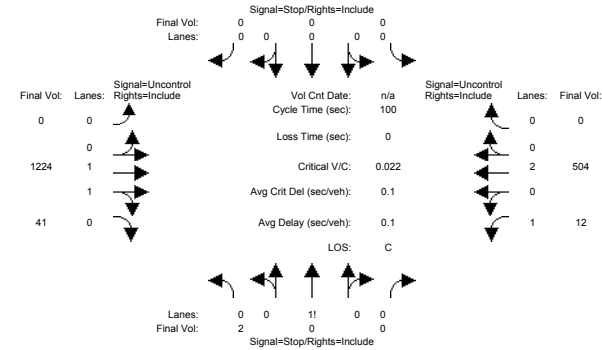
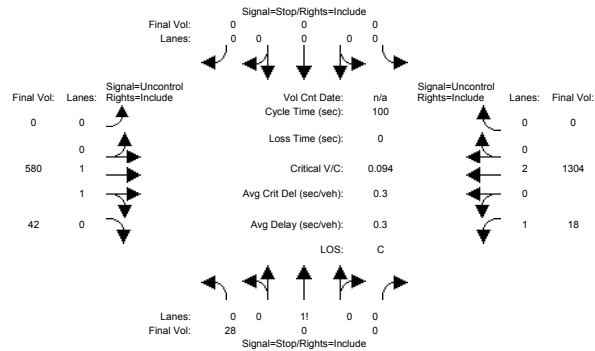


Table with columns for Street Name, Approach, Movement, Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module. Includes data for Inner Ring Road and Crisp Ave-Spear Ave.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 PM

Intersection #114: Crisp Ave/Spear Ave (Inner Ring Road)

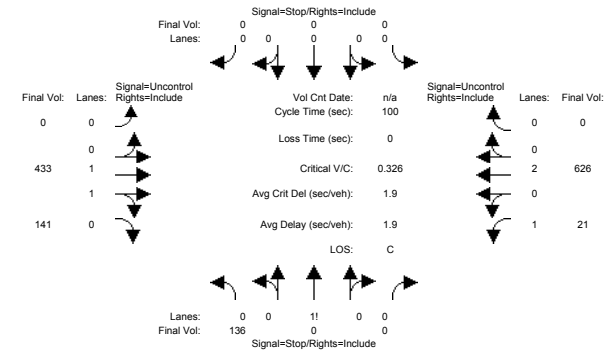


Street Name:	Inner Ring Road						Crisp Ave-Spear Ave								
	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Volume Module:															
Base Vol:	27	0	0	0	0	0	0	568	41	18	1278	0			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	27	0	0	0	0	0	0	568	41	18	1278	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:	27	0	0	0	0	0	0	568	41	18	1278	0			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
PHF Volume:	28	0	0	0	0	0	0	580	42	18	1304	0			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	28	0	0	0	0	0	0	580	42	18	1304	0			
Critical Gap Module:															
Critical Gp:	6.8	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	4.1	xxxx	xxxxx		
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	2.2	xxxx	xxxxx		
Capacity Module:															
Cnflct Vol:	1289	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	621	xxxx	xxxxx		
Potent Cap.:	158	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	969	xxxx	xxxxx		
Move Cap.:	156	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	969	xxxx	xxxxx		
Total Cap:	292	163	xxxxx	135	160	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx		
Volume/Cap:	0.09	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.02	xxxx	xxxxx		
Level of Service Module:															
2Way95thQ:	0.3	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxx	xxxxx		
Control Del:	18.6	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	8.8	xxxx	xxxxx		
LOS by Move:	C	*	*	*	*	*	*	*	*	*	A	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
ApproachDel:	18.6		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		
ApproachLOS:	C		*		*		*		*		*		*		

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 Sunday

Intersection #114: Crisp Ave/Spear Ave (Inner Ring Road)

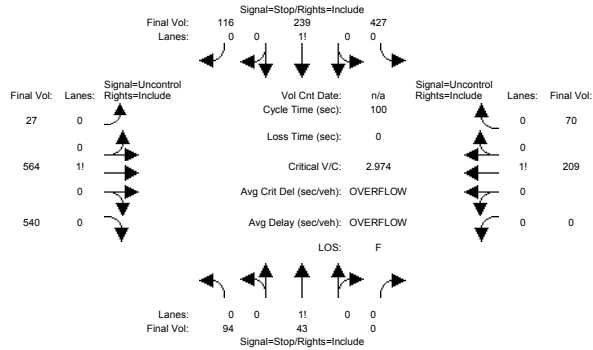


Street Name:	Inner Ring Road						Crisp Ave-Spear Ave								
	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Volume Module:															
Base Vol:	0	0	0	0	0	0	0	424	138	21	613	0			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	424	138	21	613	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:	0	0	0	0	0	0	0	424	138	21	613	0			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
PHF Volume:	0	0	0	0	0	0	0	433	141	21	626	0			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
FinalVolume:	0	0	0	0	0	0	0	433	141	21	626	0			
Critical Gap Module:															
Critical Gp:	6.8	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	4.1	xxxx	xxxxx		
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	2.2	xxxx	xxxxx		
Capacity Module:															
Cnflct Vol:	859	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	573	xxxx	xxxxx		
Potent Cap.:	300	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	1010	xxxx	xxxxx		
Move Cap.:	295	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	1010	xxxx	xxxxx		
Total Cap:	417	310	xxxxx	335	292	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx		
Volume/Cap:	0.33	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.02	xxxx	xxxxx		
Level of Service Module:															
2Way95thQ:	1.4	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxx	xxxxx		
Control Del:	17.8	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	8.6	xxxx	xxxxx		
LOS by Move:	C	*	*	*	*	*	*	*	*	*	A	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
ApproachDel:	17.8		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		xxxxxxx		
ApproachLOS:	C		*		*		*		*		*		*		

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

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 AM

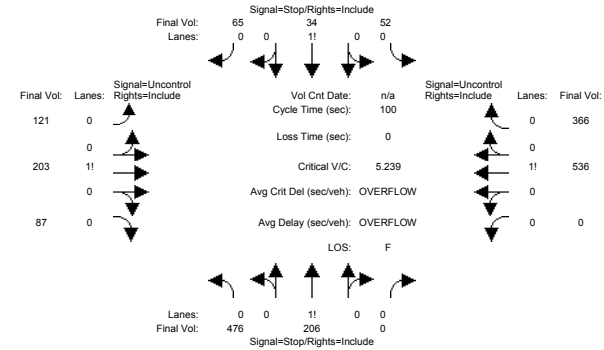
Intersection #115: Robinson St/Spear Ave



Street Name: Galvez Ave (North Bound, South Bound) and Spear Ave (East Bound, West Bound). 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, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume. Critical Gap Module: Critical Gp, FollowUpTim. Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Level of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Queue, Shrd Condel, Shared LOS, ApproachDel, ApproachLOS.

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 PM

Intersection #115: Robinson St/Spear Ave



Street Name: Galvez Ave (North Bound, South Bound) and Spear Ave (East Bound, West Bound). 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, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume. Critical Gap Module: Critical Gp, FollowUpTim. Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Level of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Queue, Shrd Condel, Shared LOS, ApproachDel, ApproachLOS.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 Sunday

Intersection #115: Robinson St/Spear Ave

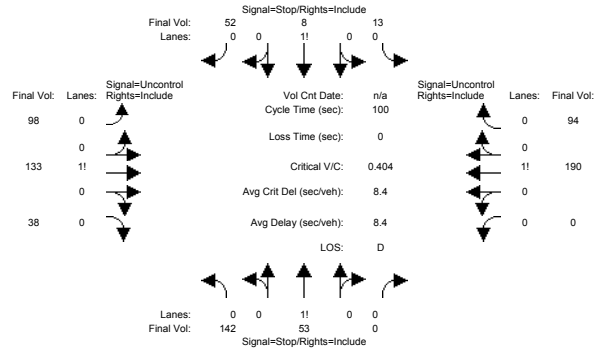


Table with columns for Street Name, Approach, Movement, Volume Module, Capacity Module, and Level of Service Module. It provides detailed traffic volume and LOS data for Galvez Ave and Spear Ave at Intersection #115.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 AM

Intersection #116: Lockwood St/Spear Ave

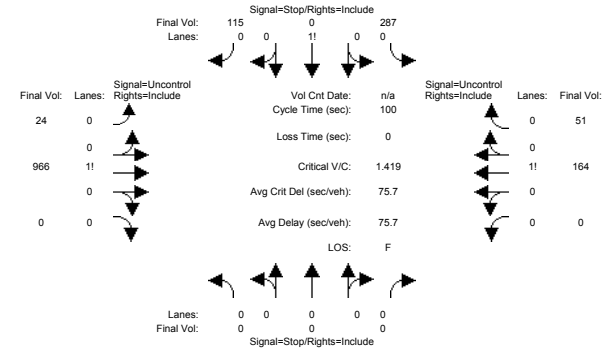
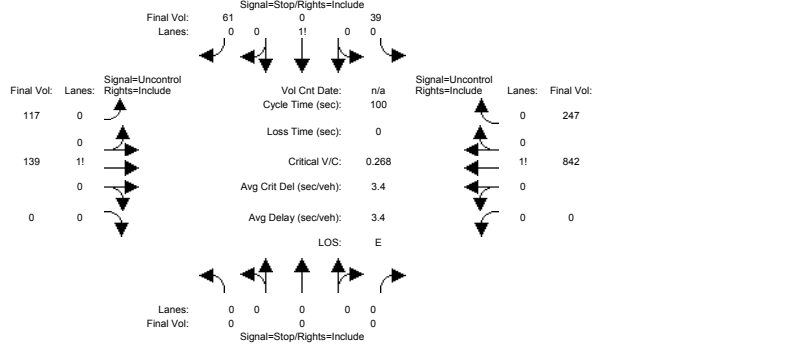


Table with columns for Street Name, Approach, Movement, Volume Module, Capacity Module, and Level of Service Module. It provides detailed traffic volume and LOS data for Lockwood St and Spear Ave at Intersection #116.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 PM

Intersection #116: Lockwood St/Spear Ave

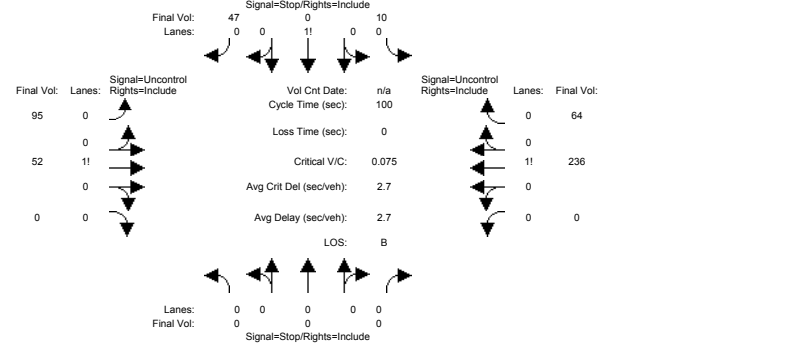


Street Name:	Lockwood St						Spear Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:	0	0	0	38	0	60	115	136	0	0	825	242
Base Vol:	0	0	0	38	0	60	115	136	0	0	825	242
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	38	0	60	115	136	0	0	825	242
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	38	0	60	115	136	0	0	825	242
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	0	0	39	0	61	117	139	0	0	842	247
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	39	0	61	117	139	0	0	842	247
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxxx	xxxxx	xxxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Capacity Module:												
Cnflct Vol:	xxxxx	xxxx	xxxxx	1339	1339	965	1089	xxxxx	xxxxx	xxxxx	xxxx	xxxxx
Potent Cap.:	xxxxx	xxxx	xxxxx	170	154	312	648	xxxxx	xxxxx	xxxxx	xxxx	xxxxx
Move Cap.:	xxxxx	xxxx	xxxxx	145	124	312	648	xxxxx	xxxxx	xxxxx	xxxx	xxxxx
Volume/Cap:	xxxxx	xxxx	xxxxx	0.27	0.00	0.20	0.18	xxxxx	xxxxx	xxxxx	xxxx	xxxxx
Level Of Service Module:												
2Way95thQ:	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Control Del:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	11.8	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	B	*	*	*	*	*
Movement:	LT	-LTR	-RT	LT	-LTR	-RT	LT	-LTR	-RT	LT	-LTR	-RT
Shared Cap.:	xxxxx	xxxx	xxxxx	xxxx	216	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	2.2	xxxxxx	0.7	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shrd Condel:	xxxxxx	xxxx	xxxxxx	xxxxxx	35.4	xxxxxx	11.8	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	E	*	B	*	*	*	*	*
ApproachDel:	xxxxxxx			35.4			xxxxxxx			xxxxxxx		
ApproachLOS:	*			E			*			*		

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2 Sunday

Intersection #116: Lockwood St/Spear Ave

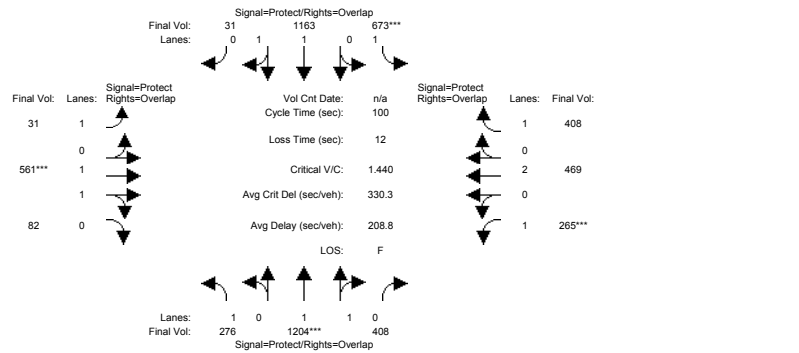


Street Name:	Lockwood St						Spear Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:	0	0	0	10	0	46	93	51	0	0	231	63
Base Vol:	0	0	0	10	0	46	93	51	0	0	231	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	10	0	46	93	51	0	0	231	63
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	10	0	46	93	51	0	0	231	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	0	0	10	0	47	95	52	0	0	236	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	10	0	47	95	52	0	0	236	64
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxxx	xxxxx	xxxxxx	3.5	4.0	3.3	2.2	xxxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Capacity Module:												
Cnflct Vol:	xxxxx	xxxx	xxxxx	510	510	268	300	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxxx	xxxx	xxxxx	527	470	776	1273	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxxx	xxxx	xxxxx	495	433	776	1273	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxxx	xxxx	xxxxx	0.02	0.00	0.06	0.07	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
2Way95thQ:	xxxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	8.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	-LTR	-RT	LT	-LTR	-RT	LT	-LTR	-RT	LT	-LTR	-RT
Shared Cap.:	xxxxx	xxxx	xxxxx	xxxx	704	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	0.3	xxxxxx	0.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shrd Condel:	xxxxxx	xxxx	xxxxxx	xxxxxx	10.6	xxxxxx	8.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxxx			10.6			xxxxxxx			xxxxxxx		
ApproachLOS:	*			B			*			*		

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 3 Weekday AM

Intersection #1004: 3rd St / Evans Ave



Street Name:	3rd St			Evans 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 46 46	12 46 46		6 20 20	12 26 26	
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:	3rd St			Evans Ave		
	North Bound	South Bound		East Bound	West Bound	
	L	T	R	L	T	R
Base Vol:	270	1180	400	660	1140	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	270	1180	400	660	1140	30
Added Vol:	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0
Initial Fut:	270	1180	400	660	1140	30
User Adj:	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
PHF Volume:	276	1204	408	673	1163	31
Reduct Vol:	0	0	0	0	0	0
Reduced Vol:	276	1204	408	673	1163	31
PCE Adj:	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
Final Volume:	276	1204	408	673	1163	31

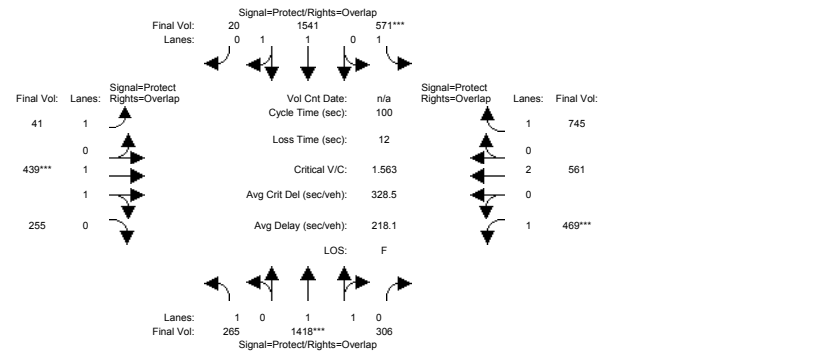
Saturation Flow Module:	3rd St			Evans Ave		
Sat/Lane:	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.83	0.83	0.86	0.86	0.86
Lanes:	1.00	1.49	0.51	1.00	1.95	0.05
Final Sat.:	1641	2358	799	1641	3185	84

Capacity Analysis Module:	3rd St			Evans Ave		
Vol/Sat:	0.17	0.51	0.51	0.41	0.37	0.37
Crit Moves:	****	****	****	****	****	****
Green/Cycle:	0.12	0.45	0.57	0.12	0.45	0.51
Volume/Cap:	1.43	1.13	0.90	3.49	0.81	0.72
Uniform Del:	45.0	28.0	19.4	45.0	24.2	19.3
IncrementDel:	219.6	69.0	7.6	1133	4.9	2.7
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	264.6	97.0	27.0	1178	29.1	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	264.6	97.0	27.0	1178	29.1	22.0
LOS by Move:	F	F	C	F	C	D
HCM2kAvgQ:	18	37	22	79	16	14

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 3 Weekday PM

Intersection #1004: 3rd St / Evans Ave



Street Name:	3rd St			Evans 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 46 46	12 46 46		6 20 20	12 26 26	
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:	3rd St			Evans Ave		
	North Bound	South Bound		East Bound	West Bound	
	L	T	R	L	T	R
Base Vol:	260	1390	300	560	1510	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	260	1390	300	560	1510	20
Added Vol:	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0
Initial Fut:	260	1390	300	560	1510	20
User Adj:	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
PHF Volume:	265	1418	306	571	1541	20
Reduct Vol:	0	0	0	0	0	0
Reduced Vol:	265	1418	306	571	1541	20
PCE Adj:	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
Final Volume:	265	1418	306	571	1541	20

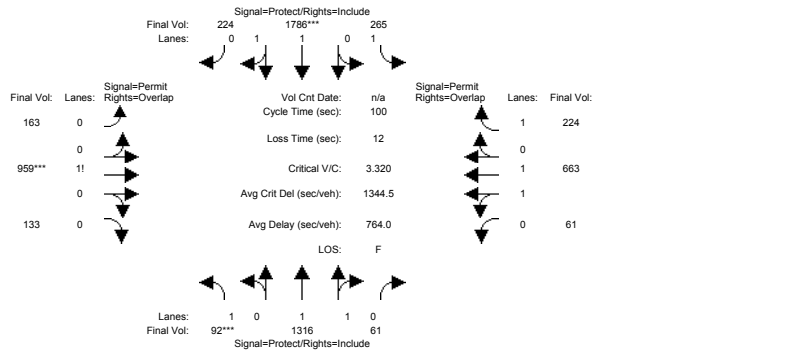
Saturation Flow Module:	3rd St			Evans Ave		
Sat/Lane:	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.84	0.84	0.86	0.86	0.86
Lanes:	1.00	1.64	0.36	1.00	1.97	0.03
Final Sat.:	1641	2626	567	1641	3232	43

Capacity Analysis Module:	3rd St			Evans Ave		
Vol/Sat:	0.16	0.54	0.54	0.35	0.48	0.48
Crit Moves:	****	****	****	****	****	****
Green/Cycle:	0.14	0.45	0.57	0.12	0.42	0.48
Volume/Cap:	1.12	1.20	0.95	2.96	1.12	0.99
Uniform Del:	43.7	28.0	20.6	45.0	29.3	26.0
IncrementDel:	95.5	96.0	12.2	896.0	65.3	19.6
InitQueueDel:	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	139.2	124	32.8	941.0	94.6	45.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	139.2	124	32.8	941.0	94.6	45.6
LOS by Move:	F	F	C	F	F	D
HCM2kAvgQ:	11	45	26	64	35	26

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 3 Weekday PM

Intersection #1009: 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

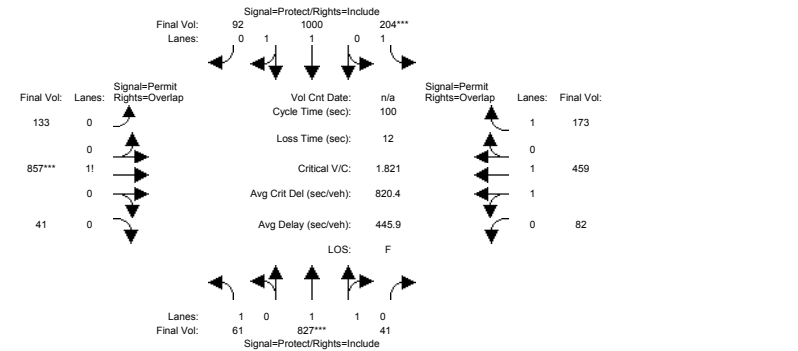
Volume Module:
Base Vol: 90 1290 60 260 1750 220 160 940 130 60 650 220
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 90 1290 60 260 1750 220 160 940 130 60 650 220
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 90 1290 60 260 1750 220 160 940 130 60 650 220
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 92 1316 61 265 1786 224 163 959 133 61 663 224
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 92 1316 61 265 1786 224 163 959 133 61 663 224
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 92 1316 61 265 1786 224 163 959 133 61 663 224

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 0.89 0.89 0.29 0.29 0.29 0.61 0.61 0.80
Lanes: 1.00 1.91 0.09 1.00 1.78 0.22 0.13 0.76 0.11 0.17 1.83 1.00
Final Sat.: 1718 3196 149 1718 3001 377 72 422 58 196 2125 1519

Capacity Analysis Module:
Vol/Sat: 0.05 0.41 0.41 0.15 0.60 0.60 2.27 2.27 2.27 0.31 0.31 0.15
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: 0.45 0.84 0.84 1.29 1.21 1.21 8.42 8.42 5.83 1.16 1.16 0.38
Uniform Del: 40.9 22.1 22.1 44.0 25.5 25.5 36.5 36.5 30.5 36.5 36.5 21.8
IncrcmtDel: 6.8 5.4 5.4 160.5 102 102.3 3351 3351 2182 87.4 87.4 1.8
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 47.7 27.5 27.5 204.5 128 127.8 3388 3388 2213 123.9 124 23.7
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: 47.7 27.5 27.5 204.5 128 127.8 3388 3388 2213 123.9 124 23.7
LOS by Move: D C C F F F F F F C
HCM2AvgQ: 3 21 21 18 57 57 173 173 165 21 21 5
Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 3 Sunday

Intersection #1009: 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: 60 810 40 200 980 90 130 840 40 80 450 170
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: 60 810 40 200 980 90 130 840 40 80 450 170
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: 60 810 40 200 980 90 130 840 40 80 450 170
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: 61 827 41 204 1000 92 133 857 41 82 459 173
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 61 827 41 204 1000 92 133 857 41 82 459 173
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: 61 827 41 204 1000 92 133 857 41 82 459 173

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 0.89 0.89 0.44 0.44 0.44 0.52 0.52 0.80
Lanes: 1.00 1.91 0.09 1.00 1.83 0.17 0.13 0.83 0.04 0.30 1.70 1.00
Final Sat.: 1718 3187 157 1718 3107 285 108 700 33 300 1688 1519

Capacity Analysis Module:
Vol/Sat: 0.04 0.26 0.26 0.12 0.32 0.32 1.22 1.22 1.22 0.27 0.27 0.11
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: 0.30 0.53 0.53 0.99 0.66 0.66 4.53 4.53 3.14 1.01 1.01 0.29
Uniform Del: 40.2 17.6 17.6 43.9 19.2 19.2 36.5 36.5 30.5 36.5 36.5 21.0
IncrcmtDel: 3.6 1.2 1.2 60.1 2.0 2.0 1600 1600 970.5 40.7 40.7 1.3
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 43.8 18.8 18.8 104.0 21.2 21.2 1637 1637 1001 77.2 77.2 22.3
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: 43.8 18.8 18.8 104.0 21.2 21.2 1637 1637 1001 77.2 77.2 22.3
LOS by Move: D B B F C C F F F E E C
HCM2AvgQ: 2 10 10 11 14 14 129 129 117 14 14 4
Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 3 Weekday PM

Intersection #1048: Middle Point Rd / Evans Ave

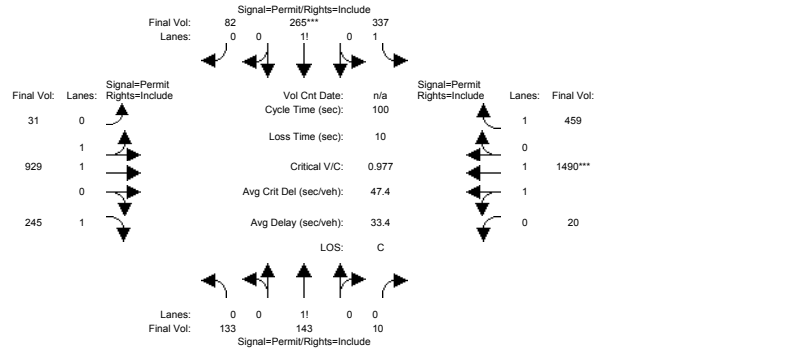


Table with columns: Street Name, Approach, Movement, Min. Green, Y+R. Rows for Middle Point Rd and Evans Ave.

Volume Module table showing traffic volumes for various movements and lanes.

Saturation Flow Module table showing saturation flow rates for different lane configurations.

Capacity Analysis Module table showing performance metrics like delay, LOS, and HCM2kAvgQ.

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 3 Sunday

Intersection #1048: Middle Point Rd / Evans Ave

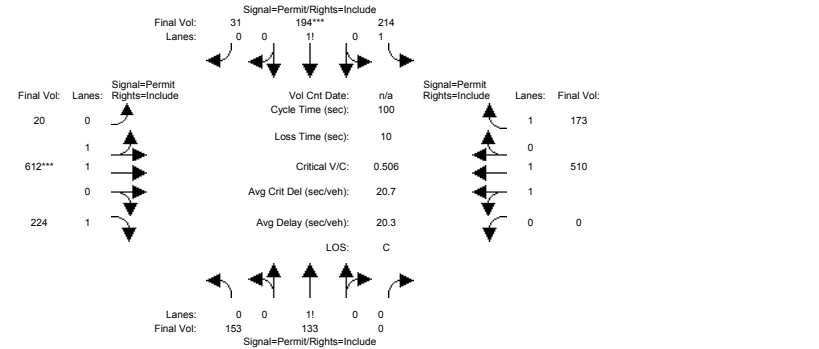


Table with columns: Street Name, Approach, Movement, Min. Green, Y+R. Rows for Middle Point Rd and Evans Ave.

Volume Module table showing traffic volumes for various movements and lanes.

Saturation Flow Module table showing saturation flow rates for different lane configurations.

Capacity Analysis Module table showing performance metrics like delay, LOS, and HCM2kAvgQ.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 3 Sunday

Intersection #111: Donahue St/Galvez Ave

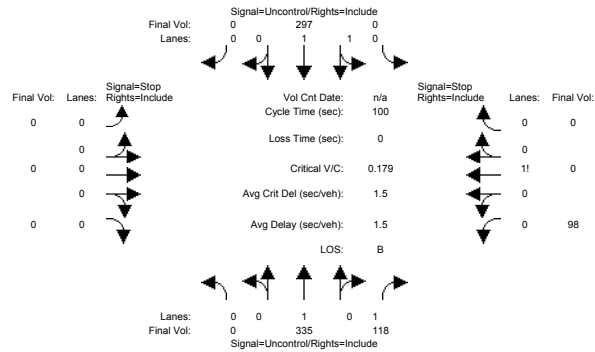


Table with 12 columns for Donahue St (North Bound, South Bound, East Bound, West Bound) and Galvez Ave (East Bound, West Bound). Rows include Volume Module (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume) and Critical Gap Module (Critical Gp, FollowUpTim).

Critical Gap Module table showing Critical Gp and FollowUpTim values for various approaches.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. for different approaches.

Level of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Queue, Shrd ConDel, and Shared LOS.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 3 AM

Intersection #112: Donahue St/Lockwood St

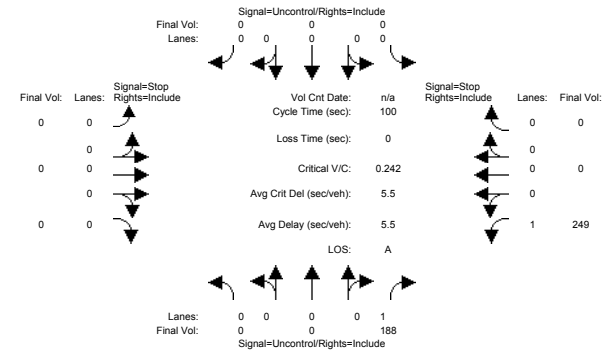


Table with 12 columns for Donahue St (North Bound, South Bound, East Bound, West Bound) and Lockwood St (East Bound, West Bound). Rows include Volume Module (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume) and Critical Gap Module (Critical Gp, FollowUpTim).

Critical Gap Module table showing Critical Gp and FollowUpTim values for various approaches.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. for different approaches.

Level of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Queue, Shrd ConDel, and Shared LOS.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 3 PM

Intersection #112: Donahue St/Lockwood St

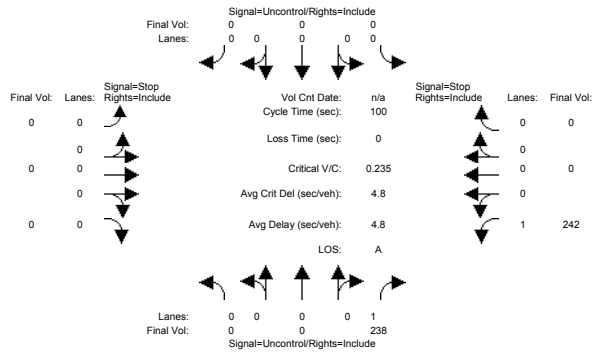


Table with columns for Street Name, Approach, Movement, Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module. Includes data for Donahue St (North and South Bound) and Lockwood St (East and West Bound).

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 3 Sunday

Intersection #112: Donahue St/Lockwood St

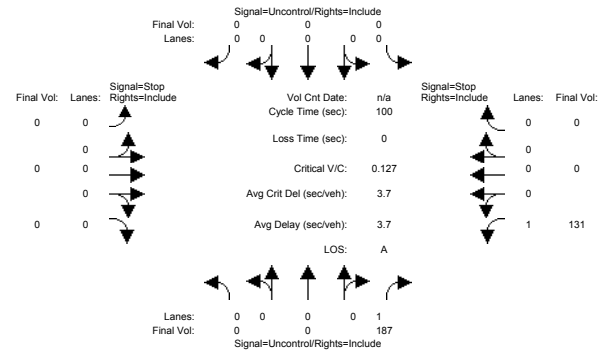
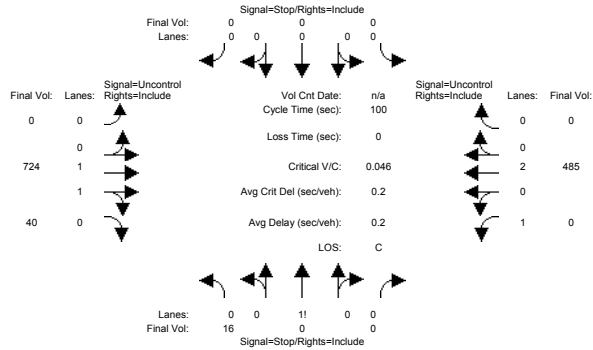


Table with columns for Street Name, Approach, Movement, Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module. Includes data for Donahue St (North and South Bound) and Lockwood St (East and West Bound).

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 3 AM

Intersection #113: Crisp Ave/I St (Outer Ring Road)



Street Name:	I St(Outer Ring Road)				Crisp Ave						
Approach:	North Bound		South Bound		East Bound		West Bound				
Movement:	L	T	R	L	T	R	L	T	R		
Volume Module:											
Base Vol:	16	0	0	0	0	0	710	39	0	475	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	16	0	0	0	0	0	710	39	0	475	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	16	0	0	0	0	0	710	39	0	475	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	16	0	0	0	0	0	724	40	0	485	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	16	0	0	0	0	0	724	40	0	485	0

Critical Gap Module:
Critical Gp: 6.8
FollowUpTim: 3.5

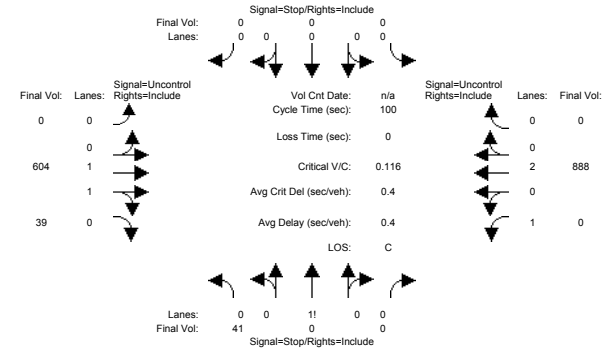
Capacity Module:
Cnflct Vol: 987
Potent Cap.: 248
Move Cap.: 248
Total Cap: 353 299
Volume/Cap: 0.05

Level of Service Module:
2Way95thQ: 0.1
Control Del: 15.7
LOS by Move: C * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxx
SharedQueue: xxx
Shrd ConDel: xxx
Shared LOS: * * * * *
ApproachDel: 15.7
ApproachLOS: C

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 3 PM

Intersection #113: Crisp Ave/I St (Outer Ring Road)



Street Name:	I St(Outer Ring Road)				Crisp Ave						
Approach:	North Bound		South Bound		East Bound		West Bound				
Movement:	L	T	R	L	T	R	L	T	R		
Volume Module:											
Base Vol:	40	0	0	0	0	0	592	38	0	870	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	40	0	0	0	0	0	592	38	0	870	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	40	0	0	0	0	0	592	38	0	870	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	41	0	0	0	0	0	604	39	0	888	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	41	0	0	0	0	0	604	39	0	888	0

Critical Gap Module:
Critical Gp: 6.8
FollowUpTim: 3.5

Capacity Module:
Cnflct Vol: 1067
Potent Cap.: 220
Move Cap.: 220
Total Cap: 352 243
Volume/Cap: 0.12

Level of Service Module:
2Way95thQ: 0.4
Control Del: 16.6
LOS by Move: C * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxx
SharedQueue: xxx
Shrd ConDel: xxx
Shared LOS: * * * * *
ApproachDel: 16.6
ApproachLOS: C

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 3 Sunday

Intersection #113: Crisp Ave/I St (Outer Ring Road)

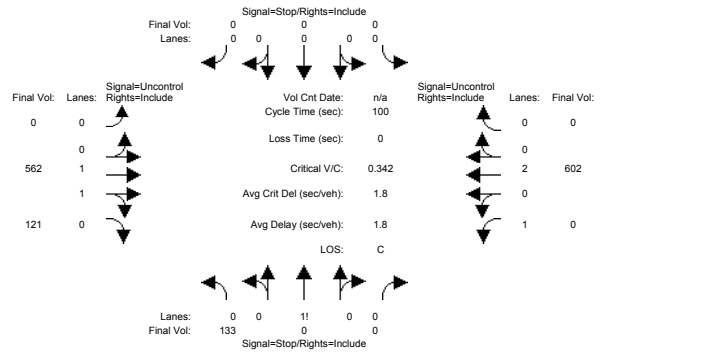


Table with columns: Street Name, Approach, Movement, Volume Module (Base Vol, Growth Adj, Initial Bse, etc.), Critical Gap Module (Critical Gp, FollowUpTim), Capacity Module (Cnflct Vol, Potent Cap, etc.), Level of Service Module (2Way95thQ, Control Del, etc.).

Level of Service Module:
2Way95thQ: 1.5
Control Del: 19.0
LOS by Move: C
Movement: LT - LTR - RT
Shared Cap.: 388
Shared Queue: 304
Shrd ConDel: 356
Shared LOS: C
ApproachDel: 19.0
ApproachLOS: C
Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 3 AM

Intersection #114: Crisp Ave/Spear Ave (Inner Ring Road)

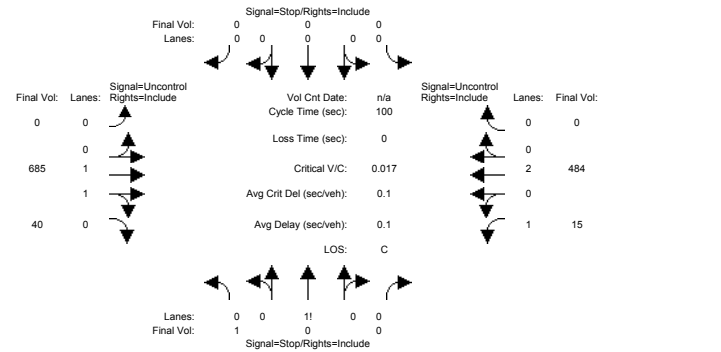


Table with columns: Street Name, Approach, Movement, Volume Module (Base Vol, Growth Adj, Initial Bse, etc.), Critical Gap Module (Critical Gp, FollowUpTim), Capacity Module (Cnflct Vol, Potent Cap, etc.), Level of Service Module (2Way95thQ, Control Del, etc.).

Level of Service Module:
2Way95thQ: 0.0
Control Del: 15.0
LOS by Move: C
Movement: LT - LTR - RT
Shared Cap.: 360
Shared Queue: 300
Shrd ConDel: 370
Shared LOS: C
ApproachDel: 15.0
ApproachLOS: C
Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
All 4 Weekday AM

Intersection #1002: 3rd St / Cesar Chavez

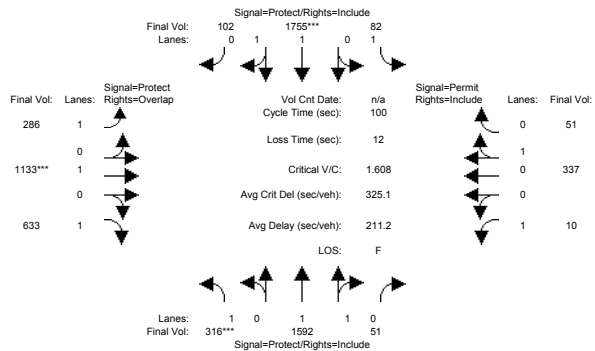


Table showing traffic signal timing parameters: Min. Green (15, 45, 45, 5, 35, 35), Y+R (5.0, 5.0, 5.0, 5.0, 5.0, 5.0), and LOS (F).

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume for all approaches.

Saturation Flow Module table showing Sat/Lane (1900), Adjustment (0.86), Lanes (1.00), and Final Sat. (1641, 3164, 101, 1641, 3076, 179, 1641, 1727, 1468, 345, 1470, 223).

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, InccremntDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ for all approaches.

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

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
All 4 Weekday PM

Intersection #1002: 3rd St / Cesar Chavez

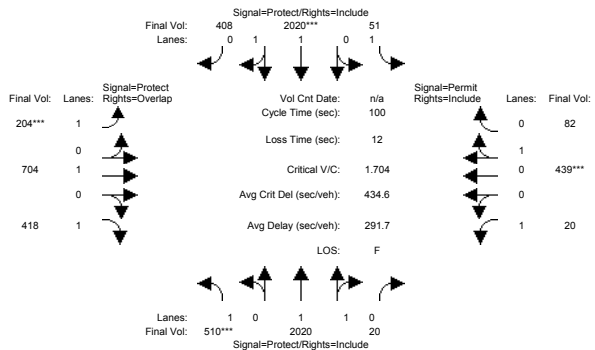


Table showing traffic signal timing parameters: Min. Green (15, 45, 45, 5, 35, 35), Y+R (5.0, 5.0, 5.0, 5.0, 5.0, 5.0), and LOS (F).

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume for all approaches.

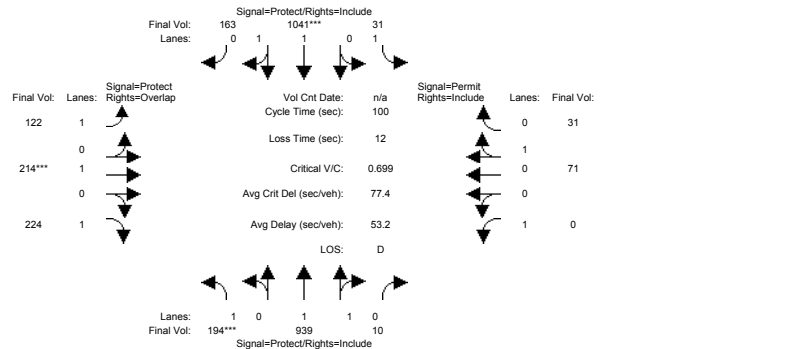
Saturation Flow Module table showing Sat/Lane (1900), Adjustment (0.86), Lanes (1.00), and Final Sat. (1641, 3245, 33, 1641, 2662, 538, 1641, 1727, 1468, 345, 1421, 264).

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, InccremntDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ for all approaches.

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
All 4 Sunday

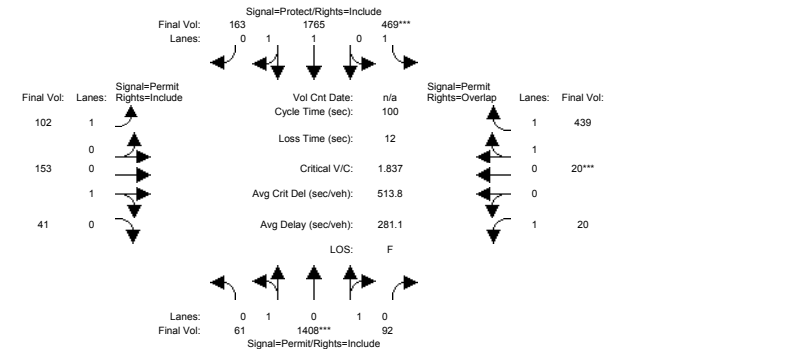
Intersection #1002: 3rd St / Cesar Chavez



Street Name: 3rd St, Cesar Chavez
Approach: North Bound, South Bound, East Bound, West Bound
Movement: L - T - R
Min. Green: 15 45 45 5 35 35 15 40 40 20 20 20
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: 190 920 10 30 1020 160 120 210 220 0 70 30
Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Capacity Analysis Module: Vol/Sat: 0.12 0.29 0.29 0.02 0.37 0.37 0.07 0.12 0.15 0.00 0.06 0.06
Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
All 4 Weekday AM

Intersection #1003: 3rd St / Cargo Way



Street Name: 3rd St, Cargo Way
Approach: North Bound, South Bound, East Bound, West Bound
Movement: L - T - R
Min. Green: 0 40 40 20 65 65 25 25 25 25 25 25
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: 60 1380 90 460 1730 160 100 150 40 20 20 430
Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Capacity Analysis Module: Vol/Sat: 0.89 0.89 0.89 0.57 0.60 0.60 0.08 0.11 0.11 0.02 0.16 0.16
Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
All 4 Weekday AM

Intersection #1004: 3rd St / Evans Ave

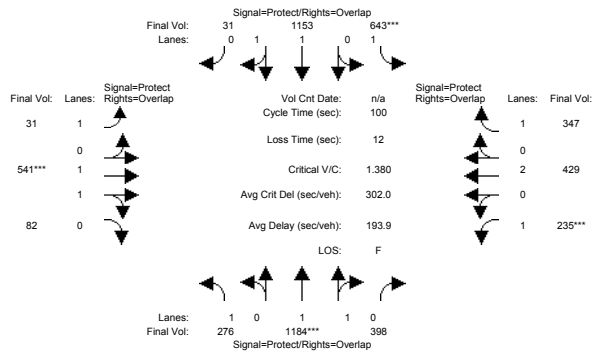


Table with columns: Street Name, Approach, Movement, Min. Green, Y+R. Rows include 3rd St and Evans Ave movements.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows include 3rd St and Evans Ave volumes.

Table with columns: Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat. Rows include saturation flow parameters.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ. Rows include capacity analysis parameters.

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
All 4 Weekday PM

Intersection #1004: 3rd St / Evans Ave

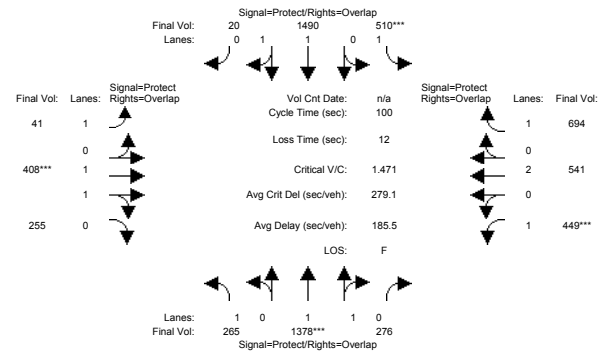


Table with columns: Street Name, Approach, Movement, Min. Green, Y+R. Rows include 3rd St and Evans Ave movements.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows include 3rd St and Evans Ave volumes.

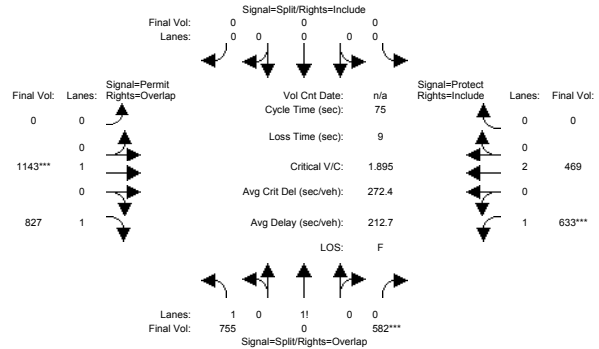
Table with columns: Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat. Rows include saturation flow parameters.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ. Rows include capacity analysis parameters.

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
All 4 Weekday AM

Intersection #1016: Evans Ave / Cesar Chavez



Street Name: Evans Ave, Cesar Chavez
Approach: North Bound, South Bound, East Bound, West Bound
Movement: L - T - R
Min. Green: 19 0 19 0 0 0 0 0 21 21 22 47 47
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: 740 0 570 0 0 0 0 1120 810 620 460 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: 740 0 570 0 0 0 0 1120 810 620 460 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: 740 0 570 0 0 0 0 1120 810 620 460 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 755 0 582 0 0 0 0 1143 827 633 469 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 755 0 582 0 0 0 0 1143 827 633 469 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: 755 0 582 0 0 0 0 1143 827 633 469 0

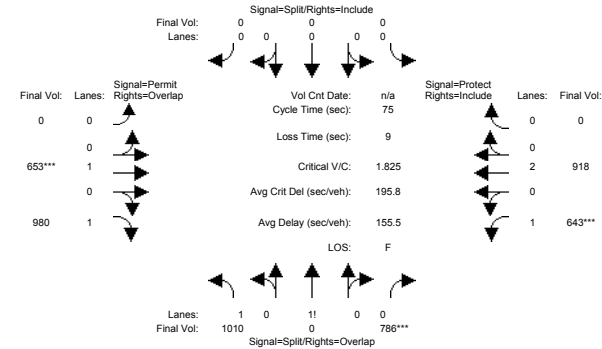
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.82 1.00 0.81 1.00 1.00 1.00 1.00 0.91 0.77 0.86 0.86 1.00
Lanes: 1.39 0.00 0.61 0.00 0.00 0.00 0.00 1.00 1.00 1.00 2.00 0.00
Final Sat.: 2164 0 937 0 0 0 0 1727 1468 1641 3281 0

Capacity Analysis Module:
Vol/Sat: 0.35 0.00 0.62 0.00 0.00 0.00 0.00 0.66 0.56 0.39 0.14 0.00
Crit Moves: ****
Green/Cycle: 0.28 0.00 0.58 0.00 0.00 0.00 0.00 0.30 0.59 0.29 0.60 0.00
Volume/Cap: 1.23 0.00 1.07 0.00 0.00 0.00 0.00 2.19 0.96 1.31 0.24 0.00
Uniform Del: 26.9 0.0 15.9 0.0 0.0 0.0 0.0 26.1 14.7 26.5 7.1 0.0
IncrementDel: 111.3 0.0 48.2 0.0 0.0 0.0 0.0 540 22.3 155.8 0.3 0.0
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00
Delay/Veh: 138.2 0.0 64.1 0.0 0.0 0.0 0.0 566 37.0 182.3 7.4 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 138.2 0.0 64.1 0.0 0.0 0.0 0.0 566 37.0 182.3 7.4 0.0
LOS by Move: F A E A A A A F D F A A
HCM2kAvgQ: 24 0 29 0 0 0 0 103 25 34 3 0

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
All 4 Weekday PM

Intersection #1016: Evans Ave / Cesar Chavez



Street Name: Evans Ave, Cesar Chavez
Approach: North Bound, South Bound, East Bound, West Bound
Movement: L - T - R
Min. Green: 19 0 19 0 0 0 0 0 21 21 22 47 47
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: 990 0 770 0 0 0 0 640 960 630 900 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: 990 0 770 0 0 0 0 640 960 630 900 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: 990 0 770 0 0 0 0 640 960 630 900 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 1010 0 786 0 0 0 0 653 980 643 918 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1010 0 786 0 0 0 0 653 980 643 918 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: 1010 0 786 0 0 0 0 653 980 643 918 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.82 1.00 0.81 1.00 1.00 1.00 1.00 0.91 0.77 0.86 0.86 1.00
Lanes: 1.39 0.00 0.61 0.00 0.00 0.00 0.00 1.00 1.00 1.00 2.00 0.00
Final Sat.: 2158 0 940 0 0 0 0 1727 1468 1641 3281 0

Capacity Analysis Module:
Vol/Sat: 0.47 0.00 0.84 0.00 0.00 0.00 0.00 0.38 0.67 0.39 0.28 0.00
Crit Moves: ****
Green/Cycle: 0.31 0.00 0.60 0.00 0.00 0.00 0.00 0.28 0.59 0.29 0.57 0.00
Volume/Cap: 1.53 0.00 1.39 0.00 0.00 0.00 0.00 1.35 1.14 1.34 0.49 0.00
Uniform Del: 26.0 0.0 15.0 0.0 0.0 0.0 0.0 27.0 15.5 26.5 9.5 0.0
IncrementDel: 241.2 0.0 181.7 0.0 0.0 0.0 0.0 171 75.9 164.8 0.9 0.0
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00
Delay/Veh: 267.2 0.0 196.7 0.0 0.0 0.0 0.0 198 91.4 191.3 10.4 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 267.2 0.0 196.7 0.0 0.0 0.0 0.0 198 91.4 191.3 10.4 0.0
LOS by Move: F A F A A A A F F F B A
HCM2kAvgQ: 47 0 72 0 0 0 0 38 41 34 6 0

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Alt 4 Sunday

Intersection #1058: Evans Ave/Napoleon Ave/Toland

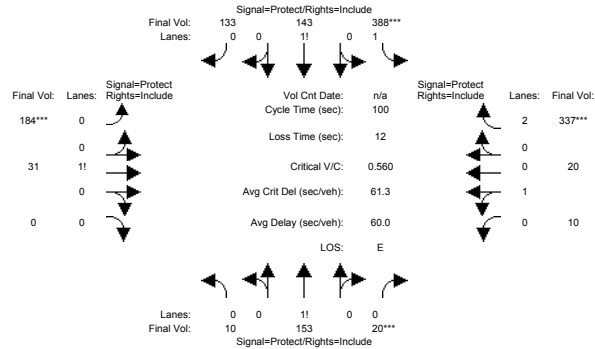


Table with 4 columns for North Bound, South Bound, East Bound, and West Bound, and rows for Movement, Min. Green, and Y+R.

Table for Volume Module with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and FinalVolume.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Alt 4 AM

Intersection #110: Innes St/Donahue St

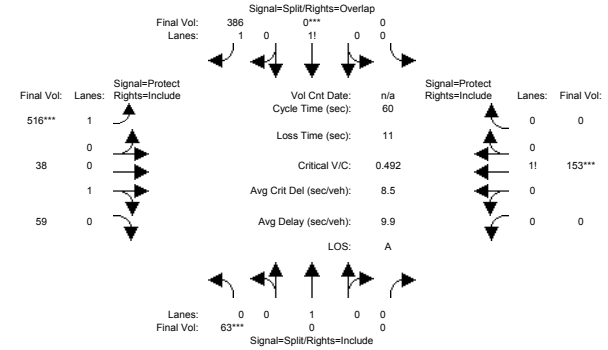


Table with 4 columns for Donahue St (North, South) and Innes St (East, West), and rows for Movement, Min. Green, and Y+R.

Table for Volume Module with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and FinalVolume.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncremntDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
All 4 AM

Intersection #111: Donahue St/Galvez Ave

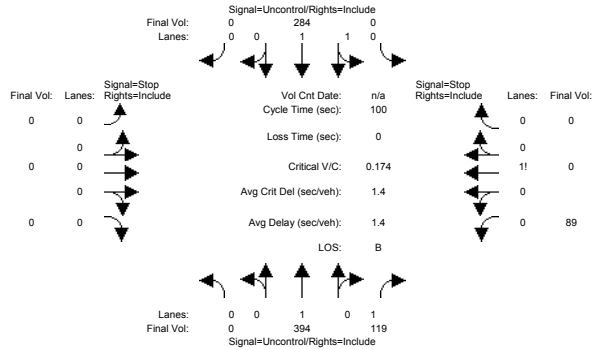


Table with columns for Street Name (Donahue St, Galvez Ave) and Approach (North Bound, South Bound, East Bound, West Bound). Rows include Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
All 4 PM

Intersection #111: Donahue St/Galvez Ave

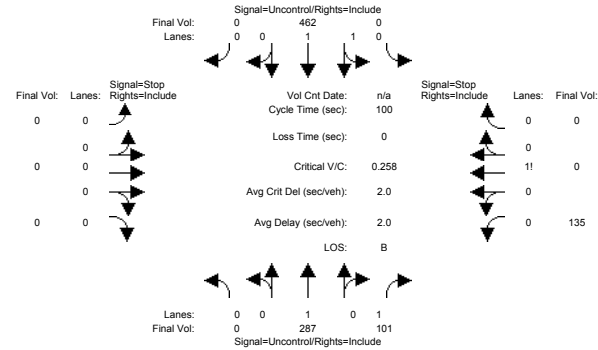


Table with columns for Street Name (Donahue St, Galvez Ave) and Approach (North Bound, South Bound, East Bound, West Bound). Rows include Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module.

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

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
All 4 Sunday

Intersection #111: Donahue St/Galvez Ave

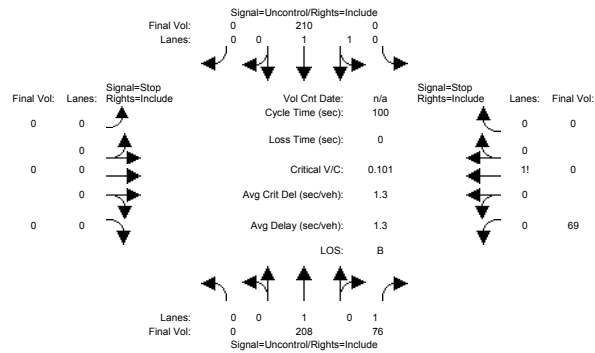


Table with columns for Street Name, Approach, and Movement. Rows include Volume Module (Base Vol, Growth Adj, Initial Bse, etc.) and Final Volume for Donahue St (North/South Bound) and Galvez Ave (East/West Bound).

Critical Gap Module table showing Critical Gap and FollowUpTim values for various movements.

Capacity Module table showing Cnflct Vol, Potent Cap, Move Cap, and Volume/Cap for different movements.

Level of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Queue, Shrd Condel, and Shared LOS.

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

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
All 4 AM

Intersection #112: Donahue St/Lockwood St

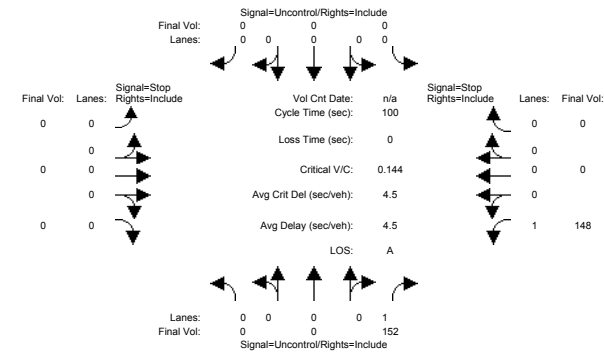


Table with columns for Street Name, Approach, and Movement. Rows include Volume Module (Base Vol, Growth Adj, Initial Bse, etc.) and Final Volume for Donahue St (North/South Bound) and Lockwood St (East/West Bound).

Critical Gap Module table showing Critical Gap and FollowUpTim values for various movements.

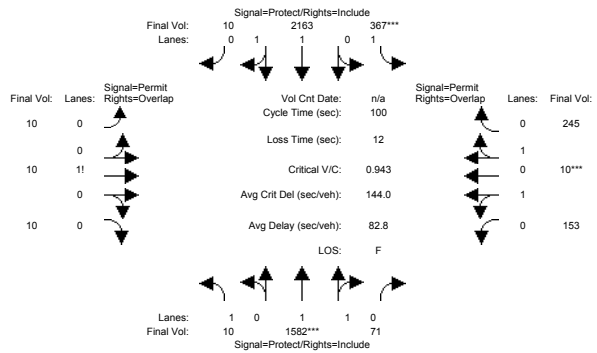
Capacity Module table showing Cnflct Vol, Potent Cap, Move Cap, and Volume/Cap for different movements.

Level of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Queue, Shrd Condel, and Shared LOS.

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

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Arena Event Weekday PM

Intersection #1008: 3rd St / Carroll Ave



Street Name:	3rd St						Carroll Ave					
	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:	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:	3rd St NB			3rd St SB			Carroll Ave EB			Carroll Ave WB		
Base Vol:	10	1550	70	340	2060	10	10	10	10	150	10	240
Initial Bse:	10	1550	70	340	2060	10	10	10	10	150	10	240
Final Volume:	10	1582	71	367	2163	10	10	10	10	153	10	245

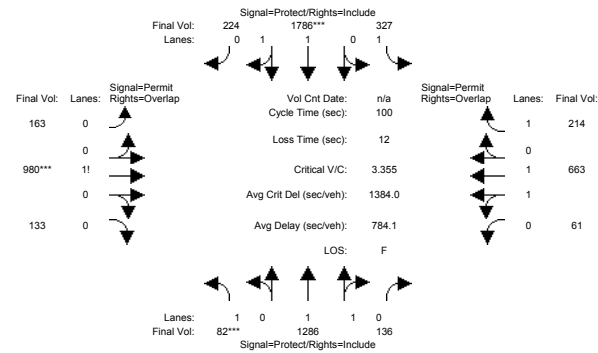
Saturation Flow Module:	3rd St NB			3rd St SB			Carroll Ave EB			Carroll Ave WB		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.90	0.90	0.71	0.71	0.71	0.65	0.65	0.65
Lanes:	1.00	1.91	0.09	1.00	1.99	0.01	0.34	0.33	0.33	0.94	0.06	1.00
Final Sat.:	1718	3268	148	1718	3417	16	452	452	452	1156	77	1233

Capacity Analysis Module:	3rd St NB			3rd St SB			Carroll Ave EB			Carroll Ave WB		
Vol/Sat:	0.01	0.48	0.48	0.21	0.63	0.63	0.02	0.02	0.02	0.13	0.13	0.20
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****

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Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Arena Event Weekday PM

Intersection #1009: 3rd St / Paul Ave / Gilman Ave



Street Name:	3rd St						Paul Ave / Gilman Ave					
	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:	3rd St NB			3rd St SB			Paul Ave EB			Gilman Ave WB		
Base Vol:	80	1260	60	260	1750	220	160	960	130	60	650	210
Initial Bse:	80	1260	60	260	1750	220	160	960	130	60	650	210
Final Volume:	82	1286	136	327	1786	224	163	980	133	61	663	214

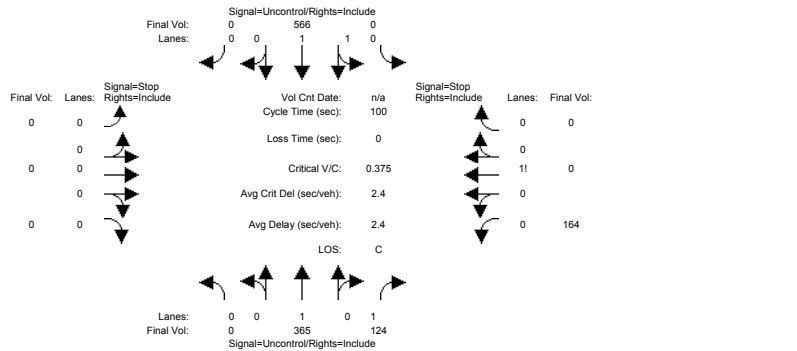
Saturation Flow Module:	3rd St NB			3rd St SB			Paul Ave EB			Gilman Ave WB		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.87	0.87	0.90	0.89	0.89	0.29	0.29	0.29	0.29	0.61	0.80
Lanes:	1.00	1.81	0.19	1.00	1.78	0.22	0.13	0.77	0.10	0.17	1.83	1.00
Final Sat.:	1718	3004	317	1718	3001	377	71	424	57	196	2121	1519

Capacity Analysis Module:	3rd St NB			3rd St SB			Paul Ave EB			Gilman Ave WB		
Vol/Sat:	0.05	0.43	0.43	0.19	0.60	0.60	2.31	2.31	2.31	0.31	0.31	0.14
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****

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Level Of Service Computation Report
 2000 HCM Unsignalized (Future Volume Alternative)
 Arena Event

Intersection #111: Donahue St/Galvez Ave

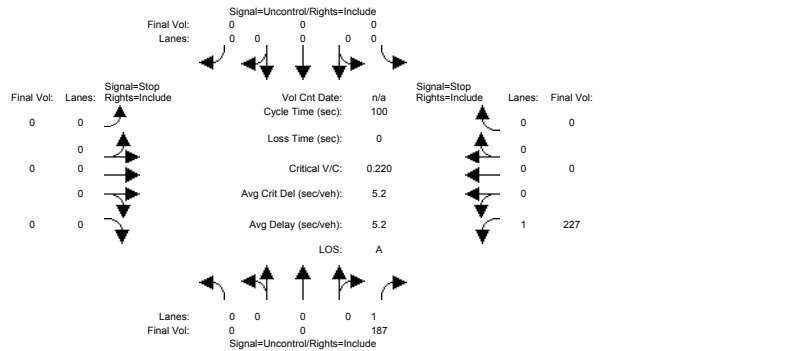


Street Name:	Donahue St					Galvez Ave						
Approach:	North Bound		South Bound			East Bound		West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	358	122	0	555	0	0	0	0	161	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	358	122	0	555	0	0	0	0	161	0	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 Put:	0	358	122	0	555	0	0	0	0	161	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	365	124	0	566	0	0	0	0	164	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	365	124	0	566	0	0	0	0	164	0	0
Critical Gap Module:	Critical Gp: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.4 xxxxx xxxxx											
FollowUpTim:	FollowUpTim: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx xxxxx											
Capacity Module:	Cnflct Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 648 xxxxx xxxxx											
Potent Cap.:	Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 438 xxxxx xxxxx											
Move Cap.:	Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 438 xxxxx xxxxx											
Volume/Cap:	Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.38 xxxxx xxxxx											
Level Of Service Module:	2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1.7 xxxxx xxxxx											
Control Del:	Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 18.1 xxxxx xxxxx											
LOS by Move:	LOS by Move: * C * * *											
Movement:	LT - LTR - RT		LT - LTR - RT			LT - LTR - RT		LT - LTR - RT			LT - LTR - RT	
Shared Cap.:	Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx											
SharedQueue:	SharedQueue: xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx											
Shrd ConDel:	Shrd ConDel: xxxxx xxxxx xxxxx 7.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx											
Shared LOS:	Shared LOS: * * * * * A *											
ApproachDel:	ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx 18.1											
ApproachLOS:	ApproachLOS: * * * * * C											

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

Level Of Service Computation Report
 2000 HCM Unsignalized (Future Volume Alternative)
 Arena Event

Intersection #112: Donahue St/Lockwood St

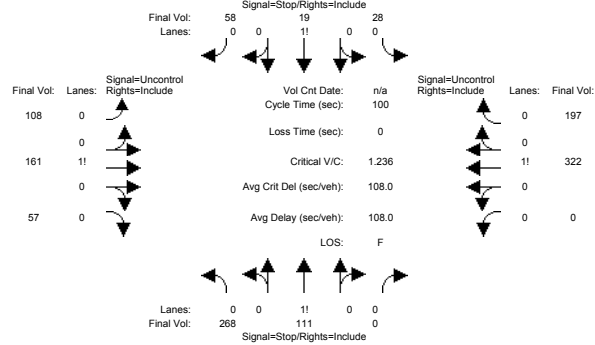


Street Name:	Donahue St					Lockwood St						
Approach:	North Bound		South Bound			East Bound		West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	0	183	0	0	0	0	0	0	222	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	183	0	0	0	0	0	0	222	0	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 Put:	0	0	183	0	0	0	0	0	0	222	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	0	187	0	0	0	0	0	0	227	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	187	0	0	0	0	0	0	227	0	0
Critical Gap Module:	Critical Gp: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.4 xxxxx xxxxx											
FollowUpTim:	FollowUpTim: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx xxxxx											
Capacity Module:	Cnflct Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0 xxxxx xxxxx											
Potent Cap.:	Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1029 xxxxx xxxxx											
Move Cap.:	Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1029 xxxxx xxxxx											
Volume/Cap:	Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.22 xxxxx xxxxx											
Level Of Service Module:	2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.8 xxxxx xxxxx											
Control Del:	Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 9.5 xxxxx xxxxx											
LOS by Move:	LOS by Move: * A * * *											
Movement:	LT - LTR - RT		LT - LTR - RT			LT - LTR - RT		LT - LTR - RT			LT - LTR - RT	
Shared Cap.:	Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx											
SharedQueue:	SharedQueue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx											
Shrd ConDel:	Shrd ConDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx											
Shared LOS:	Shared LOS: *											
ApproachDel:	ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx 9.5											
ApproachLOS:	ApproachLOS: * * * * * A											

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Arena Event

Intersection #115: Robinson St/Spear Ave



Street Name: Galvez Ave South Bound East Bound West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for Volume Module (Base Vol, Growth Adj, Initial Bse, etc.) and rows for Galvez Ave and Spear Ave movements.

Table for Critical Gap Module showing Critical Gp and FollowUpTim for Galvez Ave and Spear Ave movements.

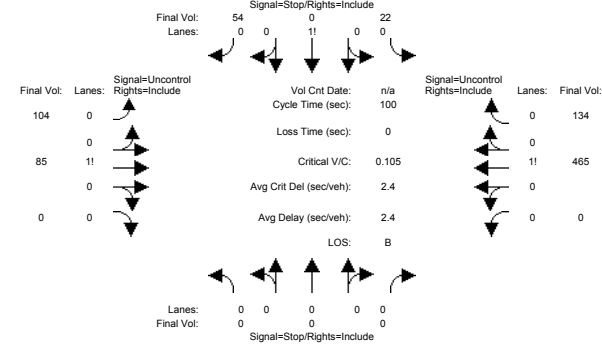
Table for Capacity Module showing Cnflct Vol, Potent Cap, Move Cap, and Volume/Cap for Galvez Ave and Spear Ave movements.

Level of Service Module showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap, Shared Queue, Shrd Condel, and Shared LOS for Galvez Ave and Spear Ave movements.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Arena Event

Intersection #116: Lockwood St/Spear Ave



Street Name: Lockwood St South Bound East Bound West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Table with columns for Volume Module (Base Vol, Growth Adj, Initial Bse, etc.) and rows for Lockwood St and Spear Ave movements.

Table for Critical Gap Module showing Critical Gp and FollowUpTim for Lockwood St and Spear Ave movements.

Table for Capacity Module showing Cnflct Vol, Potent Cap, Move Cap, and Volume/Cap for Lockwood St and Spear Ave movements.

Level of Service Module showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap, Shared Queue, Shrd Condel, and Shared LOS for Lockwood St and Spear Ave movements.

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Secondary Event Weekday PM

Intersection #1004: 3rd St / Evans Ave

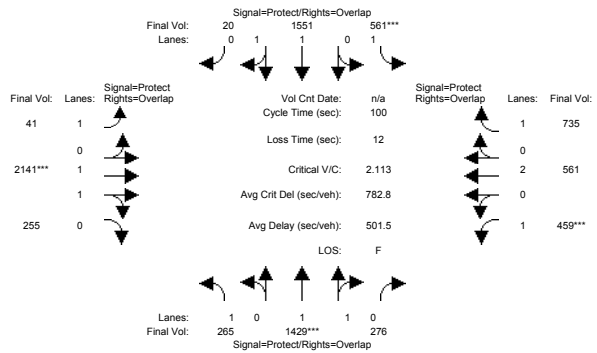


Table with columns for Street Name, Approach, Movement, and traffic volume data for 3rd St and Evans Ave.

Table for Volume Module showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Table for Saturation Flow Module showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2AvgQ.

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Secondary Event Weekday PM

Intersection #1006: 3rd St / Palou Ave

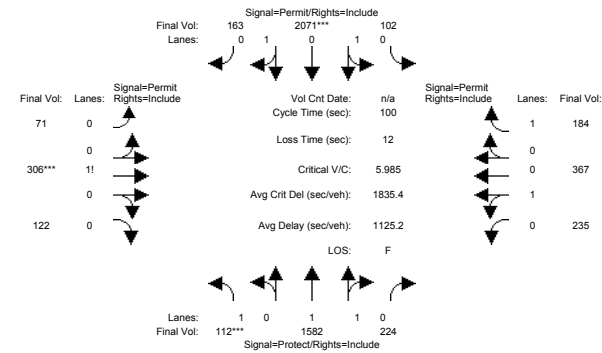


Table with columns for Street Name, Approach, Movement, and traffic volume data for 3rd St and Palou Ave.

Table for Volume Module showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Table for Saturation Flow Module showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2AvgQ.

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Secondary Event Weekday PM

Intersection #1008: 3rd St / Carroll Ave

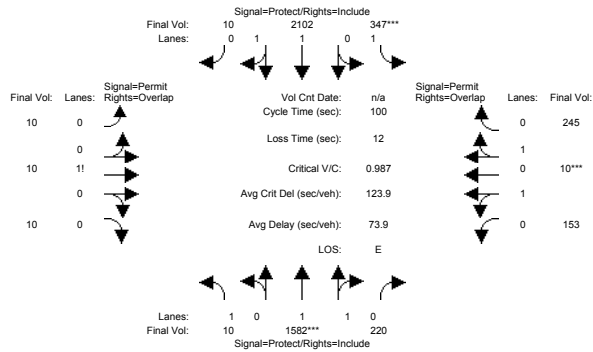


Table with columns for Street Name, Approach, Movement, and timing values (Min. Green, Y+R).

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat values.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2AvgQ.

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Secondary Event Weekday PM

Intersection #1009: 3rd St / Paul Ave / Gilman Ave

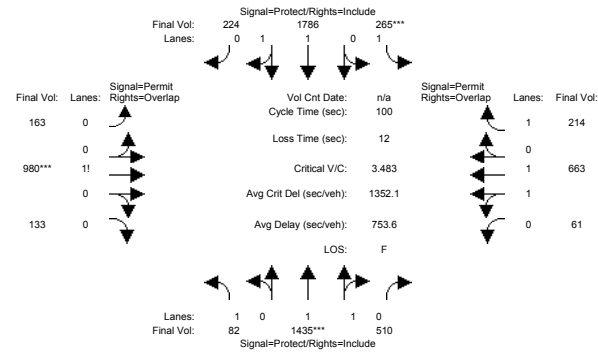


Table with columns for Street Name, Approach, Movement, and timing values (Min. Green, Y+R).

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat values.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2AvgQ.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Secondary Event

Intersection #111: Donahue St/Galvez Ave

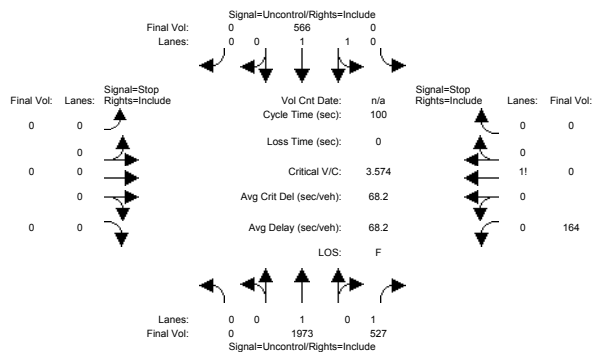


Table with 11 columns: Street Name, Approach, Movement, Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Critical Gap Module table with columns for Critical Gap, FollowUpTim, and values for Donahue St and Galvez Ave.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Queue, Shrd Condel, Shared LOS, and ApproachDel/ApproachLOS.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Secondary Event

Intersection #112: Donahue St/Lockwood St

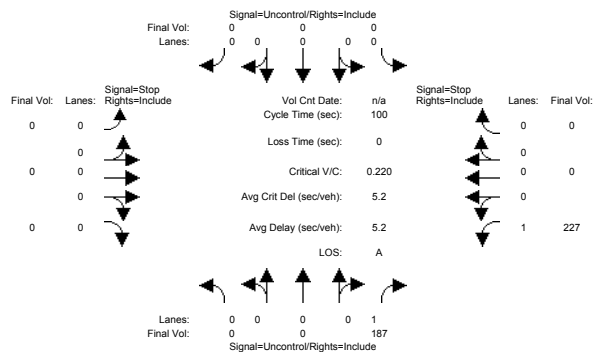


Table with 11 columns: Street Name, Approach, Movement, Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Critical Gap Module table with columns for Critical Gap, FollowUpTim, and values for Donahue St and Lockwood St.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Queue, Shrd Condel, Shared LOS, and ApproachDel/ApproachLOS.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Secondary Event

Intersection #115: Robinson St/Spear Ave

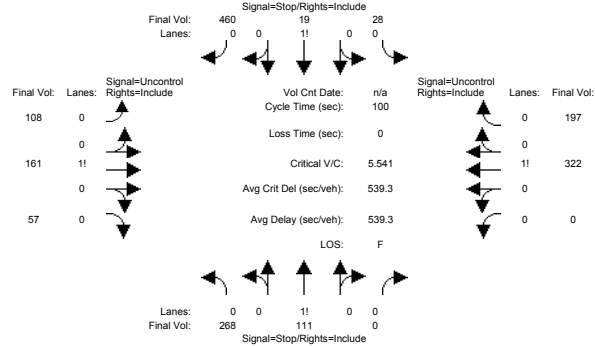


Table for Intersection #115 showing Street Name (Galvez Ave, Spear Ave), Approach, Movement, Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module. Includes data for Base Vol, Growth Adj, Initial Bse, etc.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Secondary Event

Intersection #116: Lockwood St/Spear Ave

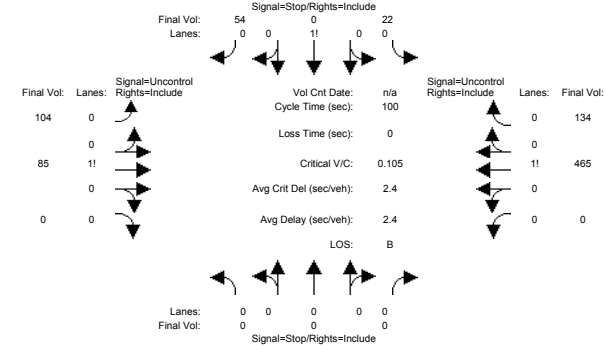
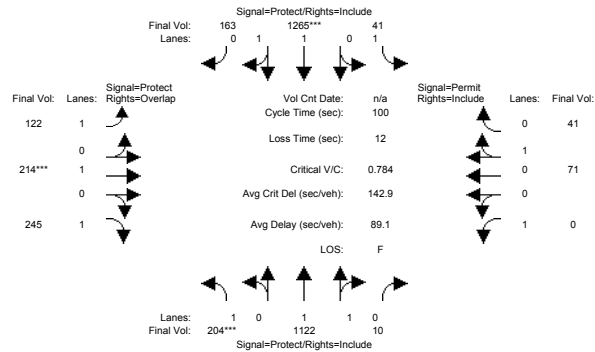


Table for Intersection #116 showing Street Name (Lockwood St, Spear Ave), Approach, Movement, Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module. Includes data for Base Vol, Growth Adj, Initial Bse, etc.

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2A Sunday

Intersection #1002: 3rd St / Cesar Chavez



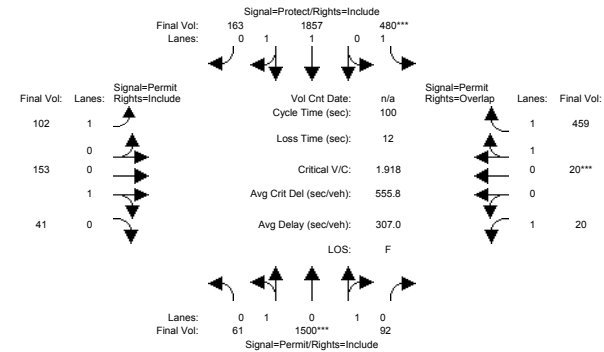
Street Name: 3rd St, Cesar Chavez
Approach: North Bound, South Bound, East Bound, West Bound
Movement: L - T - R
Min. Green: 15 45 45 5 35 35 15 40 40 20 20 20
Y+R: 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0
Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.86 0.86 0.86 0.86 0.85 0.85 0.86 0.91 0.77 1.00 0.86 0.86
Lanes: 1.00 1.98 0.02 1.00 1.77 0.23 1.00 1.00 1.00 1.00 0.64 0.36
Final Sat.: 1641 3249 30 1641 2857 369 1641 1727 1468 1900 1039 593

Capacity Analysis Module:
Vol/Sat: 0.12 0.35 0.35 0.02 0.44 0.44 0.07 0.12 0.17 0.00 0.07 0.07
Crit Moves: ****
Green/Cycle: 0.15 0.44 0.44 0.05 0.34 0.34 0.20 0.39 0.54 0.00 0.20 0.20
Volume/Cap: 0.85 0.78 0.78 0.51 1.29 1.29 0.38 0.32 0.31 0.00 0.35 0.35
Uniform Del: 42.4 24.3 24.3 47.3 33.5 33.5 35.6 21.5 13.0 0.0 35.4 35.4
IncrementDel: 28.9 4.3 4.3 21.1 138 137.7 3.4 1.2 1.0 0.0 3.0 3.0
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00
Delay/Veh: 71.2 28.6 28.6 68.4 171 171.2 39.0 22.7 14.0 0.0 38.4 38.4
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: 71.2 28.6 28.6 68.4 171 171.2 39.0 22.7 14.0 0.0 38.4 38.4
LOS by Move: E C C E F F D C B A D D
HCM2kAvgQ: 6 15 15 1 44 44 3 5 4 0 3 3
Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2A Weekday AM

Intersection #1003: 3rd St / Cargo Way



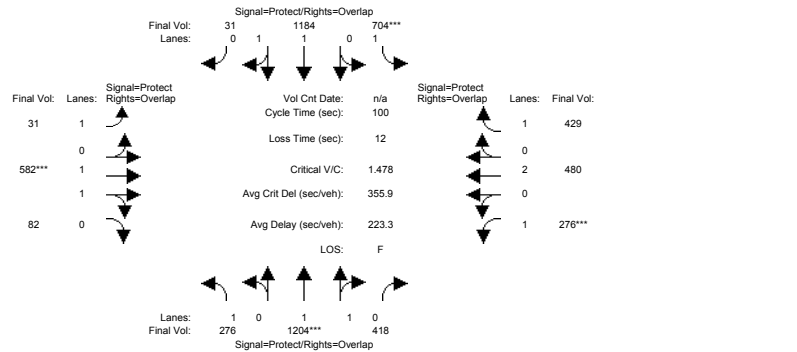
Street Name: 3rd St, Cargo Way
Approach: North Bound, South Bound, East Bound, West Bound
Movement: L - T - R
Min. Green: 0 40 40 20 65 65 25 25 25 25 25 25
Y+R: 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0
Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.46 0.46 0.46 0.43 0.85 0.85 0.72 0.92 0.92 0.45 0.78 0.78
Lanes: 0.07 1.82 0.11 1.00 1.84 0.16 1.00 0.79 0.21 1.00 0.09 1.91
Final Sat.: 65 1586 97 820 2980 262 1360 1382 369 855 126 2831

Capacity Analysis Module:
Vol/Sat: 0.95 0.95 0.95 0.58 0.62 0.62 0.08 0.11 0.11 0.02 0.16 0.16
Crit Moves: ****
Green/Cycle: 0.39 0.39 0.39 0.25 0.64 0.64 0.25 0.25 0.25 0.25 0.25 0.49
Volume/Cap: 2.41 2.41 2.41 2.39 0.98 0.98 0.31 0.45 0.45 0.10 0.66 0.33
Uniform Del: 31.0 31.0 31.0 38.5 17.8 17.8 31.4 32.7 32.7 29.8 34.7 15.8
IncrementDel: 639.5 639 639.5 638.4 15.2 15.2 2.4 3.4 3.4 0.9 4.7 0.6
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 670.5 670 670.5 676.9 33.0 33.0 33.8 36.1 36.1 30.7 39.4 16.4
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: 670.5 670 670.5 676.9 33.0 33.0 33.8 36.1 36.1 30.7 39.4 16.4
LOS by Move: F F F F C C C D D C D B
HCM2kAvgQ: 88 88 88 48 32 32 3 5 5 1 8 5
Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2A Weekday AM

Intersection #1004: 3rd St / Evans Ave



Street Name: 3rd St Evans 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 46 46 12 46 46 6 20 20 12 26 26
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

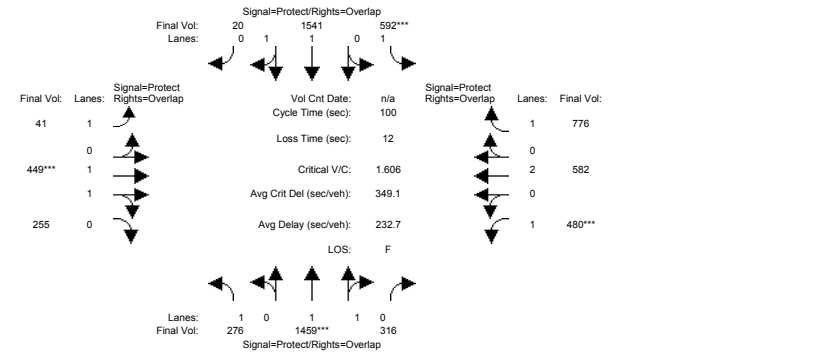
Volume Module:
Base Vol: 270 1180 410 690 1160 30 30 570 80 270 470 420
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 270 1180 410 690 1160 30 30 570 80 270 470 420
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 270 1180 410 690 1160 30 30 570 80 270 470 420
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
PHF Volume: 276 1204 418 704 1184 31 31 582 82 276 480 429
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 276 1204 418 704 1184 31 31 582 82 276 480 429
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 276 1204 418 704 1184 31 31 582 82 276 480 429

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.86 0.83 0.83 0.86 0.86 0.86 0.90 0.87 0.87 0.90 0.90 0.78
Lanes: 1.00 1.48 0.52 1.00 1.95 0.05 1.00 1.75 0.25 1.00 2.00 1.00
Final Sat.: 1641 2340 813 1641 3186 82 1718 2900 407 1718 3437 1476

Capacity Analysis Module:
Vol/Sat: 0.17 0.51 0.51 0.43 0.37 0.37 0.02 0.20 0.20 0.16 0.14 0.29
Crit Moves: **** *
Green/Cycle: 0.12 0.45 0.57 0.12 0.45 0.51 0.06 0.20 0.31 0.12 0.25 0.37
Volume/Cap: 1.43 1.14 0.90 3.65 0.82 0.73 0.30 1.02 0.64 1.36 0.55 0.78
Uniform Del: 45.0 28.0 19.5 45.0 24.5 19.5 46.0 41.0 30.0 45.0 32.9 28.3
IncrementDel: 219.6 72.4 8.0 1204 5.3 2.8 7.6 41.2 3.0 191.8 2.5 10.5
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 264.6 100 27.6 1249 29.8 22.3 53.5 82.2 33.1 236.8 35.4 38.8
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: 264.6 100 27.6 1249 29.8 22.3 53.5 82.2 33.1 236.8 35.4 38.8
LOS by Move: F F C F C C D F C F D D
HCM2kAvgQ: 18 38 22 84 16 15 1 12 9 20 7 14
Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2A Weekday PM

Intersection #1004: 3rd St / Evans Ave



Street Name: 3rd St Evans 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 46 46 12 46 46 6 20 20 12 26 26
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: 270 1430 310 580 1510 20 40 440 250 470 570 760
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: 270 1430 310 580 1510 20 40 440 250 470 570 760
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: 270 1430 310 580 1510 20 40 440 250 470 570 760
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
PHF Volume: 276 1459 316 592 1541 20 41 449 255 480 582 776
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 276 1459 316 592 1541 20 41 449 255 480 582 776
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 276 1459 316 592 1541 20 41 449 255 480 582 776

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.86 0.84 0.84 0.86 0.86 0.86 0.90 0.84 0.84 0.90 0.90 0.78
Lanes: 1.00 1.64 0.36 1.00 1.97 0.03 1.00 1.28 0.72 1.00 2.00 1.00
Final Sat.: 1641 2624 569 1641 3232 43 1718 2032 1154 1718 3437 1476

Capacity Analysis Module:
Vol/Sat: 0.17 0.56 0.56 0.36 0.48 0.48 0.02 0.22 0.22 0.28 0.17 0.53
Crit Moves: **** *
Green/Cycle: 0.15 0.45 0.57 0.12 0.42 0.48 0.06 0.20 0.34 0.12 0.25 0.37
Volume/Cap: 1.13 1.23 0.98 3.07 1.13 0.99 0.40 1.13 0.64 2.37 0.66 1.41
Uniform Del: 43.4 28.0 21.4 45.0 29.6 26.4 46.3 41.0 28.2 45.0 34.1 32.0
IncrementDel: 98.5 111 16.5 943.4 69.7 21.5 11.6 76.3 2.9 632.6 4.0 195.3
InitQueueDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Delay/Veh: 142.0 139 37.9 988.4 99.3 47.9 57.8 117 31.0 677.6 38.0 227.3
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: 142.0 139 37.9 988.4 99.3 47.9 57.8 117 31.0 677.6 38.0 227.3
LOS by Move: F F D F F D E F C F D F
HCM2kAvgQ: 12 49 28 67 36 26 1 17 9 50 10 53
Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2A Sunday

Intersection #1004: 3rd St / Evans Ave

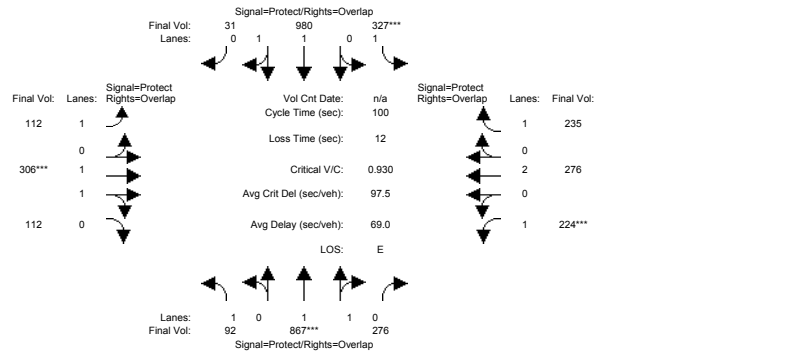


Table with columns for Street Name, Approach, and Movement (L, T, R) for 3rd St and Evans Ave. Includes rows for Min. Green, Y+R, and Final Volume.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Reduced Vol for each approach.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for each approach.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ values.

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

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2A Weekday AM

Intersection #1006: 3rd St / Palou Ave

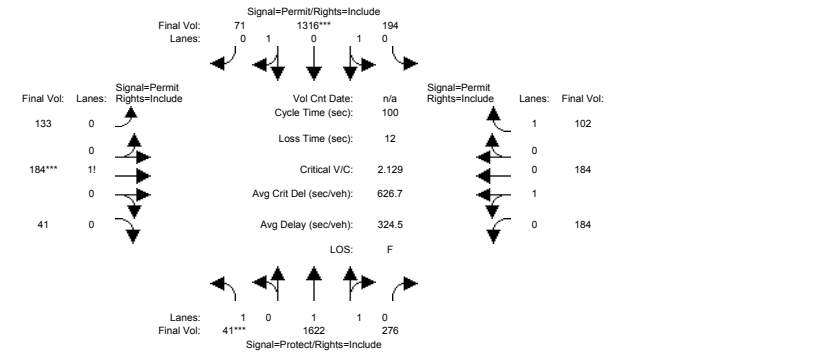


Table with columns for Street Name, Approach, and Movement (L, T, R) for 3rd St and Palou Ave. Includes rows for Min. Green, Y+R, and Final Volume.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Reduced Vol for each approach.

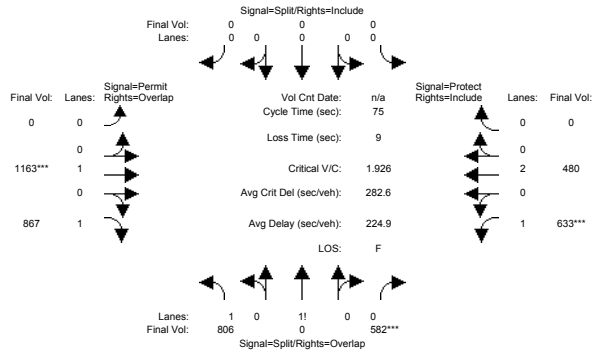
Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for each approach.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ values.

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

Level of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 ALT 2A Weekday AM

Intersection #1016: Evans Ave / Cesar Chavez



Street Name: Approach: Movement:	Evans Ave			Cesar Chavez		
	North Bound	South Bound		East Bound	West Bound	
Min. Green:	19	0	19	0	21	21
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0

Volume Module:	Evans Ave			Cesar Chavez		
	North Bound	South Bound		East Bound	West Bound	
Base Vol:	790	0	570	0	1140	850
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	790	0	570	0	1140	850

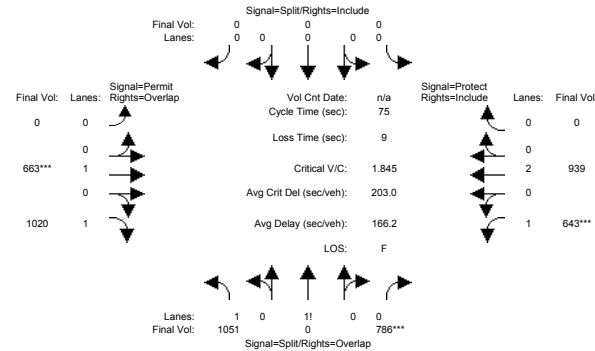
Saturation Flow Module:	Evans Ave			Cesar Chavez		
	North Bound	South Bound		East Bound	West Bound	
Sat/Lane:	1900	1900	1900	1900	1900	1900
Adjustment:	0.82	1.00	0.81	1.00	0.91	0.77

Capacity Analysis Module:	Evans Ave			Cesar Chavez		
	North Bound	South Bound		East Bound	West Bound	
Vol/Sat:	0.37	0.00	0.64	0.00	0.67	0.59
Crit Moves:	****	****	****	****	****	****
Green/Cycle:	0.28	0.00	0.58	0.00	0.30	0.59

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

Level of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 ALT 2A Weekday PM

Intersection #1016: Evans Ave / Cesar Chavez



Street Name: Approach: Movement:	Evans Ave			Cesar Chavez		
	North Bound	South Bound		East Bound	West Bound	
Min. Green:	19	0	19	0	21	21
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0

Volume Module:	Evans Ave			Cesar Chavez		
	North Bound	South Bound		East Bound	West Bound	
Base Vol:	1030	0	770	0	650	1000
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1030	0	770	0	650	1000

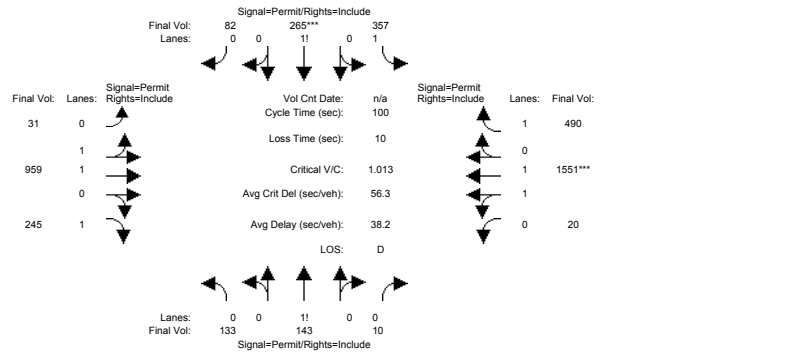
Saturation Flow Module:	Evans Ave			Cesar Chavez		
	North Bound	South Bound		East Bound	West Bound	
Sat/Lane:	1900	1900	1900	1900	1900	1900
Adjustment:	0.82	1.00	0.81	1.00	0.91	0.77

Capacity Analysis Module:	Evans Ave			Cesar Chavez		
	North Bound	South Bound		East Bound	West Bound	
Vol/Sat:	0.48	0.00	0.85	0.00	0.38	0.70
Crit Moves:	****	****	****	****	****	****
Green/Cycle:	0.31	0.00	0.60	0.00	0.28	0.59

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

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2A Weekday PM

Intersection #1048: Middle Point Rd / Evans Ave



Street Name:	Middle Point Rd				Evans Ave				
	North Bound		South Bound		East Bound		West Bound		
Approach:	L	T	R	L	T	R	L	T	R
Min. Green:	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

Volume Module:	Middle Point Rd				Evans Ave				
	North Bound		South Bound		East Bound		West Bound		
Base Vol:	130	140	10	350	260	80	30	940	240
Final Volume:	133	143	10	357	265	82	31	959	245

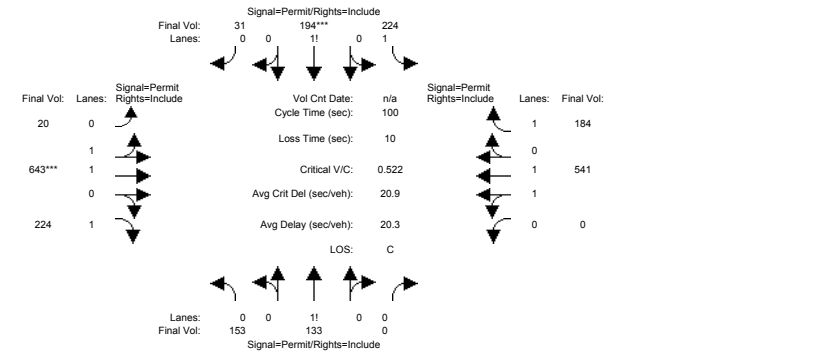
Saturation Flow Module:	Middle Point Rd				Evans Ave				
	North Bound		South Bound		East Bound		West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900
Final Sat.:	485	522	37	1652	629	194	74	2321	1537

Capacity Analysis Module:	Middle Point Rd				Evans Ave				
	North Bound		South Bound		East Bound		West Bound		
Vol/Sat:	0.27	0.27	0.27	0.22	0.42	0.42	0.41	0.41	0.16
Green/Cycle:	0.42	0.42	0.42	0.42	0.42	0.42	0.48	0.48	0.48
Delay/Veh:	27.1	27.1	27.1	22.1	66.4	66.4	29.1	29.1	16.1

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

Level of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
ALT 2A Sunday

Intersection #1048: Middle Point Rd / Evans Ave



Street Name:	Middle Point Rd				Evans Ave				
	North Bound		South Bound		East Bound		West Bound		
Approach:	L	T	R	L	T	R	L	T	R
Min. Green:	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

Volume Module:	Middle Point Rd				Evans Ave				
	North Bound		South Bound		East Bound		West Bound		
Base Vol:	150	130	0	220	190	30	20	630	220
Final Volume:	153	133	0	224	194	31	20	643	224

Saturation Flow Module:	Middle Point Rd				Evans Ave				
	North Bound		South Bound		East Bound		West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900
Final Sat.:	702	609	0	1686	738	117	98	3098	1537

Capacity Analysis Module:	Middle Point Rd				Evans Ave				
	North Bound		South Bound		East Bound		West Bound		
Vol/Sat:	0.22	0.22	0.00	0.13	0.26	0.26	0.21	0.21	0.15
Green/Cycle:	0.50	0.50	0.00	0.50	0.50	0.50	0.40	0.40	0.40
Delay/Veh:	16.3	16.3	0.0	14.3	17.4	17.4	23.3	23.3	21.6

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

Level of Service Computation Report 2000 HCM Operations (Future Volume Alternative) ALT 2A Weekday AM

Intersection #1058: Evans Ave/Napolean Ave/Toland

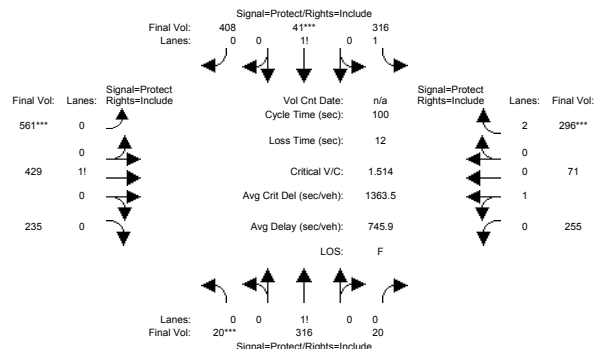


Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), and 3 rows: Min. Green (19, 40, 12, 13), Y+R (4.0, 4.0, 4.0, 4.0).

Volume Module table with 4 columns and 14 rows including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with 4 columns and 5 rows including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 4 columns and 15 rows including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Level of Service Computation Report 2000 HCM Operations (Future Volume Alternative) ALT 2A Weekday PM

Intersection #1058: Evans Ave/Napolean Ave/Toland

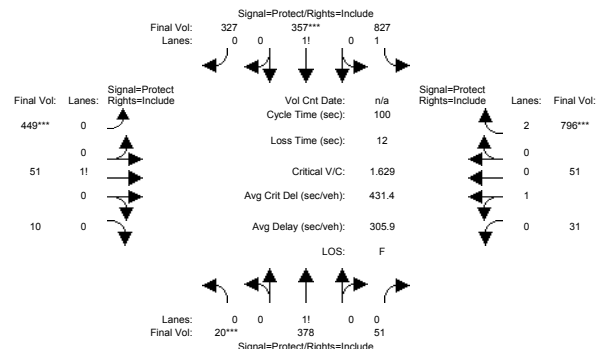


Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), and 3 rows: Min. Green (19, 40, 12, 13), Y+R (4.0, 4.0, 4.0, 4.0).

Volume Module table with 4 columns and 14 rows including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with 4 columns and 5 rows including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 4 columns and 15 rows including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Uniform Del, IncrementDel, InitQueueDel, Delay Adj, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2A AM

Intersection #111: Donahue St/Galvez Ave

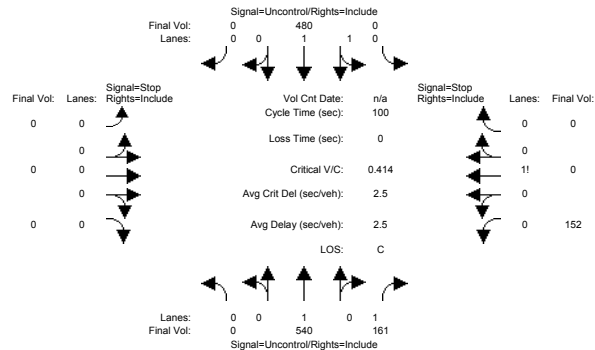


Table showing traffic volume data for Donahue St and Galvez Ave. Columns include Street Name, Approach, and Movement. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table for Critical Gap Module showing Critical Gap, FollowUpTim, and other metrics for the intersection.

Table for Capacity Module showing Conflict Vol, Potent Cap., Move Cap., and Volume/Cap. for the intersection.

Table for Level of Service Module showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, and Shared LOS.

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

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2A PM

Intersection #111: Donahue St/Galvez Ave

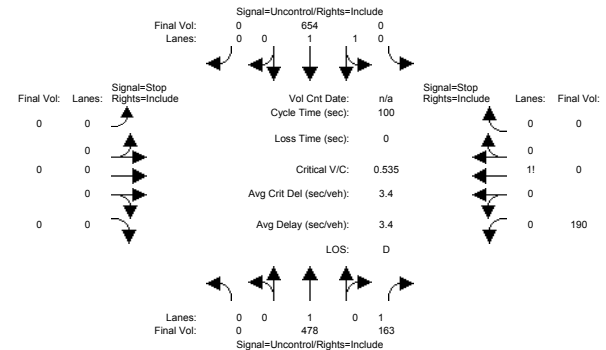


Table showing traffic volume data for Donahue St and Galvez Ave. Columns include Street Name, Approach, and Movement. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table for Critical Gap Module showing Critical Gap, FollowUpTim, and other metrics for the intersection.

Table for Capacity Module showing Conflict Vol, Potent Cap., Move Cap., and Volume/Cap. for the intersection.

Table for Level of Service Module showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, and Shared LOS.

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

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2A PM

Intersection #112: Donahue St/Lockwood St

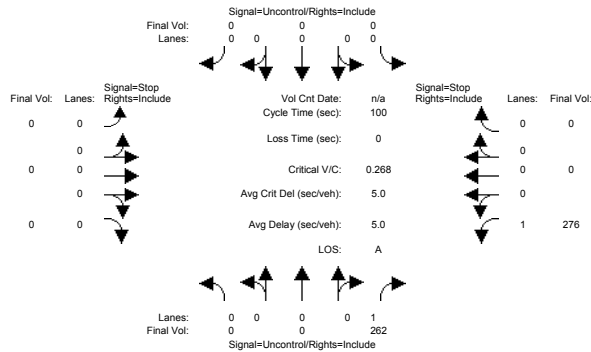


Table with columns for Street Name, Approach, Movement, Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module. Includes data for Donahue St (North Bound, South Bound) and Lockwood St (East Bound, West Bound).

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2A Sunday

Intersection #112: Donahue St/Lockwood St

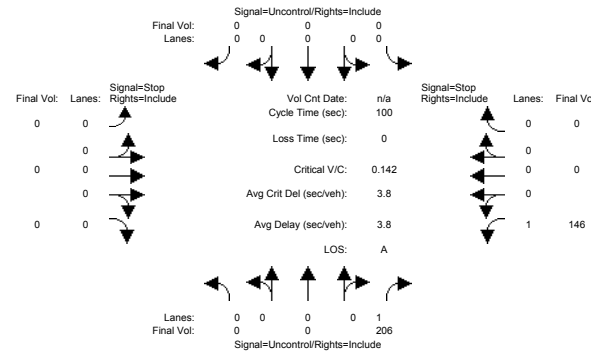
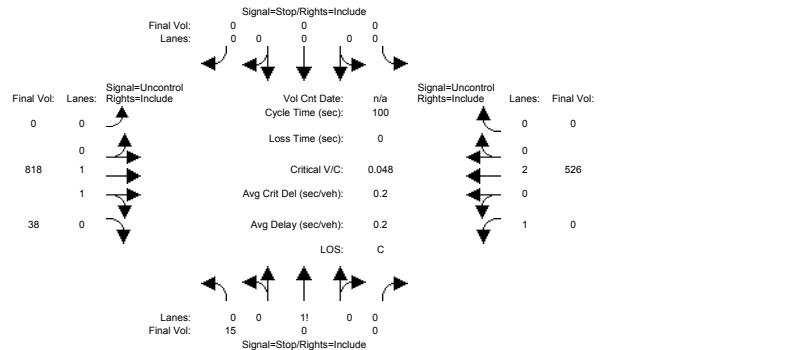


Table with columns for Street Name, Approach, Movement, Volume Module, Critical Gap Module, Capacity Module, and Level of Service Module. Includes data for Donahue St (North Bound, South Bound) and Lockwood St (East Bound, West Bound).

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2A AM

Intersection #113: Crisp Ave/I St (Outer Ring Road)



Street Name: I St(Outer Ring Road) Crisp 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:	15	0	0	0	0	0	0	802	37	0	515	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:	15	0	0	0	0	0	0	802	37	0	515	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:	15	0	0	0	0	0	0	802	37	0	515	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	15	0	0	0	0	0	0	818	38	0	526	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	15	0	0	0	0	0	0	818	38	0	526	0

Critical Gap Module:
Critical Gp: 6.8
FollowUpTim: 3.5

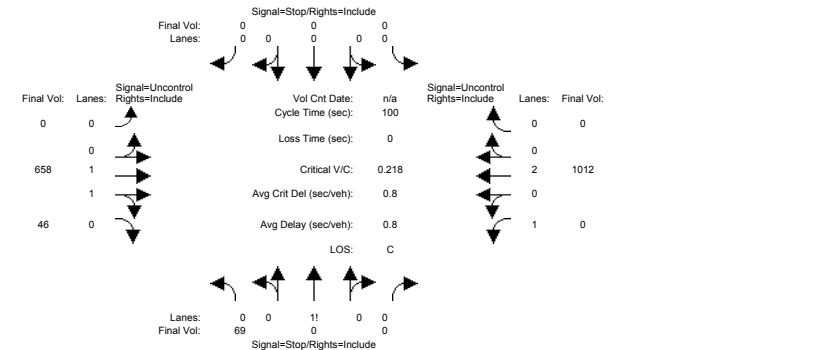
Capacity Module:
Cnflct Vol: 1100
Potent Cap.: 210
Move Cap.: 210
Total Cap: 316 269
Volume/Cap: 0.05

Level of Service Module:
2Way95thQ: 0.2
Control Del: 17.0
LOS by Move: C * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:
SharedQueue:
Shrd ConDel:
Shared LOS:
ApproachDel: 17.0
ApproachLOS: C

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

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2A PM

Intersection #113: Crisp Ave/I St (Outer Ring Road)



Street Name: I St(Outer Ring Road) Crisp 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:	68	0	0	0	0	0	0	645	45	0	992	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:	68	0	0	0	0	0	0	645	45	0	992	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:	68	0	0	0	0	0	0	645	45	0	992	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	69	0	0	0	0	0	0	658	46	0	1012	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	69	0	0	0	0	0	0	658	46	0	1012	0

Critical Gap Module:
Critical Gp: 6.8
FollowUpTim: 3.5

Capacity Module:
Cnflct Vol: 1187
Potent Cap.: 184
Move Cap.: 184
Total Cap: 319 212
Volume/Cap: 0.22

Level of Service Module:
2Way95thQ: 0.8
Control Del: 19.4
LOS by Move: C * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:
SharedQueue:
Shrd ConDel:
Shared LOS:
ApproachDel: 19.4
ApproachLOS: C

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

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2A Sunday

Intersection #113: Crisp Ave/I St (Outer Ring Road)

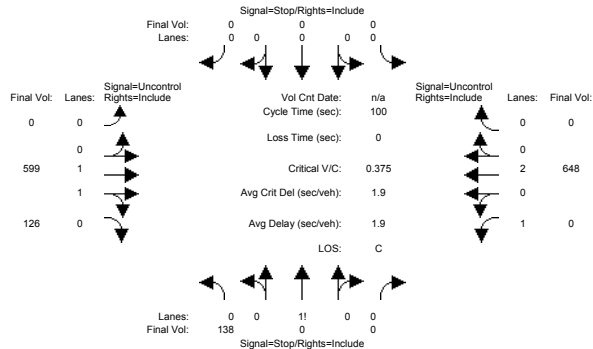


Table with columns for Street Name (I St/Outer Ring Road, Crisp Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), and various volume metrics (Base Vol, Growth Adj, Initial Bse, etc.) and Level of Service Module.

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2A AM

Intersection #114: Crisp Ave/Spear Ave (Inner Ring Road)

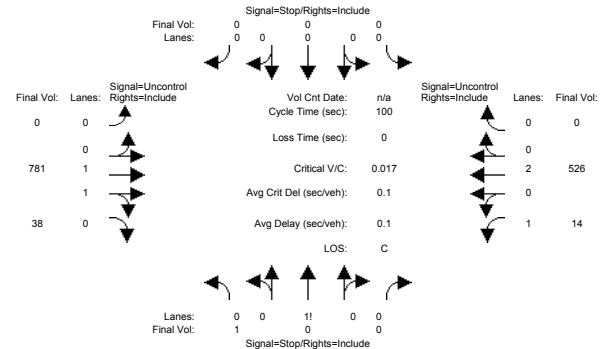
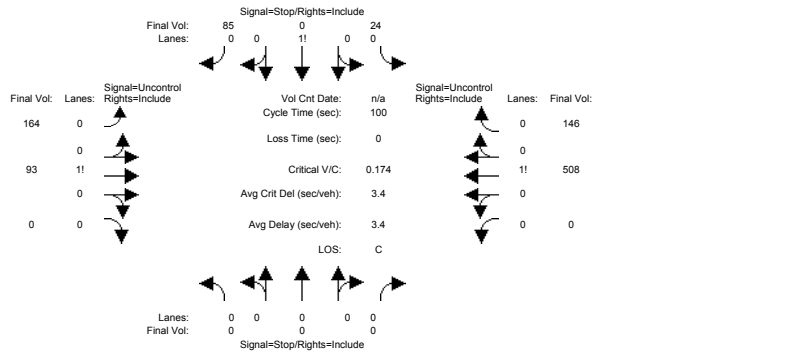


Table with columns for Street Name (Inner Ring Road, Crisp Ave-Spear Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), and various volume metrics and Level of Service Module.

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2A PM

Intersection #116: Lockwood St/Spear Ave

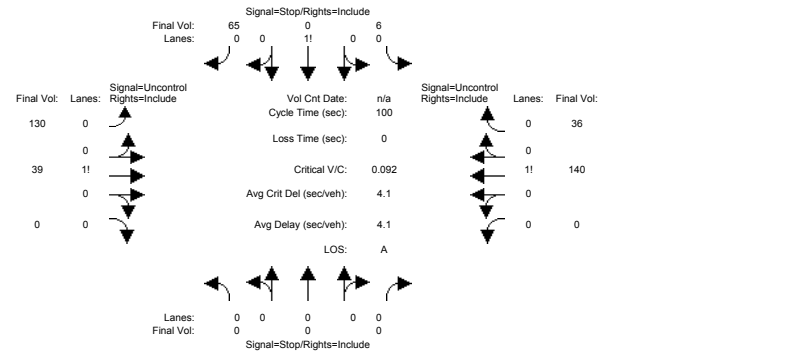


Street Name:	Lockwood St				Spear Ave							
	North Bound		South Bound		East Bound		West Bound					
Approach:	L	T	R	L	T	R	L	T	R			
Volume Module:	0	0	0	24	0	83	161	91	0	0	498	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	24	0	83	161	91	0	0	498	143
Added 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	24	0	83	161	91	0	0	498	143
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	0	0	24	0	85	164	93	0	0	508	146
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	24	0	85	164	93	0	0	508	146
Critical Gap Module:	Critical Gp:xxxxx xxxxxxxx 6.4 6.5 6.2				4.1 xxxxxxxx xxxxxxxx xxxxxxxx							
FollowUpTim:	xxxxxx xxxxxxxx 3.5 4.0 3.3				2.2 xxxxxxxx xxxxxxxx xxxxxxxx							
Capacity Module:	Cnflct Vol: xxxxx xxxxxxxx 1003 1003 581				654 xxxxxxxx xxxxxxxx xxxxxxxx							
Potent Cap.:	xxxxx xxxxxxxx 271 244 517				942 xxxxxxxx xxxxxxxx xxxxxxxx							
Move Cap.:	xxxxx xxxxxxxx 231 197 517				942 xxxxxxxx xxxxxxxx xxxxxxxx							
Volume/Cap:	xxxxx xxxxxxxx 0.11 0.00 0.16				0.17 xxxxxxxx xxxxxxxx xxxxxxxx							
Level of Service Module:	2Way95thQ: xxxxx xxxxxxxx xxxxx xxxxxxxx				0.6 xxxxxxxx xxxxxxxx xxxxxxxx							
Control Del:	xxxxxx xxxxxxxx xxxxxxxx xxxxxxxx				9.6 xxxxxxxx xxxxxxxx xxxxxxxx							
LOS by Move:	* * * * *				A * * * * *							
Shared Cap.:	xxxxx xxxxxxxx xxxxx 405 xxxxxxxx				xxxxx xxxxxxxx xxxxxxxx xxxxxxxx							
SharedQueue:	xxxxxx xxxxxxxx xxxxxxxx 1.1 xxxxxxxx				0.6 xxxxxxxx xxxxxxxx xxxxxxxx							
Shrd ConDel:	xxxxxx xxxxxxxx xxxxxxxx 17.2 xxxxxxxx				9.6 xxxxxxxx xxxxxxxx xxxxxxxx							
Shared LOS:	* * * * *				A * * * * *							
ApproachDel:	xxxxxx 17.2				xxxxxxx xxxxxxxx							
ApproachLOS:	* C				* C							

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

Level of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
ALT 2A Sunday

Intersection #116: Lockwood St/Spear Ave



Street Name:	Lockwood St				Spear Ave							
	North Bound		South Bound		East Bound		West Bound					
Approach:	L	T	R	L	T	R	L	T	R			
Volume Module:	0	0	0	6	0	64	127	38	0	0	137	35
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	6	0	64	127	38	0	0	137	35
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	6	0	64	127	38	0	0	137	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	0	0	6	0	65	130	39	0	0	140	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	6	0	65	130	39	0	0	140	36
Critical Gap Module:	Critical Gp:xxxxx xxxxxxxx 6.4 6.5 6.2				4.1 xxxxxxxx xxxxxxxx xxxxxxxx							
FollowUpTim:	xxxxxx xxxxxxxx 3.5 4.0 3.3				2.2 xxxxxxxx xxxxxxxx xxxxxxxx							
Capacity Module:	Cnflct Vol: xxxxx xxxxxxxx 456 456 158				176 xxxxxxxx xxxxxxxx xxxxxxxx							
Potent Cap.:	xxxxx xxxxxxxx 566 504 893				1413 xxxxxxxx xxxxxxxx xxxxxxxx							
Move Cap.:	xxxxx xxxxxxxx 524 454 893				1413 xxxxxxxx xxxxxxxx xxxxxxxx							
Volume/Cap:	xxxxx xxxxxxxx 0.01 0.00 0.07				0.09 xxxxxxxx xxxxxxxx xxxxxxxx							
Level of Service Module:	2Way95thQ: xxxxx xxxxxxxx xxxxx xxxxxxxx				0.3 xxxxxxxx xxxxxxxx xxxxxxxx							
Control Del:	xxxxxx xxxxxxxx xxxxxxxx xxxxxxxx				7.8 xxxxxxxx xxxxxxxx xxxxxxxx							
LOS by Move:	* * * * *				A * * * * *							
Shared Cap.:	xxxxx xxxxxxxx xxxxx 842 xxxxxxxx				xxxxx xxxxxxxx xxxxxxxx xxxxxxxx							
SharedQueue:	xxxxxx xxxxxxxx xxxxxxxx 0.3 xxxxxxxx				0.3 xxxxxxxx xxxxxxxx xxxxxxxx							
Shrd ConDel:	xxxxxx xxxxxxxx xxxxxxxx 9.7 xxxxxxxx				7.8 xxxxxxxx xxxxxxxx xxxxxxxx							
Shared LOS:	* * * * *				A * * * * *							
ApproachDel:	xxxxxx 9.7				xxxxxxx xxxxxxxx							
ApproachLOS:	* A				* A							

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

Hunter's Point Intersection Traffic Volume - AM Peak

No.	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Total	LOS	Contribution/Impact		
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right					
115	Robinson/ Spear	Existing	0	0	0	0	0	0	0	0	0	0	0	0	0	Project Proposed	--		
		No Project (2007 EIR)	0	1	0	0	1	0	1	2	0	0	0	1	0	6	Project Proposer	--	
		Alternative 1	51	23	0	217	122	112	26	304	280	0	161	35	1,331				
		Net New Alternative 1 Project Trips	43	20	0	217	120	110	22	286	264	0	153	35	1,270				
		Contribution to Total Alternative 1 Volume	84.3%	87.0%	-	100.0%	98.4%	98.2%	84.6%	94.1%	94.3%	-	95.0%	100.0%	95.4%	F	PI		
		Alternative 2	92	42	0	418	234	114	26	553	529	0	205	69	2,282				
		Net New Alternative 2 Project Trips	84	38	0	418	232	112	22	536	513	0	197	69	2,221				
		Contribution to Total Alternative 2 Volume	91.3%	90.5%	-	100.0%	99.1%	98.2%	84.6%	96.9%	97.0%	-	96.1%	100.0%	97.3%	F	PI		
		Alternative 3	48	22	0	201	114	145	32	290	260	0	192	33	1,337				
		Net New Alternative 3 Project Trips	40	18	0	201	112	143	29	274	246	0	183	33	1,279				
		Contribution to Total Alternative 3 Volume	83.3%	81.8%	-	100.0%	98.2%	98.6%	90.6%	94.5%	94.6%	-	95.3%	100.0%	95.7%	F	PI		
		Alternative 4	42	20	0	179	101	81	19	249	231	0	123	29	1,074				
		Net New Alternative 4 Project Trips	35	16	0	179	99	79	16	234	218	0	115	29	1,020				
		Contribution to Total Alternative 4 Volume	83.3%	80.0%	-	100.0%	98.0%	97.5%	84.2%	94.0%	94.4%	-	93.5%	100.0%	95.0%	E	PI		
		116	Lockwood/ Spear	Existing	0	0	0	1	0	9	4	5	0	0	1	1	21	A	--
				No Project (2007 EIR)	0	0	0	1	0	1	2	0	0	0	0	1	5	A	--
Alternative 1	146			111	0	146	111	111	24	496	466	0	86	27	890				
Net New Alternative 1 Project Trips	0			0	0	144	0	110	22	481	0	0	79	24	860				
Contribution to Total Alternative 1 Volume	-			-	-	98.6%	-	99.1%	91.7%	97.0%	-	-	91.9%	88.9%	96.6%	C	--		
Alternative 2	281			113	0	281	113	113	24	947	834	0	161	50	1,576				
Net New Alternative 2 Project Trips	0			0	0	279	0	112	22	932	0	0	153	46	1,544				
Contribution to Total Alternative 2 Volume	-			-	-	99.3%	-	99.1%	91.7%	98.4%	-	-	95.0%	92.0%	98.0%	F	PI		
Alternative 3	136			144	0	136	144	144	31	461	430	0	81	25	878				
Net New Alternative 3 Project Trips	0			0	0	134	0	143	29	447	0	0	73	22	848				
Contribution to Total Alternative 3 Volume	-			-	-	98.5%	-	99.3%	93.5%	97.0%	-	-	90.1%	88.0%	96.6%	C	--		
Alternative 4	121			144	0	121	144	144	18	410	392	0	71	23	723				
Net New Alternative 4 Project Trips	0			0	0	119	0	79	16	397	0	0	64	19	694				
Contribution to Total Alternative 4 Volume	-			-	-	98.3%	-	98.8%	88.9%	96.8%	-	-	90.1%	82.6%	96.0%	B	--		

movement for which project contribution determined to be significant, resulting in a Project Impact

critical movements at intersections operating at LOS E or LOS F, where project contributions assessed

Contribution/Impact:
 NPI = No Project Impact
 NSC = No Significant Contribution. Project contribution to critical movements operating poorly less than 5 percent
 SC/PI = Significant Contribution/Project Impact. Project contribution to critical movements operating poorly 5 percent or more

Hunter's Point Intersection Traffic Volume - PM Peak

No.	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Total	LOS	Contribution/ Impact
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
116	Lockwood/ Spear	Existing	0	0	0	1	0	9	15	0	0	0	1	0	26	A	--
		No Project (2007 EIR)	0	0	0	4	0	4	3	1	0	0	4	4	20	A	--
		Alternative 1				22		53	102	83			456	131	847		
		Net New Alternative 1 Project Trips	0	0	0	18	0	51	101	61	0	0	429	128	788		
		Contribution to Total Alternative 1 Volume	-	-	-	81.8%	-	96.2%	99.0%	73.5%	-	-	94.1%	97.7%	93.0%	B	--
		Alternative 2				38		60	115	136			825	242	1,416		
		Net New Alternative 2 Project Trips	0	0	0	34	0	57	113	113	0	0	799	239	1,355		
		Contribution to Total Alternative 2 Volume	-	-	-	89.5%	-	95.0%	98.3%	83.1%	-	-	96.8%	98.8%	95.7%	E	PI
		Alternative 3				21		76	146	80			424	121	868		
		Net New Alternative 3 Project Trips	0	0	0	17	0	73	145	57	0	0	399	119	810		
		Contribution to Total Alternative 3 Volume	-	-	-	81.0%	-	96.1%	99.3%	71.3%	-	-	94.1%	98.3%	93.3%	B	--
		Alternative 4				19		42	81	71			379	108	700		
		Net New Alternative 4 Project Trips	0	0	0	15	0	40	79	51	0	0	356	106	647		
		Contribution to Total Alternative 4 Volume	-	-	-	78.9%	-	95.2%	97.5%	71.8%	-	-	93.9%	98.1%	92.4%	B	--
		Secondary Event				22		53	102	83			456	131	847		
		Secondary Event Project Trips	0	0	0	18	0	51	101	61	0	0	429	128	788		
		Contribution to Total Secondary Event Volume	-	-	-	81.8%	-	96.2%	99.0%	73.5%	-	-	94.1%	97.7%	93.0%	B	--
Arena Event				22		53	102	83			456	131	847				
Arena Event Project Trips	0	0	0	18	0	51	101	61	0	0	429	128	788				
Contribution to Total Arena Event Volume	-	-	-	81.8%	-	96.2%	99.0%	73.5%	-	-	94.1%	97.7%	93.0%	B	--		

movement for which project contribution determined to be significant, resulting in a Project Impact

critical movements at intersections operating at LOS E or LOS F, where project contributions assessed

Contribution/Impact:

NPI = No Project Impact

NSC = No Significant Contribution. Project contribution to critical movements operating poorly less than 5 percent

SC/PI = Significant Contribution/Project Impact. Project contribution to critical movements operating poorly 5 percent or more

Hunter's Point Intersection Traffic Volume - Sunday

No.	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Total	LOS	Contribution/Impact
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
115	Robinson/ Spear	Existing	0	0	0	0	0	0	0	0	0	0	0	0	0	Project Proposed	--
		No Project (2007 EIR)	0	1	0	0	1	0	0	0	0	0	1	0	3	Object Propos	--
		Alternative 1	70	27	0	7	5	56	110	130	24	0	121	45	595		
		Net New Alternative 1 Project Trips	57	25	0	7	4	51	105	114	9	0	107	45	524		
		Contribution to Total Alternative 1 Volume	81.4%	92.6%	-	100.0%	80.0%	91.1%	95.5%	87.7%	37.5%	-	88.4%	100.0%	88.1%	C	--
		Alternative 2	139	52	0	13	8	51	96	130	37	0	186	92	804		
		Net New Alternative 2 Project Trips	114	51	0	13	7	46	91	108	17	0	160	92	699		
		Contribution to Total Alternative 2 Volume	82.0%	98.1%	-	100.0%	87.5%	90.2%	94.8%	83.1%	45.9%	-	86.0%	100.0%	86.9%	D	--
		Alternative 3	77	25	0	6	4	62	118	143	29	0	134	42	640		
		Net New Alternative 3 Project Trips	52	23	0	6	3	57	113	121	8	0	109	42	534		
		Contribution to Total Alternative 3 Volume	67.5%	92.0%	-	100.0%	75.0%	91.9%	95.8%	84.6%	27.6%	-	81.3%	100.0%	83.4%	C	--
		Alternative 4	60	19	0	5	4	45	87	109	25	0	101	31	486		
		Net New Alternative 4 Project Trips	37	17	0	5	3	40	83	89	6	0	77	31	388		
Contribution to Total Alternative 4 Volume	61.7%	89.5%	-	100.0%	75.0%	88.9%	95.4%	81.7%	24.0%	-	76.2%	100.0%	79.8%	B	--		
116	Lockwood/ Spear	Existing	0	0	0	1	0	9	4	5	0	0	1	1	21	A	--
		No Project (2007 EIR)	0	0	0	1	0	1	1	0	0	0	0	1	4	A	--
		Alternative 1	6	0	0	6	0	51	106	31	0	0	115	32	341		
		Net New Alternative 1 Project Trips	0	0	0	5	0	51	105	16	0	0	102	30	309		
		Contribution to Total Alternative 1 Volume	-	-	-	83.3%	-	100.0%	99.1%	51.6%	-	-	88.7%	93.8%	90.6%	A	--
		Alternative 2	10	0	0	10	0	46	93	51	0	0	231	63	494		
		Net New Alternative 2 Project Trips	0	0	0	9	0	46	91	30	0	0	206	61	443		
		Contribution to Total Alternative 2 Volume	-	-	-	90.0%	-	100.0%	97.8%	58.8%	-	-	89.2%	96.8%	89.7%	B	--
		Alternative 3	5	0	0	5	0	58	114	35	0	0	118	29	359		
		Net New Alternative 3 Project Trips	0	0	0	4	0	57	113	14	0	0	93	28	309		
		Contribution to Total Alternative 3 Volume	-	-	-	80.0%	-	98.3%	99.1%	40.0%	-	-	78.8%	96.6%	86.1%	A	--
		Alternative 4	4	0	0	4	0	41	84	30	0	0	91	22	272		
		Net New Alternative 4 Project Trips	0	0	0	3	0	40	83	11	0	0	68	21	226		
Contribution to Total Alternative 4 Volume	-	-	-	75.0%	-	97.6%	98.8%	36.7%	-	-	74.7%	95.5%	83.1%	A	--		

 movement for which project contribution determined to be significant, resulting in a Project Impact

 critical movements at intersections operating at LOS E or LOS F, where project contributions assessed

Contribution/Impact:

NPI = No Project Impact

NSC = No Significant Contribution. Project contribution to critical movements operating poorly less than 5 percent

SC/PI = Significant Contribution/Project Impact. Project contribution to critical movements operating poorly 5 percent or more

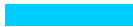
Hunter's Point Intersection Traffic Volume - AM Peak


No.	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Total	LOS	Contribution/Impact
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
2	Third/ Cesar Chavez	Alternative 2A	320	1,650	50	90	1,810	100	280	1,110	630	10	330	60	6,440	F	SC/PI
		Alternative 2A Project Trips	33	185	0	47	266	0	0	7	63	0	6	24	631		
		Net New Alternative 2A Project Trips	5	22	0	6	-20	0	0	-3	7	0	0	4	21		
		Contribution to Total Alternative 2A Volume	10.3%	11.2%	-	52.2%	14.7%	-	-	0.6%	10.0%	-	1.8%	40.0%	9.8%		
3	Third/ Cargo	Alternative 2A	60	1,470	90	470	1,820	160	100	150	40	20	20	450	4,850	F	SC/PI
		Alternative 2A Project Trips	0	179	0	44	284	0	0	0	0	0	0	39	546		
		Net New Alternative 2A Project Trips	0	24	0	-14	-1	0	0	0	0	0	0	4	13		
		Contribution to Total Alternative 2A Volume	-	12.2%	-	9.4%	15.6%	-	-	-	-	-	-	8.7%	11.3%		
4	Third/ Evans	Alternative 2A	270	1,180	410	690	1,160	30	30	570	80	270	470	420	5,580	F	SC/PI
		Alternative 2A Project Trips	0	15	47	191	93	0	0	129	2	74	112	164	827		
		Net New Alternative 2A Project Trips	0	7	-16	-52	52	0	0	-21	2	26	21	16	35		
		Contribution to Total Alternative 2A Volume	-	1.3%	11.5%	27.7%	8.0%	-	-	22.6%	2.5%	27.4%	23.8%	39.0%	14.8%		
6	Third/ Palou	Alternative 2A	40	1,590	270	190	1,290	70	130	180	40	180	180	100	4,260	F	PI
		Alternative 2A Project Trips	0	21	123	149	45	14	16	106	0	111	80	15	680		
		Net New Alternative 2A Project Trips	0	-13	-24	65	17	5	1	-12	0	22	6	4	71		
		Contribution to Total Alternative 2A Volume	-	1.3%	45.6%	78.4%	3.5%	20.0%	12.3%	58.9%	-	61.7%	44.4%	15.0%	16.0%		
8	Third/ Carroll	Alternative 2A	10	1,550	120	100	1,200	10	10	10	20	80	10	240	3,360	B	--
		Alternative 2A Project Trips	0	129	0	0	144	0	0	0	0	0	0	0	273		
		Net New Alternative 2A Project Trips	0	-36	0	0	35	0	0	0	0	0	0	0	-1		
		Contribution to Total Alternative 2A Volume	-	8.3%	-	-	12.0%	-	-	-	-	-	-	-	8.1%		
9	Third/ Gilman	Alternative 2A	40	1,440	60	100	890	180	140	760	20	40	490	130	4,290	F	SC/PI
		Alternative 2A Project Trips	0	105	0	0	103	21	12	0	0	0	0	0	241		
		Net New Alternative 2A Project Trips	0	-18	0	0	24	6	-9	0	0	0	0	0	3		
		Contribution to Total Alternative 2A Volume	-	7.3%	-	-	11.6%	11.7%	8.6%	-	-	-	-	-	5.6%		
16	Evans/ Cesar Chavez	Alternative 2A	790	0	570	0	0	0	0	1,140	850	620	470	0	4,440	F	SC/PI
		Alternative 2A Project Trips	112	0	0	0	0	0	0	70	131	0	39	0	352		
		Net New Alternative 2A Project Trips	21	0	0	0	0	0	0	3	-19	0	5	0	10		
		Contribution to Total Alternative 2A Volume	14.2%	-	-	-	-	-	-	6.1%	15.4%	-	8.3%	-	7.9%		
48	Evans/Jennings	Alternative 2A	130	130	10	410	190	30	80	1,300	160	20	940	290	3,690	C	--
		Alternative 2A Project Trips	0	0	0	216	0	0	0	388	0	0	368	158	1,130		
		Net New Alternative 2A Project Trips	0	0	0	-33	0	0	0	-86	0	0	70	16	-33		
		Contribution to Total Alternative 2A Volume	-	-	-	52.7%	-	-	-	29.8%	-	-	39.1%	54.5%	30.6%		
58	Evans/ Napoleon	Alternative 2A	20	310	20	310	40	400	550	420	230	250	70	290	2,910	F	SC/PI
		Alternative 2A Project Trips	0	0	0	131	0	0	0	0	0	0	0	112	243		
		Net New Alternative 2A Project Trips	0	0	0	-19	0	0	0	0	0	0	0	21	2		
		Contribution to Total Alternative 2A Volume	-	-	-	42.3%	-	-	-	-	-	-	-	38.6%	8.4%		

CITY AND COUNTY OF SAN FRANCISCO STREETS

Hunter's Point Intersection Traffic Volume - AM Peak

No.	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Total	LOS	Contribution/ Impact
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
110	Innes/ Donahue	Alternative 2A	58	0	0	0	0	632	690	37	63	0	150	0	1,630	A	--
		Alternative 2A Project Trips	0	0	0	0	0	562	640	0	0	0	0	0	1,202		
		Net New Alternative 2A Project Trips	0	0	0	0	0	105	-112	0	0	0	0	0	-7		
		Contribution to Total Alternative 2A Volume	-	-	-	-	-	88.9%	92.8%	-	-	-	-	-	73.7%		
111	Donahue/ Galvez	Alternative 2A	0	529	158	0	470	0	0	0	0	149	0	0	1,306	C	--
		Alternative 2A Project Trips	0	505	134	0	425	0	0	0	0	137	0	0	1,201		
		Net New Alternative 2A Project Trips	0	-61	-51	0	84	0	0	0	0	21	0	0	-7		
		Contribution to Total Alternative 2A Volume	-	95.5%	84.8%	-	90.4%	-	-	-	-	91.9%	-	-	92.0%		
112	Donahue/ Lockwood	Alternative 2A	0	0	212	0	0	0	0	0	0	267	0	0	479	A	--
		Alternative 2A Project Trips	0	0	209	0	0	0	0	0	0	260	0	0	469		
		Net New Alternative 2A Project Trips	0	0	-67	0	0	0	0	0	0	63	0	0	-4		
		Contribution to Total Alternative 2A Volume	-	-	98.6%	-	-	-	-	-	-	97.4%	-	-	97.9%		
113	Crisp/ I (Outer Ring Road)	Alternative 2A	15	0	0	0	0	0	0	802	37	0	515	0	1,369	C	--
		Alternative 2A Project Trips	1	0	0	0	0	0	0	686	10	0	427	0	1,124		
		Net New Alternative 2A Project Trips	1	0	0	0	0	0	0	30	10	0	86	0	127		
		Contribution to Total Alternative 2A Volume	6.7%	-	-	-	-	-	-	85.5%	27.0%	-	82.9%	-	82.1%		
114	Crisp/ Spear (Inner Ring Road)	Alternative 2A	1	0	0	0	0	0	0	765	37	14	515	0	1,332	C	--
		Alternative 2A Project Trips	1	0	0	0	0	0	0	676	10	0	427	0	1,114		
		Net New Alternative 2A Project Trips	1	0	0	0	0	0	0	20	10	0	86	0	117		
		Contribution to Total Alternative 2A Volume	100.0%	-	-	-	-	-	-	88.4%	27.0%	-	82.9%	-	83.6%		
115	Robinson/ Spear	Alternative 2A	56	25	0	238	134	158	35	338	305	0	213	39	1,541	F	PI
		Alternative 2A Project Trips	48	22	0	238	132	156	31	322	291	0	204	39	1,483		
		Net New Alternative 2A Project Trips	26	12	0	133	74	48	-77	85	162	0	74	21	558		
		Contribution to Total Alternative 2A Volume	85.7%	88.0%	-	100.0%	98.5%	98.7%	88.6%	95.3%	95.4%	-	95.8%	100.0%	96.2%		
116	Lockwood/ Spear	Alternative 2A	0	0	0	161	0	157	33	543	0	0	95	30	1,019	C	--
		Alternative 2A Project Trips	0	0	0	159	0	156	31	530	0	0	87	26	989		
		Net New Alternative 2A Project Trips	0	0	0	89	0	48	-77	296	0	0	47	14	417		
		Contribution to Total Alternative 2A Volume	-	-	-	98.8%	-	99.4%	93.9%	97.6%	-	-	91.6%	86.7%	97.1%		

 movement for which project contribution determined to be significant, resulting in a Project Impact

 critical movements at intersections operating at LOS E or LOS F, where project contributions assessed

Contribution/Impact:

NPI = No Project Impact

NSC = No Significant Contribution. Project contribution to critical movements operating poorly less than 5 percent

SC/PI = Significant Contribution/Project Impact. Project contribution to critical movements operating poorly 5 percent or more

Hunter's Point Intersection Traffic Volume - PM Peak

No.	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Total	LOS	Contribution/ Impact
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
2	Third/ Cesar Chavez	Alternative 2A	520	2,130	20	60	2,110	400	200	690	420	20	430	90	7,090	F	SC/PI
		Alternative 2A Project Trips	74	346	0	24	195	0	0	6	33	0	8	53	739		
		Net New Alternative 2A Project Trips	28	92	0	8	63	0	0	2	12	0	1	16	222		
		Contribution to Total Alternative 2A Volume	14.2%	16.2%	-	40.0%	9.2%	-	-	0.9%	7.9%	-	1.9%	58.9%	10.4%		
3	Third/ Cargo	Alternative 2A	10	2,190	50	390	1,990	170	110	120	30	110	20	380	5,570	F	SC/PI
		Alternative 2A Project Trips	0	365	0	39	188	0	0	0	0	0	0	55	647		
		Net New Alternative 2A Project Trips	0	115	0	11	63	0	0	0	0	0	0	5	194		
		Contribution to Total Alternative 2A Volume	-	16.7%	-	10.0%	9.4%	-	-	-	-	-	-	14.5%	11.6%		
4	Third/ Evans	Alternative 2A	270	1,430	310	580	1,510	20	40	440	250	470	570	760	6,650	F	SC/PI
		Alternative 2A Project Trips	9	124	72	169	20	0	0	101	2	61	136	241	935		
		Net New Alternative 2A Project Trips	9	88	30	50	15	0	0	34	2	10	23	27	288		
		Contribution to Total Alternative 2A Volume	3.3%	8.7%	23.2%	29.1%	1.3%	-	-	23.0%	0.8%	13.0%	23.9%	31.7%	14.1%		
6	Third/ Palou	Alternative 2A	110	1,590	260	110	2,030	160	70	320	120	260	380	210	5,620	F	SC/PI
		Alternative 2A Project Trips	0	46	131	35	34	12	10	83	0	183	133	136	803		
		Net New Alternative 2A Project Trips	0	16	46	21	-1	9	8	42	0	41	52	93	327		
		Contribution to Total Alternative 2A Volume	-	2.9%	50.4%	31.8%	1.7%	7.5%	14.3%	25.9%	-	70.4%	35.0%	64.8%	14.3%		
8	Third/ Carroll	Alternative 2A	10	1,620	70	310	2,090	10	10	10	10	140	10	240	4,530	E	PI
		Alternative 2A Project Trips	0	163	0	0	197	0	0	0	0	0	0	0	360		
		Net New Alternative 2A Project Trips	0	56	0	0	34	0	0	0	0	0	0	0	90		
		Contribution to Total Alternative 2A Volume	-	10.1%	-	-	9.4%	-	-	-	-	-	-	-	7.9%		
9	Third/ Gilman	Alternative 2A	90	1,310	60	260	1,770	220	160	940	130	60	660	220	5,880	F	SC/PI
		Alternative 2A Project Trips	0	115	0	0	152	23	24	0	0	0	0	0	314		
		Net New Alternative 2A Project Trips	0	36	0	0	27	4	10	0	0	0	0	0	77		
		Contribution to Total Alternative 2A Volume	-	8.8%	-	-	8.6%	10.5%	15.0%	-	-	-	-	-	5.3%		
16	Evans/ Cesar Chavez	Alternative 2A	1,030	0	770	0	0	0	0	650	1,000	630	920	0	5,000	F	SC/PI
		Alternative 2A Project Trips	146	0	0	0	0	0	0	39	103	0	82	0	370		
		Net New Alternative 2A Project Trips	33	0	0	0	0	0	0	14	36	0	29	0	112		
		Contribution to Total Alternative 2A Volume	14.2%	-	-	-	-	-	-	6.0%	10.3%	-	8.9%	-	7.4%		
48	Evans/Jennings	Alternative 2A	130	140	10	350	260	80	30	940	240	20	1,520	480	4,200	D	--
		Alternative 2A Project Trips	0	0	0	161	0	0	0	355	0	0	457	261	1,234		
		Net New Alternative 2A Project Trips	0	0	0	48	0	0	0	118	0	0	66	43	275		
		Contribution to Total Alternative 2A Volume	-	-	-	46.0%	-	-	-	37.8%	-	-	30.1%	54.4%	29.4%		
58	Evans/ Napoleon	Alternative 2A	20	370	50	810	350	320	440	50	10	30	50	780	3,280	F	SC/PI
		Alternative 2A Project Trips	0	0	0	103	0	0	0	0	0	0	0	146	249		
		Net New Alternative 2A Project Trips	0	0	0	36	0	0	0	0	0	0	0	33	69		
		Contribution to Total Alternative 2A Volume	-	-	-	12.7%	-	-	-	-	-	-	-	18.7%	7.6%		

Hunter's Point Intersection Traffic Volume - PM Peak

No.	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Total	LOS	Contribution/ Impact
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
110	Innes/ Donahue	Alternative 2A	80	0	0	0	0	832	642	138	59	0	89	0	1,840	A	--
		Alternative 2A Project Trips	0	0	0	0	0	757	555	0	0	0	0	0	1,312		
		Net New Alternative 2A Project Trips	0	0	0	0	0	118	183	0	0	0	0	0	301		
		Contribution to Total Alternative 2A Volume	-	-	-	-	-	91.0%	86.4%	-	-	-	-	-	71.3%		
111	Donahue/ Galvez	Alternative 2A	0	468	160	0	641	0	0	0	0	186	0	0	1,455	C	--
		Alternative 2A Project Trips	0	417	138	0	588	0	0	0	0	169	0	0	1,312		
		Net New Alternative 2A Project Trips	0	140	43	0	108	0	0	0	0	10	0	0	301		
		Contribution to Total Alternative 2A Volume	-	89.1%	86.3%	-	91.7%	-	-	-	-	90.9%	-	-	90.2%		
112	Donahue/ Lockwood	Alternative 2A	0	0	257	0	0	0	0	0	0	270	0	0	527	A	--
		Alternative 2A Project Trips	0	0	248	0	0	0	0	0	0	264	0	0	512		
		Net New Alternative 2A Project Trips	0	0	86	0	0	0	0	0	0	33	0	0	119		
		Contribution to Total Alternative 2A Volume	-	-	96.5%	-	-	-	-	-	-	97.8%	-	-	97.2%		
113	Crisp/ I (Outer Ring Road)	Alternative 2A	68	0	0	0	0	0	0	645	45	0	992	0	1,750	C	--
		Alternative 2A Project Trips	52	0	0	0	0	0	0	485	10	0	840	0	1,387		
		Net New Alternative 2A Project Trips	52	0	0	0	0	0	0	189	10	0	285	0	536		
		Contribution to Total Alternative 2A Volume	76.5%	-	-	-	-	-	-	75.2%	22.2%	-	84.7%	-	79.3%		
114	Crisp/ Spear (Inner Ring Road)	Alternative 2A	52	0	0	0	0	0	0	600	45	16	940	0	1,653	C	--
		Alternative 2A Project Trips	52	0	0	0	0	0	0	475	10	0	788	0	1,325		
		Net New Alternative 2A Project Trips	52	0	0	0	0	0	0	179	10	0	233	0	474		
		Contribution to Total Alternative 2A Volume	100.0%	-	-	-	-	-	-	79.2%	22.2%	-	83.8%	-	80.2%		
115	Robinson/ Spear	Alternative 2A	286	120	0	30	21	87	165	222	61	0	370	211	1,573	F	PI
		Alternative 2A Project Trips	261	117	0	30	17	81	160	197	37	0	342	211	1,453		
		Net New Alternative 2A Project Trips	163	71	0	18	10	-26	52	76	23	0	137	128	652		
		Contribution to Total Alternative 2A Volume	91.3%	97.5%	-	100.0%	81.0%	93.1%	97.0%	88.7%	60.7%	-	92.4%	100.0%	92.4%		
116	Lockwood/ Spear	Alternative 2A	0	0	0	24	0	83	161	91	0	0	498	143	1,000	C	--
		Alternative 2A Project Trips	0	0	0	20	0	81	160	67	0	0	472	141	941		
		Net New Alternative 2A Project Trips	0	0	0	12	0	-26	52	41	0	0	291	86	456		
		Contribution to Total Alternative 2A Volume	-	-	-	83.3%	-	97.6%	99.4%	73.6%	-	-	94.8%	98.6%	94.1%		

HUNTERS POINT SHIPYARD STREETS

movement for which project contribution determined to be significant, resulting in a Project Impact

critical movements at intersections operating at LOS E or LOS F, where project contributions assessed

Contribution/Impact:

NPI = No Project Impact

NSC = No Significant Contribution. Project contribution to critical movements operating poorly less than 5 percent

SC/PI = Significant Contribution/Project Impact. Project contribution to critical movements operating poorly 5 percent or more

Hunter's Point Intersection Traffic Volume - Sunday Peak

No.	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Total	LOS	Contribution/ Impact
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
2	Third/ Cesar Chavez	Alternative 2A	200	1,100	10	40	1,240	160	120	210	240	0	70	40	3,430	F	PI
		Alternative 2A Project Trips	42	211	0	18	209	0	0	5	36	0	4	20	545		
		Net New Alternative 2A Project Trips	26	123	0	10	146	0	0	2	25	0	1	8	341		
		Contribution to Total Alternative 2A Volume	21.0%	19.2%	-	45.0%	16.9%	-	-	2.4%	15.0%	-	5.7%	50.0%	15.9%		
3	Third/ Cargo	Alternative 2A	0	1,140	10	220	1,240	20	10	10	0	20	0	160	2,830	C	--
		Alternative 2A Project Trips	0	225	0	32	213	0	0	0	0	0	0	27	497		
		Net New Alternative 2A Project Trips	0	141	0	18	153	0	0	0	0	0	0	8	320		
		Contribution to Total Alternative 2A Volume	-	19.7%	-	14.5%	17.2%	-	-	-	-	-	-	16.9%	17.6%		
4	Third/ Evans	Alternative 2A	90	850	270	320	960	30	110	300	110	220	270	230	3,760	E	PI
		Alternative 2A Project Trips	21	109	52	138	75	0	0	79	17	34	64	116	705		
		Net New Alternative 2A Project Trips	21	102	46	80	73	0	0	53	17	25	28	39	484		
		Contribution to Total Alternative 2A Volume	23.3%	12.8%	19.3%	43.1%	7.8%	-	-	26.3%	15.5%	15.5%	23.7%	50.4%	18.8%		
6	Third/ Palou	Alternative 2A	140	1,040	200	160	1,140	100	70	310	90	200	260	230	3,940	F	SC/PI
		Alternative 2A Project Trips	0	33	126	112	20	5	8	75	0	127	92	132	730		
		Net New Alternative 2A Project Trips	0	30	90	96	15	5	8	60	0	75	63	118	560		
		Contribution to Total Alternative 2A Volume	-	3.2%	63.0%	70.0%	1.8%	5.0%	11.4%	24.2%	-	63.5%	35.4%	57.4%	18.5%		
8	Third/ Carroll	Alternative 2A	0	1,110	50	260	1,150	0	0	0	60	80	0	210	2,920	E	PI
		Alternative 2A Project Trips	0	147	0	0	135	0	0	0	0	0	0	0	282		
		Net New Alternative 2A Project Trips	0	112	0	0	83	0	0	0	0	0	0	0	195		
		Contribution to Total Alternative 2A Volume	-	13.2%	-	-	11.7%	-	-	-	-	-	-	-	9.7%		
9	Third/ Gilman	Alternative 2A	60	820	40	200	990	90	130	840	40	80	450	170	3,910	F	SC/PI
		Alternative 2A Project Trips	0	105	0	0	98	18	21	0	0	0	0	0	242		
		Net New Alternative 2A Project Trips	0	80	0	0	60	11	16	0	0	0	0	0	167		
		Contribution to Total Alternative 2A Volume	-	12.8%	-	-	9.9%	20.0%	16.2%	-	-	-	-	-	6.2%		
16	Evans/ Cesar Chavez	Alternative 2A	440	0	200	0	0	0	0	380	430	150	280	0	1,880	B	--
		Alternative 2A Project Trips	85	0	0	0	0	0	0	41	96	0	46	0	268		
		Net New Alternative 2A Project Trips	49	0	0	0	0	0	0	28	70	0	27	0	174		
		Contribution to Total Alternative 2A Volume	19.3%	-	-	-	-	-	-	10.8%	22.3%	-	16.4%	-	14.3%		
48	Evans/Jennings	Alternative 2A	150	130	0	220	190	30	20	630	220	0	530	180	2,300	C	--
		Alternative 2A Project Trips	0	0	0	129	0	0	0	279	0	0	223	118	749		
		Net New Alternative 2A Project Trips	0	0	0	70	0	0	0	189	0	0	100	39	398		
		Contribution to Total Alternative 2A Volume	-	-	-	58.6%	-	-	-	44.3%	-	-	42.1%	65.6%	32.6%		
58	Evans/ Napoleon	Alternative 2A	10	150	20	420	140	130	180	30	0	10	20	350	1,460	E	SC/PI
		Alternative 2A Project Trips	0	0	0	96	0	0	0	0	0	0	0	85	181		
		Net New Alternative 2A Project Trips	0	0	0	70	0	0	0	0	0	0	0	49	119		
		Contribution to Total Alternative 2A Volume	-	-	-	22.9%	-	-	-	-	-	-	-	24.3%	12.4%		

Hunter's Point Intersection Traffic Volume - Sunday Peak

No.	Intersection	Scenario	Northbound			Southbound			Eastbound			Westbound			Total	LOS	Contribution/ Impact
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
110	Innes/ Donahue	Alternative 2A	77	0	0	0	0	430	498	111	42	0	73	0	1,231	A	--
		Alternative 2A Project Trips	0	0	0	0	0	363	435	0	0	0	0	0	798		
		Net New Alternative 2A Project Trips	0	0	0	0	0	153	280	0	0	0	0	0	433		
		Contribution to Total Alternative 2A Volume	-	-	-	-	-	84.4%	87.3%	-	-	-	-	-	64.8%		
111	Donahue/ Galvez	Alternative 2A	0	360	126	0	322	0	0	0	0	105	0	0	913	B	--
		Alternative 2A Project Trips	0	324	111	0	274	0	0	0	0	89	0	0	798		
		Net New Alternative 2A Project Trips	0	214	66	0	122	0	0	0	0	31	0	0	433		
		Contribution to Total Alternative 2A Volume	-	90.0%	88.1%	-	85.1%	-	-	-	-	84.8%	-	-	87.4%		
112	Donahue/ Lockwood	Alternative 2A	0	0	202	0	0	0	0	0	0	143	0	0	345	A	--
		Alternative 2A Project Trips	0	0	198	0	0	0	0	0	0	138	0	0	336		
		Net New Alternative 2A Project Trips	0	0	162	0	0	0	0	0	0	84	0	0	246		
		Contribution to Total Alternative 2A Volume	-	-	98.0%	-	-	-	-	-	-	96.5%	-	-	97.4%		
113	Crisp/ I (Outer Ring Road)	Alternative 2A	135	0	0	0	0	0	0	587	123	0	635	0	1,480	C	--
		Alternative 2A Project Trips	114	0	0	0	0	0	0	447	93	0	472	0	1,126		
		Net New Alternative 2A Project Trips	114	0	0	0	0	0	0	317	93	0	292	0	816		
		Contribution to Total Alternative 2A Volume	84.4%	-	-	-	-	-	-	76.1%	75.6%	-	74.3%	-	76.1%		
114	Crisp/ Spear (Inner Ring Road)	Alternative 2A	114	0	0	0	0	0	0	464	123	21	521	0	1,243	C	--
		Alternative 2A Project Trips	114	0	0	0	0	0	0	354	93	0	358	0	919		
		Net New Alternative 2A Project Trips	114	0	0	0	0	0	0	224	93	0	178	0	609		
		Contribution to Total Alternative 2A Volume	100.0%	-	-	-	-	-	-	76.3%	75.6%	-	68.7%	-	73.9%		
115	Robinson/ Spear	Alternative 2A	87	29	0	7	5	68	131	158	30	0	151	50	716	C	--
		Alternative 2A Project Trips	63	28	0	7	4	63	126	135	9	0	126	50	611		
		Net New Alternative 2A Project Trips	45	20	0	5	3	54	121	127	6	0	99	35	515		
		Contribution to Total Alternative 2A Volume	72.4%	96.6%	-	100.0%	80.0%	92.6%	96.2%	85.4%	30.0%	-	83.4%	100.0%	85.3%		
116	Lockwood/ Spear	Alternative 2A	0	0	0	6	0	64	127	38	0	0	137	35	407	A	--
		Alternative 2A Project Trips	0	0	0	5	0	63	126	17	0	0	112	33	356		
		Net New Alternative 2A Project Trips	0	0	0	4	0	54	121	12	0	0	79	23	293		
		Contribution to Total Alternative 2A Volume	-	-	-	83.3%	-	98.4%	99.2%	44.7%	-	-	81.8%	94.3%	87.5%		

movement for which project contribution determined to be significant, resulting in a Project Impact

critical movements at intersections operating at LOS E or LOS F, where project contributions assessed

Contribution/Impact:

NPI = No Project Impact

NSC = No Significant Contribution. Project contribution to critical movements operating poorly less than 5 percent

SC/PI = Significant Contribution/Project Impact. Project contribution to critical movements operating poorly 5 percent or more

Freeway and Ramps Calculations

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 NB																					
Agency or Company		From/To	SF County Line (Alana/3rd St)																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	2007																					
Project Description HPS																								
<input type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	6757 veh/h	Peak-Hour Factor, PHF	0.92																					
AAADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AAADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AAADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R - 1)]	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1882 pc/h/ln	Design LOS																						
S	55.7 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	33.8 pc/mi/ln	S	mi/h																					
LOS	D	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 SB																					
Agency or Company		From/To	SF County Line (3rd St/Alana)																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	2007																					
Project Description HPS																								
<input type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	7946 veh/h	Peak-Hour Factor, PHF	0.92																					
AAADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AAADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AAADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R - 1)]	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2213 pc/h/ln	Design LOS																						
S	51.4 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	43.0 pc/mi/ln	S	mi/h																					
LOS	E	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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Application	Input	Output																							
Operational (LOS)	FFS, N, v_p	LOS, S, D																							
Design (N)	FFS, LOS, v_p	N, S, D																							
Design (v_p)	FFS, LOS, N	v_p , S, D																							
Planning (LOS)	FFS, N, AADT	LOS, S, D																							
Planning (H)	FFS, LOS, AADT	N, S, D																							
Planning (v_p)	FFS, LOS, N	v_p , S, D																							
General Information		Site Information																							
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB																						
Agency or Company		From/To	Before toll plaza																						
Date Performed	2/11/2010	Jurisdiction																							
Analysis Time Period	AM Peak	Analysis Year	2007																						
Project Description HPS																									
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)		<input type="checkbox"/> Planning Data																					
Flow Inputs																									
Volume, V	6934 veh/h	Peak-Hour Factor, PHF	0.92																						
AADT	veh/day	%Trucks and Buses, P_T	4																						
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																						
Peak-Hr Direction Prop, D		General Terrain:	Level																						
DDHV = AADT x K x D	veh/h	Grade %	Length	mi																					
Driver type adjustment	1.00	Up/Down %																							
Calculate Flow Adjustments																									
f_p	1.00	E_R	1.2																						
E_T	1.5	$f_{HV} = 1/[1+P_T(E_T-1) + P_R(E_R-1)]$	0.980																						
Speed Inputs		Calc Speed Adj and FFS																							
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																						
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																						
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																						
Number of Lanes, N	4	f_N	1.5 mi/h																						
FFS (measured)	mi/h	FFS	56.0 mi/h																						
Base free-flow Speed, BFFS	60.0 mi/h																								
LOS and Performance Measures		Design (N)																							
<u>Operational (LOS)</u>		<u>Design (N)</u>																							
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1922 pc/h/ln	Design LOS																							
S	55.6 mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																						
D = v_p / S	34.6 pc/mi/ln	S	mi/h																						
LOS	D	D = v_p / S	pc/mi/ln																						
		Required Number of Lanes, N																							
Glossary		Factor Location																							
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																						
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																						
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																						
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																						
DDHV - Directional design hour volume																									

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Application	Input	Output																							
Operational (LOS)	FFS, N, v_p	LOS, S, D																							
Design (N)	FFS, LOS, v_p	N, S, D																							
Design (v_p)	FFS, LOS, N	v_p , S, D																							
Planning (LOS)	FFS, N, AADT	LOS, S, D																							
Planning (H)	FFS, LOS, AADT	N, S, D																							
Planning (v_p)	FFS, LOS, N	v_p , S, D																							
General Information		Site Information																							
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB																						
Agency or Company		From/To	After toll plaza																						
Date Performed	2/11/2010	Jurisdiction																							
Analysis Time Period	AM Peak	Analysis Year	2007																						
Project Description HPS																									
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)		<input type="checkbox"/> Planning Data																					
Flow Inputs																									
Volume, V	8746 veh/h	Peak-Hour Factor, PHF	0.92																						
AADT	veh/day	%Trucks and Buses, P_T	4																						
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																						
Peak-Hr Direction Prop, D		General Terrain:	Level																						
DDHV = AADT x K x D	veh/h	Grade %	Length	mi																					
Driver type adjustment	1.00	Up/Down %																							
Calculate Flow Adjustments																									
f_p	1.00	E_R	1.2																						
E_T	1.5	$f_{HV} = 1/[1+P_T(E_T-1) + P_R(E_R-1)]$	0.980																						
Speed Inputs		Calc Speed Adj and FFS																							
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																						
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																						
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																						
Number of Lanes, N	4	f_N	1.5 mi/h																						
FFS (measured)	mi/h	FFS	56.0 mi/h																						
Base free-flow Speed, BFFS	60.0 mi/h																								
LOS and Performance Measures		Design (N)																							
<u>Operational (LOS)</u>		<u>Design (N)</u>																							
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2424 pc/h/ln	Design LOS																							
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																						
D = v_p / S	pc/mi/ln	S	mi/h																						
LOS	F	D = v_p / S	pc/mi/ln																						
		Required Number of Lanes, N																							
Glossary		Factor Location																							
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																						
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																						
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																						
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																						
DDHV - Directional design hour volume																									

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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst: pliao		Highway/Direction of Travel: I-280 NB																						
Agency or Company:		From/To: S. of US 101 (Alemany Off/On)																						
Date Performed: 2/11/2010		Jurisdiction:																						
Analysis Time Period: AM Peak		Analysis Year: 2007																						
Project Description: HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	7533 veh/h	Peak-Hour Factor, PHF	0.92																					
AAADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AAADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures																								
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)		Design LOS																						
v _p = 2098 pc/h/ln		v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)																						
S = 53.7 mi/h		S																						
D = v _p / S = 39.1 pc/mi/ln		D = v _p / S																						
LOS = E		Required Number of Lanes, N																						
Glossary																								
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst: pliao		Highway/Direction of Travel: I-280 SB																						
Agency or Company:		From/To: S. of US 101 (Alemany On/Off)																						
Date Performed: 2/11/2010		Jurisdiction:																						
Analysis Time Period: AM Peak		Analysis Year: 2007																						
Project Description: HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	4798 veh/h	Peak-Hour Factor, PHF	0.92																					
AAADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AAADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures																								
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)		Design LOS																						
v _p = 1336 pc/h/ln		v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)																						
S = 56.0 mi/h		S																						
D = v _p / S = 23.9 pc/mi/ln		D = v _p / S																						
LOS = C		Required Number of Lanes, N																						
Glossary																								
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 NB																					
Agency or Company		From/To	SF County Line (Alana/3rd St)																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	PM Peak	Analysis Year	2007																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	7879 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
<u>Operational (LOS)</u>		<u>Design (N)</u>																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2195 pc/h/ln	Design LOS																						
S	51.9 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	42.3 pc/mi/ln	S	mi/h																					
LOS	E	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 SB																					
Agency or Company		From/To	SF County Line (3rd St/Alana)																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	PM Peak	Analysis Year	2007																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	7120 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
<u>Operational (LOS)</u>		<u>Design (N)</u>																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1983 pc/h/ln	Design LOS																						
S	55.1 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	36.0 pc/mi/ln	S	mi/h																					
LOS	E	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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Application	Input	Output																				
Operational (LOS)	FFS, N, v_p	LOS, S, D																				
Design (N)	FFS, LOS, v_p	N, S, D																				
Design (v_p)	FFS, LOS, N	v_p , S, D																				
Planning (LOS)	FFS, N, AADT	LOS, S, D																				
Planning (H)	FFS, LOS, AADT	N, S, D																				
Planning (v_p)	FFS, LOS, N	v_p , S, D																				
General Information	Site Information																					
Analyst: pliao	Highway/Direction of Travel: SF/Oakland Bay Bridge EB																					
Agency or Company:	From/To: Before toll plaza																					
Date Performed: 2/11/2010	Jurisdiction:																					
Analysis Time Period: PM Peak	Analysis Year: 2007																					
Project Description: HPS																						
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																						
Flow Inputs																						
Volume, V: 8596 veh/h	Peak-Hour Factor, PHF: 0.92																					
AADT: veh/day	%Trucks and Buses, P_T : 4																					
Peak-Hr Prop. of AADT, K:	%RVs, P_R : 0																					
Peak-Hr Direction Prop, D:	General Terrain: Level																					
DDHV = AADT x K x D: veh/h	Grade % Length: mi																					
Driver type adjustment: 1.00	Up/Down %:																					
Calculate Flow Adjustments																						
f_p : 1.00	E_R : 1.2																					
E_T : 1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$: 0.980																					
Speed Inputs	Calc Speed Adj and FFS																					
Lane Width: 12.0 ft	f_{LW} : 0.0 mi/h																					
Rt-Shoulder Lat. Clearance: 6.0 ft	f_{LC} : 0.0 mi/h																					
Interchange Density: 1.00 I/mi	f_{ID} : 2.5 mi/h																					
Number of Lanes, N: 4	f_N : 1.5 mi/h																					
FFS (measured): mi/h	FFS: 56.0 mi/h																					
Base free-flow Speed, BFFS: 60.0 mi/h																						
LOS and Performance Measures																						
Operational (LOS)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$: 2383 pc/h/ln																						
S: mi/h																						
D = v_p / S : pc/mi/ln																						
LOS: F																						
Design (N)																						
Design LOS																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$: pc/h																						
S: mi/h																						
D = v_p / S : pc/mi/ln																						
Required Number of Lanes, N:																						
Glossary																						
N - Number of lanes	S - Speed																					
V - Hourly volume	D - Density																					
v_p - Flow rate	FFS - Free-flow speed																					
LOS - Level of service	BFFS - Base free-flow speed																					
DDHV - Directional design hour volume																						

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Application	Input	Output																				
Operational (LOS)	FFS, N, v_p	LOS, S, D																				
Design (N)	FFS, LOS, v_p	N, S, D																				
Design (v_p)	FFS, LOS, N	v_p , S, D																				
Planning (LOS)	FFS, N, AADT	LOS, S, D																				
Planning (H)	FFS, LOS, AADT	N, S, D																				
Planning (v_p)	FFS, LOS, N	v_p , S, D																				
General Information	Site Information																					
Analyst: pliao	Highway/Direction of Travel: SF/Oakland Bay Bridge WB																					
Agency or Company:	From/To: After toll plaza																					
Date Performed: 2/11/2010	Jurisdiction:																					
Analysis Time Period: PM Peak	Analysis Year: 2007																					
Project Description: HPS																						
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																						
Flow Inputs																						
Volume, V: 7345 veh/h	Peak-Hour Factor, PHF: 0.92																					
AADT: veh/day	%Trucks and Buses, P_T : 4																					
Peak-Hr Prop. of AADT, K:	%RVs, P_R : 0																					
Peak-Hr Direction Prop, D:	General Terrain: Level																					
DDHV = AADT x K x D: veh/h	Grade % Length: mi																					
Driver type adjustment: 1.00	Up/Down %:																					
Calculate Flow Adjustments																						
f_p : 1.00	E_R : 1.2																					
E_T : 1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$: 0.980																					
Speed Inputs	Calc Speed Adj and FFS																					
Lane Width: 12.0 ft	f_{LW} : 0.0 mi/h																					
Rt-Shoulder Lat. Clearance: 6.0 ft	f_{LC} : 0.0 mi/h																					
Interchange Density: 1.00 I/mi	f_{ID} : 2.5 mi/h																					
Number of Lanes, N: 4	f_N : 1.5 mi/h																					
FFS (measured): mi/h	FFS: 56.0 mi/h																					
Base free-flow Speed, BFFS: 60.0 mi/h																						
LOS and Performance Measures																						
Operational (LOS)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$: 2036 pc/h/ln																						
S: 54.6 mi/h																						
D = v_p / S : 37.3 pc/mi/ln																						
LOS: E																						
Design (N)																						
Design LOS																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$: pc/h																						
S: mi/h																						
D = v_p / S : pc/mi/ln																						
Required Number of Lanes, N:																						
Glossary																						
N - Number of lanes	S - Speed																					
V - Hourly volume	D - Density																					
v_p - Flow rate	FFS - Free-flow speed																					
LOS - Level of service	BFFS - Base free-flow speed																					
DDHV - Directional design hour volume																						

BASIC FREEWAY SEGMENTS WORKSHEET																						
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Application	Input	Output																				
Operational (LOS)	FFS, N , v_p	LOS, S, D																				
Design (N)	FFS, LOS, v_p	N, S, D																				
Design (v_p)	FFS, LOS, N	v_p , S, D																				
Planning (LOS)	FFS, N, AADT	LOS, S, D																				
Planning (H)	FFS, LOS, AADT	N, S, D																				
Planning (v_p)	FFS, LOS, N	v_p , S, D																				
General Information		Site Information																				
Analyst	pliao	Highway/Direction of Travel	I-280 NB																			
Agency or Company		From/To	S. of US 101 (Alemany Off/On)																			
Date Performed	2/11/2010	Jurisdiction																				
Analysis Time Period	PM Peak	Analysis Year	2007																			
Project Description HPS																						
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																						
Flow Inputs																						
Volume, V	4811 veh/h	Peak-Hour Factor, PHF	0.92																			
AADT	veh/day	%Trucks and Buses, P_T	5																			
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																			
Peak-Hr Direction Prop, D		General Terrain:	Level																			
DDHV = AADT x K x D	veh/h	Grade	% Length mi																			
Driver type adjustment	1.00	Up/Down %																				
Calculate Flow Adjustments																						
f_p	1.00	E_R	1.2																			
E_T	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976																			
Speed Inputs		Calc Speed Adj and FFS																				
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																			
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																			
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																			
Number of Lanes, N	4	f_N	1.5 mi/h																			
FFS (measured)	mi/h	FFS	56.0 mi/h																			
Base free-flow Speed, BFFS	60.0 mi/h																					
LOS and Performance Measures		Design (N)																				
Operational (LOS)		Design (N)																				
$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	1340 pc/h/ln	Design LOS																				
S	56.0 mi/h	$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																			
D = v_p / S	23.9 pc/mi/ln	S	mi/h																			
LOS	C	D = v_p / S	pc/mi/ln																			
		Required Number of Lanes, N																				
Glossary		Factor Location																				
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																			
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																			
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																			
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																			
DDHV - Directional design hour volume																						

BASIC FREEWAY SEGMENTS WORKSHEET																						
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Application	Input	Output																				
Operational (LOS)	FFS, N , v_p	LOS, S, D																				
Design (N)	FFS, LOS, v_p	N, S, D																				
Design (v_p)	FFS, LOS, N	v_p , S, D																				
Planning (LOS)	FFS, N, AADT	LOS, S, D																				
Planning (H)	FFS, LOS, AADT	N, S, D																				
Planning (v_p)	FFS, LOS, N	v_p , S, D																				
General Information		Site Information																				
Analyst	pliao	Highway/Direction of Travel	I-280 SB																			
Agency or Company		From/To	S. of US 101 (Alemany On/Off)																			
Date Performed	2/11/2010	Jurisdiction																				
Analysis Time Period	PM Peak	Analysis Year	2007																			
Project Description HPS																						
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																						
Flow Inputs																						
Volume, V	8346 veh/h	Peak-Hour Factor, PHF	0.92																			
AADT	veh/day	%Trucks and Buses, P_T	5																			
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																			
Peak-Hr Direction Prop, D		General Terrain:	Level																			
DDHV = AADT x K x D	veh/h	Grade	% Length mi																			
Driver type adjustment	1.00	Up/Down %																				
Calculate Flow Adjustments																						
f_p	1.00	E_R	1.2																			
E_T	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976																			
Speed Inputs		Calc Speed Adj and FFS																				
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																			
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																			
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																			
Number of Lanes, N	4	f_N	1.5 mi/h																			
FFS (measured)	mi/h	FFS	56.0 mi/h																			
Base free-flow Speed, BFFS	60.0 mi/h																					
LOS and Performance Measures		Design (N)																				
Operational (LOS)		Design (N)																				
$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	2325 pc/h/ln	Design LOS																				
S	56.0 mi/h	$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																			
D = v_p / S	41.0 pc/mi/ln	S	mi/h																			
LOS	F	D = v_p / S	pc/mi/ln																			
		Required Number of Lanes, N																				
Glossary		Factor Location																				
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																			
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																			
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																			
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																			
DDHV - Directional design hour volume																						

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 NB
Agency or Company		From/To	SF County Line (Alana/3rd St)
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	Sunday PM	Analysis Year	2007
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

Flow Inputs			
Volume, V	4414 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T-1) + P_R(E_R-1))$	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>			
$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	1229 pc/h/ln	Design LOS	
S	56.0 mi/h	$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	21.9 pc/mi/ln	S	mi/h
LOS	C	$D = v_p / S$	pc/mi/ln
Required Number of Lanes, N			

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

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Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 SB
Agency or Company		From/To	SF County Line (3rd St/Alana)
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	Sunday PM	Analysis Year	2007
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

Flow Inputs			
Volume, V	4295 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T-1) + P_R(E_R-1))$	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>			
$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	1196 pc/h/ln	Design LOS	
S	56.0 mi/h	$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	21.4 pc/mi/ln	S	mi/h
LOS	C	$D = v_p / S$	pc/mi/ln
Required Number of Lanes, N			

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

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BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , v_p	LOS, S , D	Design (N)	FFS, LOS, v_p	N , S , D	Design (v_p)	FFS, LOS, N	v_p , S , D	Planning (LOS)	FFS, N , AADT	LOS, S , D	Planning (H)	FFS, LOS, AADT	N , S , D	Planning (v_p)	FFS, LOS, N	v_p , S , D
Application	Input	Output																						
Operational (LOS)	FFS, N , v_p	LOS, S , D																						
Design (N)	FFS, LOS, v_p	N , S , D																						
Design (v_p)	FFS, LOS, N	v_p , S , D																						
Planning (LOS)	FFS, N , AADT	LOS, S , D																						
Planning (H)	FFS, LOS, AADT	N , S , D																						
Planning (v_p)	FFS, LOS, N	v_p , S , D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB																					
Agency or Company		From/To	Before toll plaza																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	2007																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																						
Flow Inputs																								
Volume, V	7772 veh/h	Peak-Hour Factor, PHF	0.92																					
AAADT	veh/day	%Trucks and Buses, P_T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2154 pc/h/ln	Design LOS																						
f_p		$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
S	52.7 mi/h	f_p																						
$D = v_p / S$	40.9 pc/mi/ln	S	mi/h																					
LOS	E	$D = v_p / S$	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N , v_p	LOS, S , D																						
Design (N)	FFS, LOS, v_p	N , S , D																						
Design (v_p)	FFS, LOS, N	v_p , S , D																						
Planning (LOS)	FFS, N , AADT	LOS, S , D																						
Planning (H)	FFS, LOS, AADT	N , S , D																						
Planning (v_p)	FFS, LOS, N	v_p , S , D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB																					
Agency or Company		From/To	After toll plaza																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	2007																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																						
Flow Inputs																								
Volume, V	6808 veh/h	Peak-Hour Factor, PHF	0.92																					
AAADT	veh/day	%Trucks and Buses, P_T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1887 pc/h/ln	Design LOS																						
f_p		$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
S	55.7 mi/h	f_p																						
$D = v_p / S$	33.9 pc/mi/ln	S	mi/h																					
LOS	D	$D = v_p / S$	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																									
		<table border="0"> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </table>			Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																							
Operational (LOS)	FFS, N, v _p	LOS, S, D																							
Design (N)	FFS, LOS, v _p	N, S, D																							
Design (v _p)	FFS, LOS, N	v _p , S, D																							
Planning (LOS)	FFS, N, AADT	LOS, S, D																							
Planning (H)	FFS, LOS, AADT	N, S, D																							
Planning (v _p)	FFS, LOS, N	v _p , S, D																							
General Information		Site Information																							
Analyst	pliao	Highway/Direction of Travel	I-280 NB																						
Agency or Company		From/To	S. of US 101 (Alemany Off/On)																						
Date Performed	2/11/2010	Jurisdiction																							
Analysis Time Period	Sunday PM	Analysis Year	2007																						
Project Description HPS		<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																							
Flow Inputs																									
Volume, V	3127 veh/h	Peak-Hour Factor, PHF	0.92																						
AADT	veh/day	%Trucks and Buses, P _T	5																						
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																						
Peak-Hr Direction Prop, D		General Terrain:	Level																						
DDHV = AADT x K x D	veh/h	Grade %	Length	mi																					
Driver type adjustment	1.00	Up/Down %																							
Calculate Flow Adjustments																									
f _p	1.00	E _R	1.2																						
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																						
Speed Inputs		Calc Speed Adj and FFS																							
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																						
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																						
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																						
Number of Lanes, N	4	f _N	1.5 mi/h																						
FFS (measured)	mi/h	FFS	56.0 mi/h																						
Base free-flow Speed, BFFS	60.0 mi/h																								
LOS and Performance Measures		Design (N)																							
<u>Operational (LOS)</u>		<u>Design (N)</u>																							
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	871 pc/h/ln	Design LOS																							
f _p		v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																						
S	56.0 mi/h	f _p																							
D = v _p / S	15.6 pc/mi/ln	S	mi/h																						
LOS	B	D = v _p / S	pc/mi/ln																						
		Required Number of Lanes, N																							
Glossary		Factor Location																							
N - Number of lanes	S - Speed	E _R - Exhibits23-8, 23-10	f _{LW} - Exhibit 23-4																						
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																						
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																						
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																						
DDHV - Directional design hour volume																									

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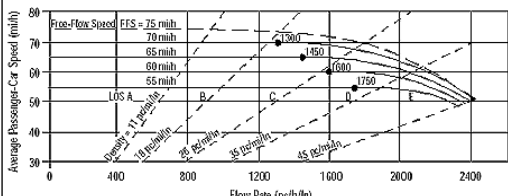
BASIC FREEWAY SEGMENTS WORKSHEET																									
		<table border="0"> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </table>			Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																							
Operational (LOS)	FFS, N, v _p	LOS, S, D																							
Design (N)	FFS, LOS, v _p	N, S, D																							
Design (v _p)	FFS, LOS, N	v _p , S, D																							
Planning (LOS)	FFS, N, AADT	LOS, S, D																							
Planning (H)	FFS, LOS, AADT	N, S, D																							
Planning (v _p)	FFS, LOS, N	v _p , S, D																							
General Information		Site Information																							
Analyst	pliao	Highway/Direction of Travel	I-280 SB																						
Agency or Company		From/To	S. of US 101 (Alemany On/Off)																						
Date Performed	2/11/2010	Jurisdiction																							
Analysis Time Period	Sunday PM	Analysis Year	2007																						
Project Description HPS		<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																							
Flow Inputs																									
Volume, V	5425 veh/h	Peak-Hour Factor, PHF	0.92																						
AADT	veh/day	%Trucks and Buses, P _T	5																						
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																						
Peak-Hr Direction Prop, D		General Terrain:	Level																						
DDHV = AADT x K x D	veh/h	Grade %	Length	mi																					
Driver type adjustment	1.00	Up/Down %																							
Calculate Flow Adjustments																									
f _p	1.00	E _R	1.2																						
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																						
Speed Inputs		Calc Speed Adj and FFS																							
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																						
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																						
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																						
Number of Lanes, N	4	f _N	1.5 mi/h																						
FFS (measured)	mi/h	FFS	56.0 mi/h																						
Base free-flow Speed, BFFS	60.0 mi/h																								
LOS and Performance Measures		Design (N)																							
<u>Operational (LOS)</u>		<u>Design (N)</u>																							
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1511 pc/h/ln	Design LOS																							
f _p		v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																						
S	56.0 mi/h	f _p																							
D = v _p / S	27.0 pc/mi/ln	S	mi/h																						
LOS	D	D = v _p / S	pc/mi/ln																						
		Required Number of Lanes, N																							
Glossary		Factor Location																							
N - Number of lanes	S - Speed	E _R - Exhibits23-8, 23-10	f _{LW} - Exhibit 23-4																						
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																						
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																						
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																						
DDHV - Directional design hour volume																									

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BASIC FREEWAY SEGMENTS WORKSHEET



Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 NB
Agency or Company		From/To	SF County Line (Alana/3rd St)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	No Project
Project Description	HPS		
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data			

Flow Inputs

Volume, V	8775 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade	% Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.976

Speed Inputs

Lane Width	12.0	ft
Rt-Shoulder Lat. Clearance	6.0	ft
Interchange Density	1.00	1/mi
Number of Lanes, N	4	
FFS (measured)		mi/h
Base free-flow Speed, BFFS	60.0	mi/h

Calc Speed Adj and FFS

f _{LW}	0.0	mi/h
f _{LC}	0.0	mi/h
f _{ID}	2.5	mi/h
f _N	1.5	mi/h
FFS	56.0	mi/h

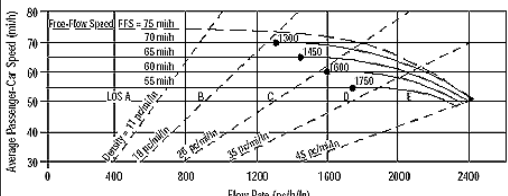
LOS and Performance Measures

Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2444	pc/h/ln	pc/h
S		mi/h	mi/h
D = v _p / S		pc/mi/ln	pc/mi/ln
LOS	F		
Required Number of Lanes, N			

Glossary

N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET



Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 SB
Agency or Company		From/To	SF County Line (3rd St/Alana)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	No Project
Project Description	HPS		
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data			

Flow Inputs

Volume, V	10361 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade	% Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.976

Speed Inputs

Lane Width	12.0	ft
Rt-Shoulder Lat. Clearance	6.0	ft
Interchange Density	1.00	1/mi
Number of Lanes, N	4	
FFS (measured)		mi/h
Base free-flow Speed, BFFS	60.0	mi/h

Calc Speed Adj and FFS

f _{LW}	0.0	mi/h
f _{LC}	0.0	mi/h
f _{ID}	2.5	mi/h
f _N	1.5	mi/h
FFS	56.0	mi/h

LOS and Performance Measures

Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2886	pc/h/ln	pc/h
S		mi/h	mi/h
D = v _p / S		pc/mi/ln	pc/mi/ln
LOS	F		
Required Number of Lanes, N			

Glossary

N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, V _p	LOS, S, D
Design (N)	FFS, LOS, V _p	N, S, D
Design (V _p)	FFS, LOS, N	V _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (V _p)	FFS, LOS, N	V _p , S, D

General Information

Analyst	pliao
Agency or Company	
Date Performed	2/11/2010
Analysis Time Period	AM Peak

Project Description: HPS

Oper.(LOS) Des.(N) Planning Data

Flow Inputs

Volume, V	8378 veh/h
AADT	veh/day
Peak-Hr Prop. of AADT, K	
Peak-Hr Direction Prop, D	
DDHV = AADT x K x D	veh/h
Driver type adjustment	1.00

Calculate Flow Adjustments

f _p	1.00
E _R	
E _T	1.5
f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980

Speed Inputs

Lane Width	12.0	ft
Rt-Shoulder Lat. Clearance	6.0	ft
Interchange Density	1.00	I/mi
Number of Lanes, N	4	
FFS (measured)		mi/h
Base free-flow Speed, BFFS	60.0	mi/h

LOS and Performance Measures

Operational (LOS)

V _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2322	pc/h/ln
S		mi/h
D = v _p / S		pc/mi/ln
LOS	F	

Glossary

N	- Number of lanes	S	- Speed
V	- Hourly volume	D	- Density
v _p	- Flow rate	FFS	- Free-flow speed
LOS	- Level of service	BFFS	- Base free-flow speed
DDHV	- Directional design hour volume		

Site Information

Highway/Direction of Travel	SF/Oakland Bay Bridge EB
From/To	Before toll plaza
Jurisdiction	
Analysis Year	No Project

Flow Inputs

Volume, V	8378 veh/h
AADT	veh/day
Peak-Hr Factor, PHF	0.92
%Trucks and Buses, P _T	4
%RVs, P _R	0
General Terrain: Level	
Grade %	Length mi
Up/Down %	

Calculate Flow Adjustments

f _p	1.00
E _R	1.2
E _T	1.5
f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980

Speed Inputs

Lane Width	12.0	ft
Rt-Shoulder Lat. Clearance	6.0	ft
Interchange Density	1.00	I/mi
Number of Lanes, N	4	
FFS (measured)		mi/h
Base free-flow Speed, BFFS	60.0	mi/h

Design (N)

Design (N)

Design LOS		
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)		pc/h
S		mi/h
D = v _p / S		pc/mi/ln
Required Number of Lanes, N		

Factor Location

E _R	- Exhibits 23-8, 23-10	f _{LW}	- Exhibit 23-4
E _T	- Exhibits 23-8, 23-10, 23-11	f _{LC}	- Exhibit 23-5
f _p	- Page 23-12	f _N	- Exhibit 23-6
LOS, S, FFS, V _p	- Exhibits 23-2, 23-3	f _{TD}	- Exhibit 23-7

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, V _p	LOS, S, D
Design (N)	FFS, LOS, V _p	N, S, D
Design (V _p)	FFS, LOS, N	V _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (V _p)	FFS, LOS, N	V _p , S, D

General Information

Analyst	pliao
Agency or Company	
Date Performed	2/11/2010
Analysis Time Period	AM Peak

Project Description: HPS

Oper.(LOS) Des.(N) Planning Data

Flow Inputs

Volume, V	9962 veh/h
AADT	veh/day
Peak-Hr Prop. of AADT, K	
Peak-Hr Direction Prop, D	
DDHV = AADT x K x D	veh/h
Driver type adjustment	1.00

Calculate Flow Adjustments

f _p	1.00
E _R	
E _T	1.5
f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980

Speed Inputs

Lane Width	12.0	ft
Rt-Shoulder Lat. Clearance	6.0	ft
Interchange Density	1.00	I/mi
Number of Lanes, N	4	
FFS (measured)		mi/h
Base free-flow Speed, BFFS	60.0	mi/h

LOS and Performance Measures

Operational (LOS)

V _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2761	pc/h/ln
S		mi/h
D = v _p / S		pc/mi/ln
LOS	F	

Glossary

N	- Number of lanes	S	- Speed
V	- Hourly volume	D	- Density
v _p	- Flow rate	FFS	- Free-flow speed
LOS	- Level of service	BFFS	- Base free-flow speed
DDHV	- Directional design hour volume		

Site Information

Highway/Direction of Travel	SF/Oakland Bay Bridge WB
From/To	After toll plaza
Jurisdiction	
Analysis Year	No Project

Flow Inputs

Volume, V	9962 veh/h
AADT	veh/day
Peak-Hr Factor, PHF	0.92
%Trucks and Buses, P _T	4
%RVs, P _R	0
General Terrain: Level	
Grade %	Length mi
Up/Down %	

Calculate Flow Adjustments

f _p	1.00
E _R	1.2
E _T	1.5
f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980

Speed Inputs

Lane Width	12.0	ft
Rt-Shoulder Lat. Clearance	6.0	ft
Interchange Density	1.00	I/mi
Number of Lanes, N	4	
FFS (measured)		mi/h
Base free-flow Speed, BFFS	60.0	mi/h

Design (N)

Design (N)

Design LOS		
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)		pc/h
S		mi/h
D = v _p / S		pc/mi/ln
Required Number of Lanes, N		

Factor Location

E _R	- Exhibits 23-8, 23-10	f _{LW}	- Exhibit 23-4
E _T	- Exhibits 23-8, 23-10, 23-11	f _{LC}	- Exhibit 23-5
f _p	- Page 23-12	f _N	- Exhibit 23-6
LOS, S, FFS, V _p	- Exhibits 23-2, 23-3	f _{TD}	- Exhibit 23-7

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information

Analyst: pliao
 Agency or Company:
 Date Performed: 2/16/2010
 Analysis Time Period: AM Peak

Site Information

Highway/Direction of Travel: I-280 NB
 From/To: S. of US 101 (Alemany Off/On)
 Jurisdiction:
 Analysis Year: No Project

Oper.(LOS)

Des.(N)

Planning Data

Flow Inputs

Volume, V	8138 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.976

Speed Inputs

Lane Width: 12.0 ft
 Rt-Shoulder Lat. Clearance: 6.0 ft
 Interchange Density: 1.00 I/mi
 Number of Lanes, N: 4
 FFS (measured): mi/h
 Base free-flow Speed, BFFS: 60.0 mi/h

Calc Speed Adj and FFS

f_{LW}: 0.0 mi/h
 f_{LC}: 0.0 mi/h
 f_{ID}: 2.5 mi/h
 f_N: 1.5 mi/h
 FFS: 56.0 mi/h

LOS and Performance Measures

Operational (LOS)
 v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p) = 2267 pc/h/ln
 S = mi/h
 D = v_p / S = pc/mi/ln
 LOS = F

Design (N)

Design (N)
 Design LOS
 v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p) = pc/h
 S = mi/h
 D = v_p / S = pc/mi/ln
 Required Number of Lanes, N

Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information

Analyst: pliao
 Agency or Company:
 Date Performed: 2/16/2010
 Analysis Time Period: AM Peak

Site Information

Highway/Direction of Travel: I-280 SB
 From/To: S. of US 101 (Alemany On/Off)
 Jurisdiction:
 Analysis Year: No Project

Oper.(LOS)

Des.(N)

Planning Data

Flow Inputs

Volume, V	6868 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.976

Speed Inputs

Lane Width: 12.0 ft
 Rt-Shoulder Lat. Clearance: 6.0 ft
 Interchange Density: 1.00 I/mi
 Number of Lanes, N: 4
 FFS (measured): mi/h
 Base free-flow Speed, BFFS: 60.0 mi/h

Calc Speed Adj and FFS

f_{LW}: 0.0 mi/h
 f_{LC}: 0.0 mi/h
 f_{ID}: 2.5 mi/h
 f_N: 1.5 mi/h
 FFS: 56.0 mi/h

LOS and Performance Measures

Operational (LOS)
 v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p) = 1913 pc/h/ln
 S = 55.6 mi/h
 D = v_p / S = 34.4 pc/mi/ln
 LOS = D

Design (N)

Design (N)
 Design LOS
 v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p) = pc/h
 S = mi/h
 D = v_p / S = pc/mi/ln
 Required Number of Lanes, N

Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 NB
Agency or Company		From/To	SF County Line (Alana/3rd St)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	No Project
Project Description	HPS		
<input checked="checked" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

Flow Inputs			
Volume, V	9754 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade % Length	mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2717 pc/h/ln	Design LOS	
f _p		v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
S	mi/h	f _p	
D = v _p / S	pc/mi/ln	S	mi/h
LOS	F	D = v _p / S	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 SB
Agency or Company		From/To	SF County Line (3rd St/Alana)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	No Project
Project Description	HPS		
<input checked="checked" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

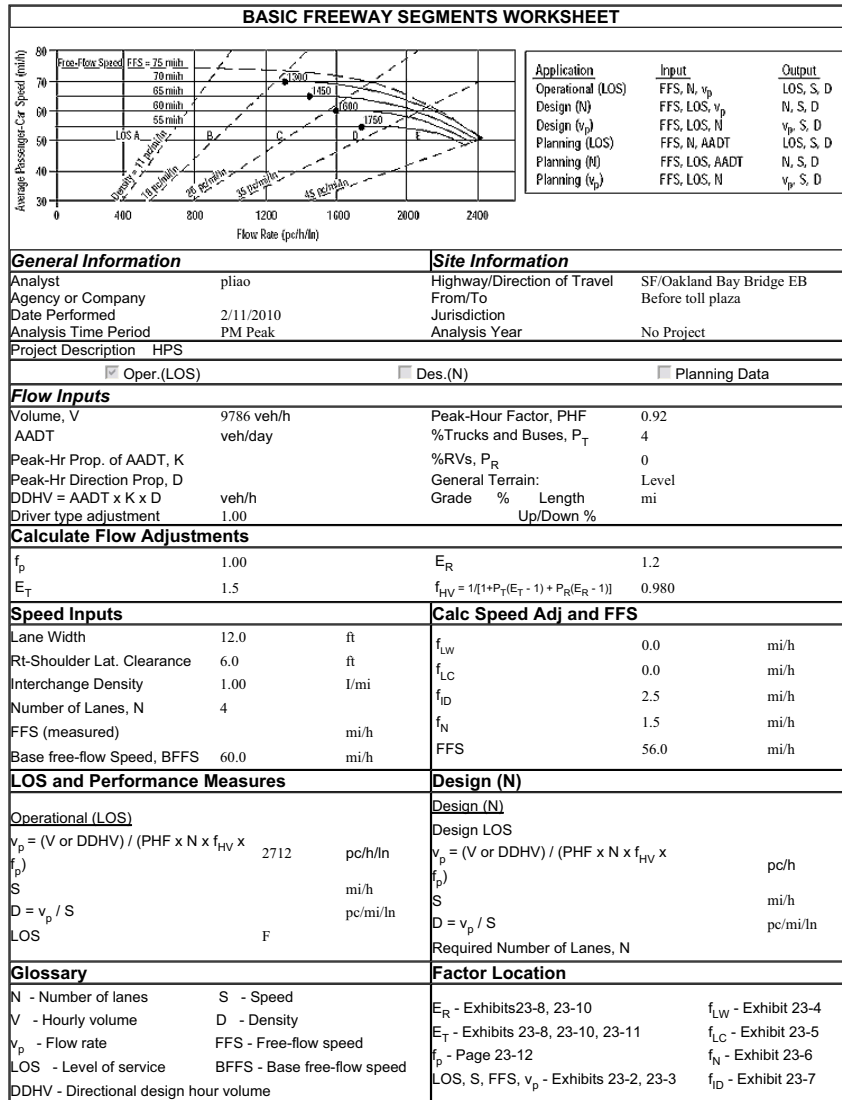
Flow Inputs			
Volume, V	9694 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade % Length	mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2700 pc/h/ln	Design LOS	
f _p		v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
S	mi/h	f _p	
D = v _p / S	pc/mi/ln	S	mi/h
LOS	F	D = v _p / S	pc/mi/ln
		Required Number of Lanes, N	

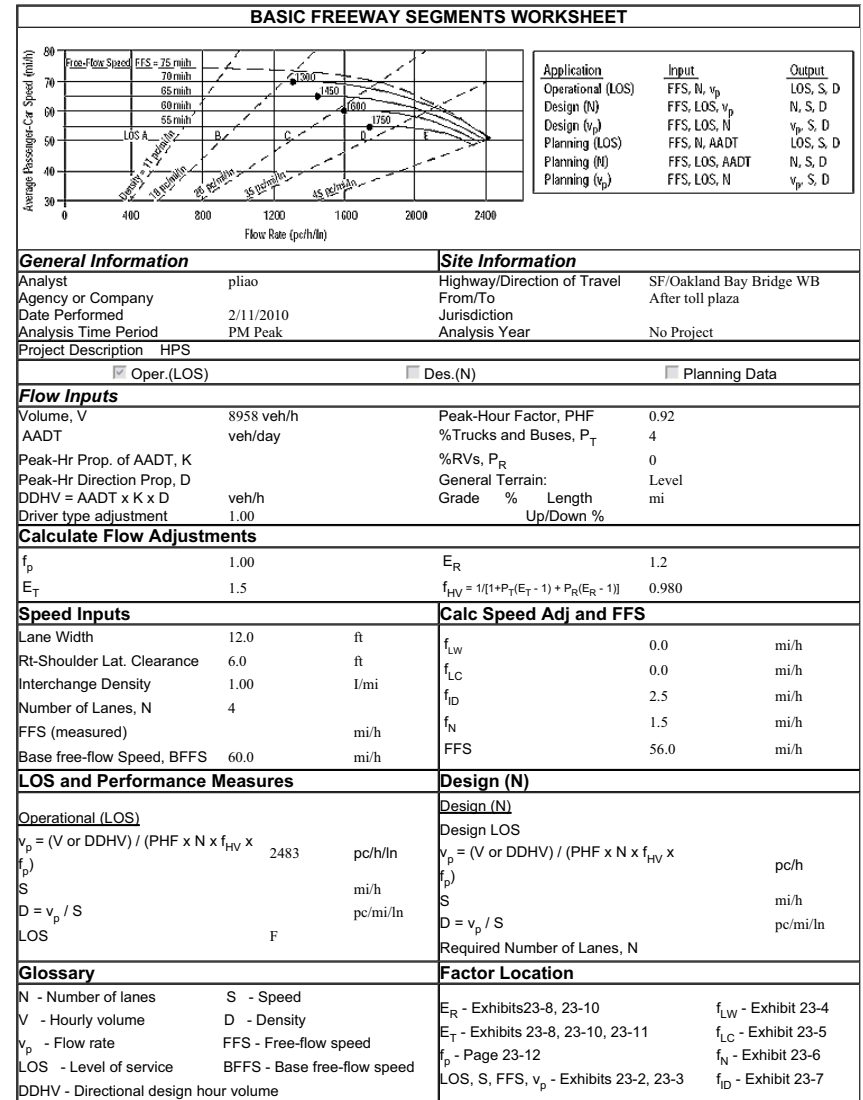
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			



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BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 NB
Agency or Company		From/To	S. of US 101 (Alemany Off/On)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	No Project
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	6652 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)		Design LOS	
	1853 pc/h/ln		v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)
f _p			pc/h
S	55.8 mi/h		mi/h
D = v _p / S	33.2 pc/mi/ln		D = v _p / S
LOS	D		pc/mi/ln
		Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

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BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 SB
Agency or Company		From/To	S. of US 101 (Alemany On/Off)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	No Project
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	9086 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)		Design LOS	
	2531 pc/h/ln		v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)
f _p			pc/h
S	mi/h		mi/h
D = v _p / S	33.2 pc/mi/ln		D = v _p / S
LOS	F		pc/mi/ln
		Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

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BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information

Analyst: pliao
 Agency or Company:
 Date Performed: 2/16/2010
 Analysis Time Period: Sunday PM

Site Information

Highway/Direction of Travel: US 101 NB
 From/To: SF County Line (Alana/3rd St)
 Jurisdiction:
 Analysis Year: No Project

Oper.(LOS)

Des.(N)

Planning Data

Flow Inputs

Volume, V	6126 veh/h	Peak-Hour Factor, PHF	0.92
AACT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AACT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AACT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T - 1) + P _R (E _R - 1))	0.976

Speed Inputs

Lane Width	12.0	ft
Rt-Shoulder Lat. Clearance	6.0	ft
Interchange Density	1.00	I/mi
Number of Lanes, N	4	
FFS (measured)		mi/h
Base free-flow Speed, BFFS	60.0	mi/h

Calc Speed Adj and FFS

f _{LW}	0.0	mi/h
f _{LC}	0.0	mi/h
f _{ID}	2.5	mi/h
f _N	1.5	mi/h
FFS	56.0	mi/h

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p) = 1706 pc/h/ln

S = 56.0 mi/h

D = v_p / S = 30.5 pc/mi/ln

LOS = D

Design (N)

Design LOS

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p) = pc/h

S = mi/h

D = v_p / S = pc/mi/ln

Required Number of Lanes, N

Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

f_{LW} - Exhibit 23-4
 f_{LC} - Exhibit 23-5
 f_N - Exhibit 23-6
 f_{ID} - Exhibit 23-7

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information

Analyst: pliao
 Agency or Company:
 Date Performed: 2/11/2010
 Analysis Time Period: Sunday PM

Site Information

Highway/Direction of Travel: US 101 SB
 From/To: SF County Line (3rd St/Alana)
 Jurisdiction:
 Analysis Year: No Project

Oper.(LOS)

Des.(N)

Planning Data

Flow Inputs

Volume, V	6392 veh/h	Peak-Hour Factor, PHF	0.92
AACT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AACT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AACT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T - 1) + P _R (E _R - 1))	0.976

Speed Inputs

Lane Width	12.0	ft
Rt-Shoulder Lat. Clearance	6.0	ft
Interchange Density	1.00	I/mi
Number of Lanes, N	4	
FFS (measured)		mi/h
Base free-flow Speed, BFFS	60.0	mi/h

Calc Speed Adj and FFS

f _{LW}	0.0	mi/h
f _{LC}	0.0	mi/h
f _{ID}	2.5	mi/h
f _N	1.5	mi/h
FFS	56.0	mi/h

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p) = 1780 pc/h/ln

S = 56.0 mi/h

D = v_p / S = 31.8 pc/mi/ln

LOS = D

Design (N)

Design LOS

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p) = pc/h

S = mi/h

D = v_p / S = pc/mi/ln

Required Number of Lanes, N

Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

f_{LW} - Exhibit 23-4
 f_{LC} - Exhibit 23-5
 f_N - Exhibit 23-6
 f_{ID} - Exhibit 23-7

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst: pliao		Highway/Direction of Travel: SF/Oakland Bay Bridge EB																						
Agency or Company:		From/To: Before toll plaza																						
Date Performed: 2/11/2010		Jurisdiction:																						
Analysis Time Period: Sunday PM		Analysis Year: No Project																						
Project Description: HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	8950 veh/h	Peak-Hour Factor, PHF	0.92																					
AAADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AAADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AAADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2481 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst: pliao		Highway/Direction of Travel: SF/Oakland Bay Bridge WB																						
Agency or Company:		From/To: After toll plaza																						
Date Performed: 2/11/2010		Jurisdiction:																						
Analysis Time Period: Sunday PM		Analysis Year: No Project																						
Project Description: HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	8333 veh/h	Peak-Hour Factor, PHF	0.92																					
AAADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AAADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AAADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2310 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET			
		Application Operational (LOS) FFS, N, v_p Design (N) FFS, LOS, v_p Design (v_p) FFS, LOS, N Planning (LOS) FFS, N, AADT Planning (H) FFS, LOS, AADT Planning (v_p) FFS, LOS, N	Output LOS, S, D N, S, D v_p , S, D LOS, S, D N, S, D v_p , S, D
General Information		Site Information	
Analyst pliao		Highway/Direction of Travel I-280 NB	
Agency or Company		From/To S. of US 101 (Alemayn Off/On)	
Date Performed 2/16/2010		Jurisdiction	
Analysis Time Period Sunday PM		Analysis Year No Project	
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	4338 veh/h	Peak-Hour Factor, PHF	0.92
AAADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1208 pc/h/ln	Design LOS	
f_p		$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
S	56.0 mi/h	f_p	
D = v_p / S	21.6 pc/mi/ln	S	mi/h
LOS	C	D = v_p / S	pc/mi/ln
		Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET			
		Application Operational (LOS) FFS, N, v_p Design (N) FFS, LOS, v_p Design (v_p) FFS, LOS, N Planning (LOS) FFS, N, AADT Planning (H) FFS, LOS, AADT Planning (v_p) FFS, LOS, N	Output LOS, S, D N, S, D v_p , S, D LOS, S, D N, S, D v_p , S, D
General Information		Site Information	
Analyst pliao		Highway/Direction of Travel I-280 SB	
Agency or Company		From/To S. of US 101 (Alemayn On/Off)	
Date Performed 2/16/2010		Jurisdiction	
Analysis Time Period Sunday PM		Analysis Year No Project	
Project Description HPS			
<input type="checkbox"/> Oper.(LOS) <input checked="" type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	5924 veh/h	Peak-Hour Factor, PHF	0.92
AAADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1650 pc/h/ln	Design LOS	
f_p		$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
S	56.0 mi/h	f_p	
D = v_p / S	29.5 pc/mi/ln	S	mi/h
LOS	D	D = v_p / S	pc/mi/ln
		Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N , v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information

Analyst: pliao
 Agency or Company: pliao
 Date Performed: 2/16/2010
 Analysis Time Period: Gameday
 Project Description: HPS

Site Information

Highway/Direction of Travel: US 101 NB
 From/To: SF County Line (Alana/3rd St)
 Jurisdiction:
 Analysis Year: No Project

Flow Inputs

Volume, V: 10936 veh/h
 AADT: veh/day
 Peak-Hr Prop. of AADT, K:
 Peak-Hr Direction Prop, D:
 DDHV = AADT x K x D
 Driver type adjustment: 1.00

Calculate Flow Adjustments

f_p : 1.00
 E_T : 1.5
 E_R : 1.2
 $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$: 0.976

Speed Inputs

Lane Width: 12.0 ft
 Rt-Shoulder Lat. Clearance: 6.0 ft
 Interchange Density: 1.00 I/mi
 Number of Lanes, N: 4
 FFS (measured): mi/h
 Base free-flow Speed, BFFS: 60.0 mi/h

Calc Speed Adj and FFS

f_{LW} : 0.0 mi/h
 f_{LC} : 0.0 mi/h
 f_{ID} : 2.5 mi/h
 f_N : 1.5 mi/h
 FFS: 56.0 mi/h

LOS and Performance Measures

Operational (LOS)
 $v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$: 3046 pc/h/ln
 S : mi/h
 $D = v_p / S$: pc/mi/ln
 LOS: F
 Required Number of Lanes, N:

Design (N)

Design (N)
 Design LOS
 $v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$: pc/h
 f_p :
 S : mi/h
 $D = v_p / S$: pc/mi/ln

Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

f_{LW} - Exhibit 23-4
 f_{LC} - Exhibit 23-5
 f_N - Exhibit 23-6
 f_{ID} - Exhibit 23-7

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information

Analyst: pliao
 Agency or Company: pliao
 Date Performed: 2/11/2010
 Analysis Time Period: Sunday PM
 Project Description: HPS

Site Information

Highway/Direction of Travel: US 101 SB
 From/To: SF County Line (3rd St/Alana)
 Jurisdiction:
 Analysis Year: No Project

Flow Inputs

Volume, V: 9512 veh/h
 AADT: veh/day
 Peak-Hr Prop. of AADT, K:
 Peak-Hr Direction Prop, D:
 DDHV = AADT x K x D
 Driver type adjustment: 1.00

Calculate Flow Adjustments

f_p : 1.00
 E_T : 1.5
 E_R : 1.2
 $f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$: 0.976

Speed Inputs

Lane Width: 12.0 ft
 Rt-Shoulder Lat. Clearance: 6.0 ft
 Interchange Density: 1.00 I/mi
 Number of Lanes, N: 4
 FFS (measured): mi/h
 Base free-flow Speed, BFFS: 60.0 mi/h

Calc Speed Adj and FFS

f_{LW} : 0.0 mi/h
 f_{LC} : 0.0 mi/h
 f_{ID} : 2.5 mi/h
 f_N : 1.5 mi/h
 FFS: 56.0 mi/h

LOS and Performance Measures

Operational (LOS)
 $v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$: 2649 pc/h/ln
 S : mi/h
 $D = v_p / S$: pc/mi/ln
 LOS: F
 Required Number of Lanes, N:

Design (N)

Design (N)
 Design LOS
 $v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$: pc/h
 f_p :
 S : mi/h
 $D = v_p / S$: pc/mi/ln

Glossary

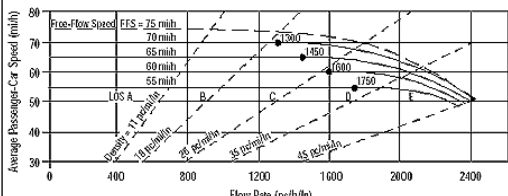
N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

f_{LW} - Exhibit 23-4
 f_{LC} - Exhibit 23-5
 f_N - Exhibit 23-6
 f_{ID} - Exhibit 23-7

BASIC FREEWAY SEGMENTS WORKSHEET



Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information

Analyst: pliao
 Agency or Company: pliao
 Date Performed: 2/11/2010
 Analysis Time Period: Sunday PM
 Project Description: HPS

Site Information

Highway/Direction of Travel: SF/Oakland Bay Bridge EB
 From/To: Before toll plaza
 Jurisdiction:
 Analysis Year: No Project

Oper.(LOS)

Des.(N)

Planning Data

Flow Inputs

Volume, V	9720 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	4
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade	% Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980

Speed Inputs

Lane Width	12.0	ft
Rt-Shoulder Lat. Clearance	6.0	ft
Interchange Density	1.00	I/mi
Number of Lanes, N	4	
FFS (measured)		mi/h
Base free-flow Speed, BFFS	60.0	mi/h

Calc Speed Adj and FFS

f _{LW}	0.0	mi/h
f _{LC}	0.0	mi/h
f _{ID}	2.5	mi/h
f _N	1.5	mi/h
FFS	56.0	mi/h

LOS and Performance Measures

Operational (LOS)

v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2694	pc/h/ln
S		mi/h
D = v _p / S		pc/mi/ln
LOS	F	

Design (N)

Design LOS	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	
f _p	
S	
D = v _p / S	
Required Number of Lanes, N	

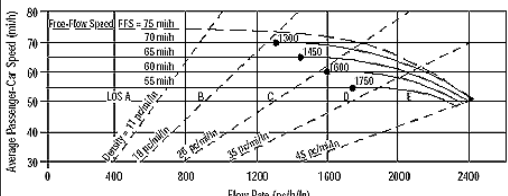
Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
f _p - Page 23-12	f _N - Exhibit 23-6
LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7

BASIC FREEWAY SEGMENTS WORKSHEET



Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information

Analyst: pliao
 Agency or Company: pliao
 Date Performed: 2/16/2010
 Analysis Time Period: Sunday PM
 Project Description: HPS

Site Information

Highway/Direction of Travel: I-280 SB
 From/To: S. of US 101 (Alemany On/Off)
 Jurisdiction:
 Analysis Year: No Project

Oper.(LOS)

Des.(N)

Planning Data

Flow Inputs

Volume, V	7014 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade	% Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976

Speed Inputs

Lane Width	12.0	ft
Rt-Shoulder Lat. Clearance	6.0	ft
Interchange Density	1.00	I/mi
Number of Lanes, N	4	
FFS (measured)		mi/h
Base free-flow Speed, BFFS	60.0	mi/h

Calc Speed Adj and FFS

f _{LW}	0.0	mi/h
f _{LC}	0.0	mi/h
f _{ID}	2.5	mi/h
f _N	1.5	mi/h
FFS	56.0	mi/h

LOS and Performance Measures

Operational (LOS)

v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1954	pc/h/ln
S	55.3	mi/h
D = v _p / S	35.3	pc/mi/ln
LOS	E	

Design (N)

Design LOS	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	
f _p	
S	
D = v _p / S	
Required Number of Lanes, N	

Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
f _p - Page 23-12	f _N - Exhibit 23-6
LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N , v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 NB
Agency or Company		From/To	SF County Line (Alana/3rd St)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	No Project (EIR)
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data	

Flow Inputs			
Volume, V	8745 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976

Speed Inputs				Calc Speed Adj and FFS			
Lane Width	12.0	ft	f_{LW}	0.0	mi/h		
Rt-Shoulder Lat. Clearance	6.0	ft	f_{LC}	0.0	mi/h		
Interchange Density	1.00	I/mi	f_{ID}	2.5	mi/h		
Number of Lanes, N	4		f_N	1.5	mi/h		
FFS (measured)		mi/h	FFS	56.0	mi/h		
Base free-flow Speed, BFFS	60.0	mi/h					

LOS and Performance Measures			Design (N)		
Operational (LOS)			Design (N)		
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2436	pc/h/ln	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$		pc/h
S		mi/h	S		mi/h
$D = v_p / S$		pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	F		Required Number of Lanes, N		

Glossary			Factor Location		
N - Number of lanes	S - Speed		E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4	
V - Hourly volume	D - Density		E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5	
v_p - Flow rate	FFS - Free-flow speed		f_p - Page 23-12	f_N - Exhibit 23-6	
LOS - Level of service	BFFS - Base free-flow speed		LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7	
DDHV - Directional design hour volume					

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 SB
Agency or Company		From/To	SF County Line (3rd St/Alana)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	No Project (EIR)
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data	

Flow Inputs			
Volume, V	10361 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

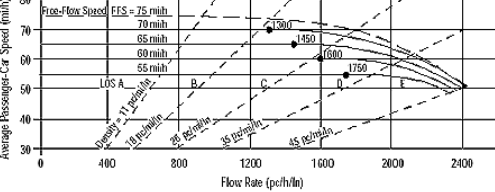
Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976

Speed Inputs				Calc Speed Adj and FFS			
Lane Width	12.0	ft	f_{LW}	0.0	mi/h		
Rt-Shoulder Lat. Clearance	6.0	ft	f_{LC}	0.0	mi/h		
Interchange Density	1.00	I/mi	f_{ID}	2.5	mi/h		
Number of Lanes, N	4		f_N	1.5	mi/h		
FFS (measured)		mi/h	FFS	56.0	mi/h		
Base free-flow Speed, BFFS	60.0	mi/h					

LOS and Performance Measures			Design (N)		
Operational (LOS)			Design (N)		
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2886	pc/h/ln	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$		pc/h
S		mi/h	S		mi/h
$D = v_p / S$		pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	F		Required Number of Lanes, N		

Glossary			Factor Location		
N - Number of lanes	S - Speed		E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4	
V - Hourly volume	D - Density		E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5	
v_p - Flow rate	FFS - Free-flow speed		f_p - Page 23-12	f_N - Exhibit 23-6	
LOS - Level of service	BFFS - Base free-flow speed		LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7	
DDHV - Directional design hour volume					

BASIC FREEWAY SEGMENTS WORKSHEET



Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB
Agency or Company		From/To	Before toll plaza
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	No Project (EIR)
Project Description HPS			

<input type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)		<input type="checkbox"/> Planning Data	
Flow Inputs					
Volume, V	8362 veh/h	Peak-Hour Factor, PHF	0.92		
AADT	veh/day	%Trucks and Buses, P_T	4		
Peak-Hr Prop. of AADT, K		%RVs, P_R	0		
Peak-Hr Direction Prop, D		General Terrain:	Level		
DDHV = AADT x K x D	veh/h	Grade	% Length	mi	
Driver type adjustment	1.00		Up/Down %		

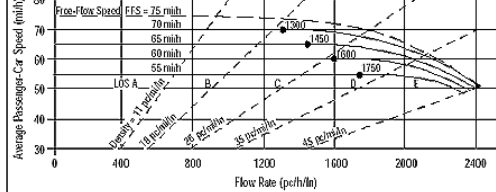
Calculate Flow Adjustments					
f_p	1.00	E_R	1.2		
E_T	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.980		

Speed Inputs			Calc Speed Adj and FFS		
Lane Width	12.0	ft	f_{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f_{LC}	0.0	mi/h
Interchange Density	1.00	I/mi	f_{ID}	2.5	mi/h
Number of Lanes, N	4		f_N	1.5	mi/h
FFS (measured)		mi/h	FFS	56.0	mi/h
Base free-flow Speed, BFFS	60.0	mi/h			

LOS and Performance Measures			Design (N)		
Operational (LOS)			Design (N)		
$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	2318	pc/h/ln	Design LOS		
S		mi/h	$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$		pc/h
$D = v_p / S$		pc/mi/ln	S		mi/h
LOS	F		$D = v_p / S$		pc/mi/ln
			Required Number of Lanes, N		

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET



Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB
Agency or Company		From/To	After toll plaza
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	No Project (EIR)
Project Description HPS			

<input type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)		<input type="checkbox"/> Planning Data	
Flow Inputs					
Volume, V	9947 veh/h	Peak-Hour Factor, PHF	0.92		
AADT	veh/day	%Trucks and Buses, P_T	4		
Peak-Hr Prop. of AADT, K		%RVs, P_R	0		
Peak-Hr Direction Prop, D		General Terrain:	Level		
DDHV = AADT x K x D	veh/h	Grade	% Length	mi	
Driver type adjustment	1.00		Up/Down %		

Calculate Flow Adjustments					
f_p	1.00	E_R	1.2		
E_T	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.980		

Speed Inputs			Calc Speed Adj and FFS		
Lane Width	12.0	ft	f_{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f_{LC}	0.0	mi/h
Interchange Density	1.00	I/mi	f_{ID}	2.5	mi/h
Number of Lanes, N	4		f_N	1.5	mi/h
FFS (measured)		mi/h	FFS	56.0	mi/h
Base free-flow Speed, BFFS	60.0	mi/h			

LOS and Performance Measures			Design (N)		
Operational (LOS)			Design (N)		
$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	2757	pc/h/ln	Design LOS		
S		mi/h	$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$		pc/h
$D = v_p / S$		pc/mi/ln	S		mi/h
LOS	F		$D = v_p / S$		pc/mi/ln
			Required Number of Lanes, N		

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v_p	LOS, S, D	Design (N)	FFS, LOS, v_p	N, S, D	Design (v_p)	FFS, LOS, N	v_p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v_p)	FFS, LOS, N	v_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information Analyst: pliao Agency or Company: pliao Date Performed: 2/16/2010 Analysis Time Period: AM Peak Project Description: HPS		Site Information Highway/Direction of Travel: I-280 NB From/To: S. of US 101 (Alemany Off/On) Jurisdiction: pliao Analysis Year: No Project (EIR)																						
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs Volume, V: 8138 veh/h Peak-Hour Factor, PHF: 0.92 AADT: veh/day %Trucks and Buses, P_T : 5 Peak-Hr Prop. of AADT, K: %RVs, P_R : 0 Peak-Hr Direction Prop, D: General Terrain: Level DDHV = AADT x K x D Grade % Length: mi Driver type adjustment: 1.00 Up/Down %:																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 $f_{HV} = 1/(1 + P_T(E_T - 1) + P_R(E_R - 1))$: 0.976																								
Speed Inputs Lane Width: 12.0 ft Rt-Shoulder Lat. Clearance: 6.0 ft Interchange Density: 1.00 I/mi Number of Lanes, N: 4 FFS (measured): mi/h Base free-flow Speed, BFFS: 60.0 mi/h		Calc Speed Adj and FFS f_{LW} : 0.0 mi/h f_{LC} : 0.0 mi/h f_{ID} : 2.5 mi/h f_N : 1.5 mi/h FFS: 56.0 mi/h																						
LOS and Performance Measures Operational (LOS) $v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$: 2267 pc/h/ln S : mi/h $D = v_p / S$: pc/mi/ln LOS: F Design (N) Design LOS $v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$: pc/h f_p : pc/h S : mi/h $D = v_p / S$: pc/mi/ln Required Number of Lanes, N:																								
Glossary N - Number of lanes S - Speed V - Hourly volume D - Density v_p - Flow rate FFS - Free-flow speed LOS - Level of service BFFS - Base free-flow speed DDHV - Directional design hour volume		Factor Location E_R - Exhibits 23-8, 23-10 f_{LW} - Exhibit 23-4 E_T - Exhibits 23-8, 23-10, 23-11 f_{LC} - Exhibit 23-5 f_p - Page 23-12 f_N - Exhibit 23-6 LOS, S, FFS, v_p - Exhibits 23-2, 23-3 f_{ID} - Exhibit 23-7																						

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v_p	LOS, S, D	Design (N)	FFS, LOS, v_p	N, S, D	Design (v_p)	FFS, LOS, N	v_p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v_p)	FFS, LOS, N	v_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information Analyst: pliao Agency or Company: pliao Date Performed: 2/16/2010 Analysis Time Period: AM Peak Project Description: HPS		Site Information Highway/Direction of Travel: I-280 SB From/To: S. of US 101 (Alemany On/Off) Jurisdiction: pliao Analysis Year: No Project																						
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs Volume, V: 6868 veh/h Peak-Hour Factor, PHF: 0.92 AADT: veh/day %Trucks and Buses, P_T : 5 Peak-Hr Prop. of AADT, K: %RVs, P_R : 0 Peak-Hr Direction Prop, D: General Terrain: Level DDHV = AADT x K x D Grade % Length: mi Driver type adjustment: 1.00 Up/Down %:																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 $f_{HV} = 1/(1 + P_T(E_T - 1) + P_R(E_R - 1))$: 0.976																								
Speed Inputs Lane Width: 12.0 ft Rt-Shoulder Lat. Clearance: 6.0 ft Interchange Density: 1.00 I/mi Number of Lanes, N: 4 FFS (measured): mi/h Base free-flow Speed, BFFS: 60.0 mi/h		Calc Speed Adj and FFS f_{LW} : 0.0 mi/h f_{LC} : 0.0 mi/h f_{ID} : 2.5 mi/h f_N : 1.5 mi/h FFS: 56.0 mi/h																						
LOS and Performance Measures Operational (LOS) $v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$: 1913 pc/h/ln S : 55.6 mi/h $D = v_p / S$: 34.4 pc/mi/ln LOS: D Design (N) Design LOS $v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$: pc/h f_p : pc/h S : mi/h $D = v_p / S$: pc/mi/ln Required Number of Lanes, N:																								
Glossary N - Number of lanes S - Speed V - Hourly volume D - Density v_p - Flow rate FFS - Free-flow speed LOS - Level of service BFFS - Base free-flow speed DDHV - Directional design hour volume		Factor Location E_R - Exhibits 23-8, 23-10 f_{LW} - Exhibit 23-4 E_T - Exhibits 23-8, 23-10, 23-11 f_{LC} - Exhibit 23-5 f_p - Page 23-12 f_N - Exhibit 23-6 LOS, S, FFS, v_p - Exhibits 23-2, 23-3 f_{ID} - Exhibit 23-7																						

BASIC FREEWAY SEGMENTS WORKSHEET

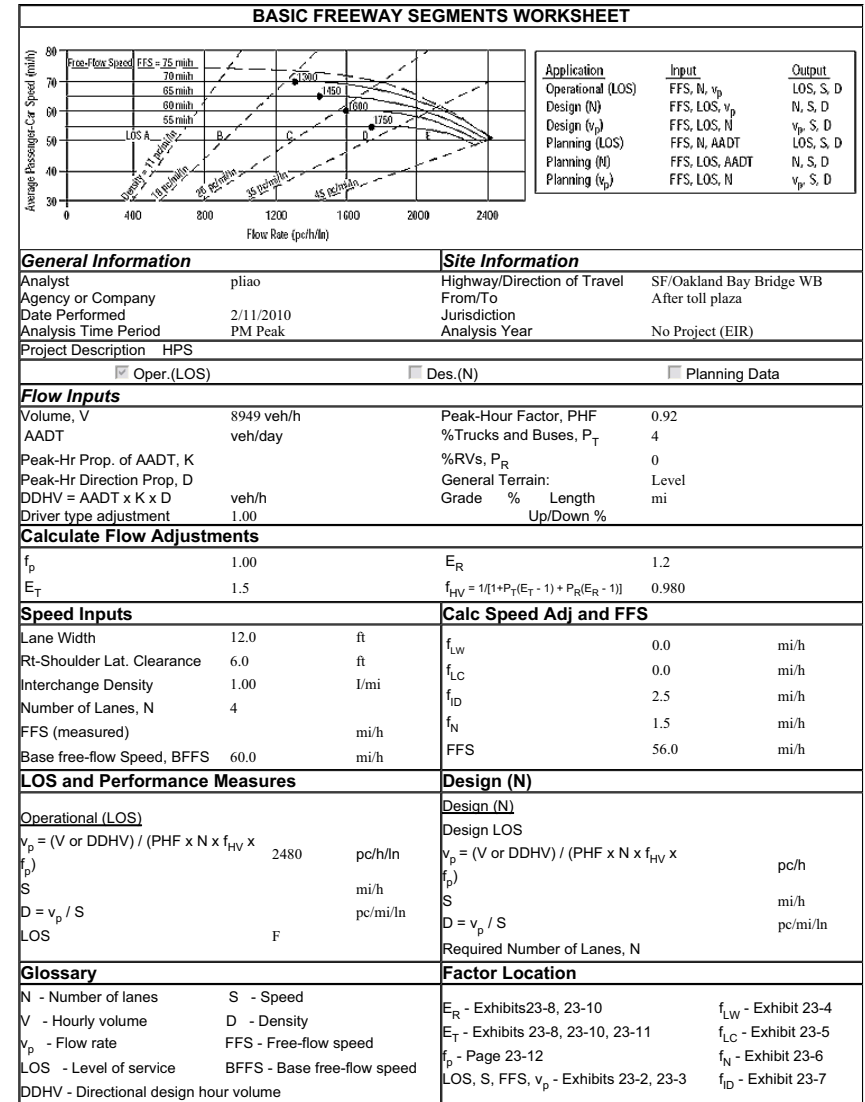
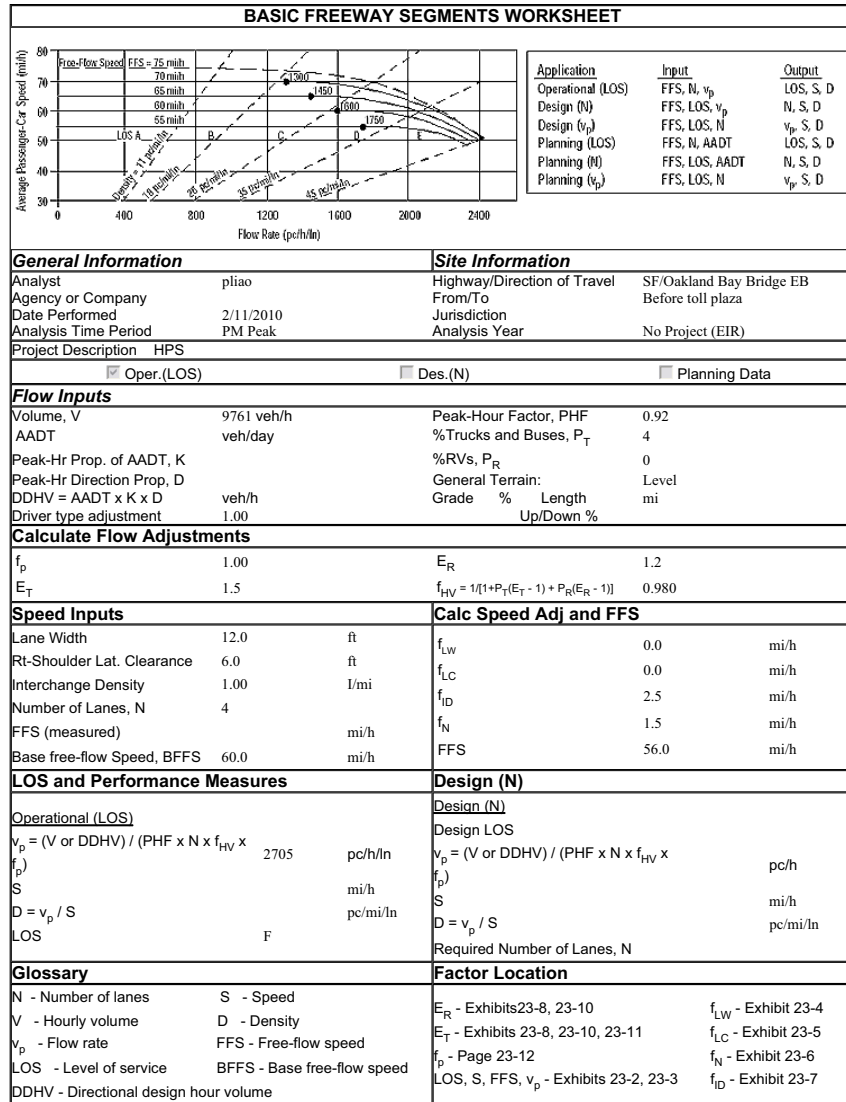
Application	Input	Output
Operational (LOS)	FFS, N , v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

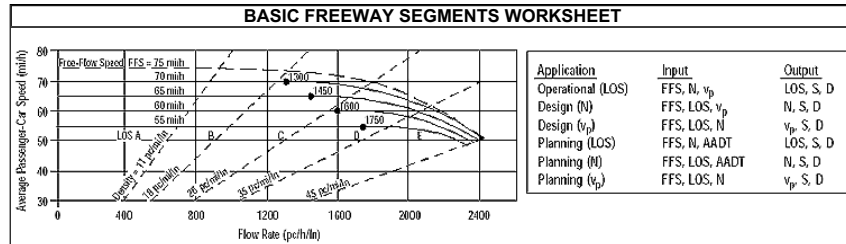
General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 NB
Agency or Company		From/To	SF County Line (Alana/3rd St)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	No Project (EIR)
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data	
Flow Inputs			
Volume, V	9738 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade	mi
Driver type adjustment	1.00	% Length Up/Down %	
Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	2712 pc/h/ln	Design LOS	
S	mi/h	$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	pc/mi/ln	S	mi/h
LOS	F	$D = v_p / S$	pc/mi/ln
		Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 SB
Agency or Company		From/To	SF County Line (3rd St/Alana)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	No Project (EIR)
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data	
Flow Inputs			
Volume, V	9694 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade	mi
Driver type adjustment	1.00	% Length Up/Down %	
Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	2700 pc/h/ln	Design LOS	
S	mi/h	$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	pc/mi/ln	S	mi/h
LOS	F	$D = v_p / S$	pc/mi/ln
		Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			





General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 NB
Agency or Company		From/To	S. of US 101 (Alemany Off/On)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	No Project
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

Flow Inputs

Volume, V	6652 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain: Level	
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

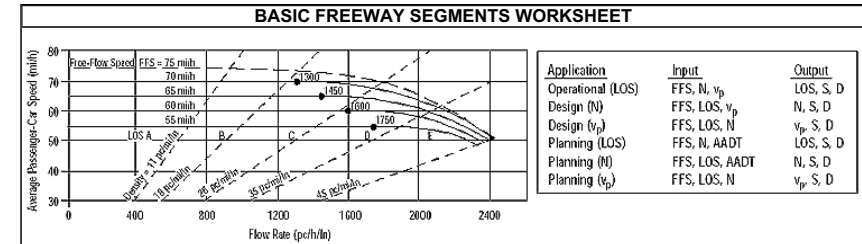
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1)+P _R (E _R -1)]	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1853 pc/h/ln	Design LOS	
S	55.8 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
D = v _p / S	33.2 pc/mi/ln	S	mi/h
LOS	D	D = v _p / S	pc/mi/ln
Required Number of Lanes, N		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

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General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 SB
Agency or Company		From/To	S. of US 101 (Alemany On/Off)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	No Project
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

Flow Inputs

Volume, V	9086 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain: Level	
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1)+P _R (E _R -1)]	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

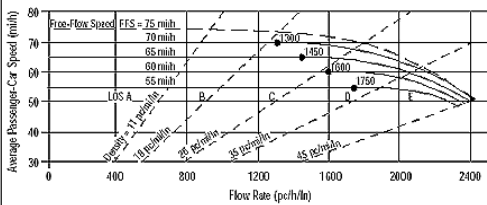
LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2531 pc/h/ln	Design LOS	
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
D = v _p / S	pc/mi/ln	S	mi/h
LOS	F	D = v _p / S	pc/mi/ln
Required Number of Lanes, N		Required Number of Lanes, N	

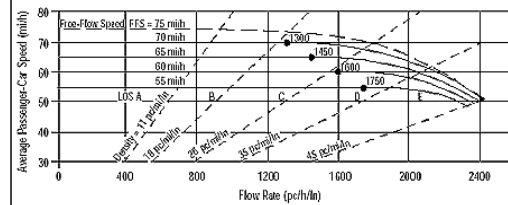
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

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BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v_p	LOS, S, D	Design (N)	FFS, LOS, v_p	N, S, D	Design (v_p)	FFS, LOS, N	v_p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v_p)	FFS, LOS, N	v_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 NB																					
Agency or Company		From/To	SF County Line (Alana/3rd St)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	No Project (EIR)																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
Flow Inputs																								
Volume, V	6096 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade % Length	mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1698 pc/h/ln	Design LOS																						
f_p		$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
S	56.0 mi/h	f_p																						
$D = v_p / S$	30.3 pc/mi/ln	S	mi/h																					
LOS	D	$D = v_p / S$	pc/mi/ln																					
Required Number of Lanes, N																								
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 SB																					
Agency or Company		From/To	SF County Line (3rd St/Alana)																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	No Project (EIR)																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
Flow Inputs																								
Volume, V	6392 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade % Length	mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1780 pc/h/ln	Design LOS																						
f_p		$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
S	56.0 mi/h	f_p																						
$D = v_p / S$	31.8 pc/mi/ln	S	mi/h																					
LOS	D	$D = v_p / S$	pc/mi/ln																					
Required Number of Lanes, N																								
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																							
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Application	Input	Output																					
Operational (LOS)	FFS, N, v _p	LOS, S, D																					
Design (N)	FFS, LOS, v _p	N, S, D																					
Design (v _p)	FFS, LOS, N	v _p , S, D																					
Planning (LOS)	FFS, N, AADT	LOS, S, D																					
Planning (H)	FFS, LOS, AADT	N, S, D																					
Planning (v _p)	FFS, LOS, N	v _p , S, D																					
General Information		Site Information																					
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB																				
Agency or Company		From/To	Before toll plaza																				
Date Performed	2/11/2010	Jurisdiction																					
Analysis Time Period	Sunday PM	Analysis Year	No Project (EIR)																				
Project Description	HPS																						
<input checked="checked" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																					
<input type="checkbox"/> Planning Data																							
Flow Inputs																							
Volume, V	8934 veh/h	Peak-Hour Factor, PHF	0.92																				
AADT	veh/day	%Trucks and Buses, P _T	4																				
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																				
Peak-Hr Direction Prop, D		General Terrain:	Level																				
DDHV = AADT x K x D	veh/h	Grade % Length	mi																				
Driver type adjustment	1.00	Up/Down %																					
Calculate Flow Adjustments																							
f _p	1.00	E _R	1.2																				
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980																				
Speed Inputs		Calc Speed Adj and FFS																					
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																				
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																				
Interchange Density	1.00 l/mi	f _{ID}	2.5 mi/h																				
Number of Lanes, N	4	f _N	1.5 mi/h																				
FFS (measured)	mi/h	FFS	56.0 mi/h																				
Base free-flow Speed, BFFS	60.0 mi/h																						
LOS and Performance Measures		Design (N)																					
<u>Operational (LOS)</u>		<u>Design (N)</u>																					
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2476 pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																				
S	mi/h	S	mi/h																				
D = v _p / S	pc/mi/ln	D = v _p / S	pc/mi/ln																				
LOS	F	Required Number of Lanes, N																					
Glossary		Factor Location																					
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																				
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																				
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																				
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																				
DDHV - Directional design hour volume																							

BASIC FREEWAY SEGMENTS WORKSHEET																							
		<table border="1"><thead><tr><th>Application</th><th>Input</th><th>Output</th></tr></thead><tbody><tr><td>Operational (LOS)</td><td>FFS, N, v_p</td><td>LOS, S, D</td></tr><tr><td>Design (N)</td><td>FFS, LOS, v_p</td><td>N, S, D</td></tr><tr><td>Design (v_p)</td><td>FFS, LOS, N</td><td>v_p, S, D</td></tr><tr><td>Planning (LOS)</td><td>FFS, N, AADT</td><td>LOS, S, D</td></tr><tr><td>Planning (H)</td><td>FFS, LOS, AADT</td><td>N, S, D</td></tr><tr><td>Planning (v_p)</td><td>FFS, LOS, N</td><td>v_p, S, D</td></tr></tbody></table>	Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																					
Operational (LOS)	FFS, N, v _p	LOS, S, D																					
Design (N)	FFS, LOS, v _p	N, S, D																					
Design (v _p)	FFS, LOS, N	v _p , S, D																					
Planning (LOS)	FFS, N, AADT	LOS, S, D																					
Planning (H)	FFS, LOS, AADT	N, S, D																					
Planning (v _p)	FFS, LOS, N	v _p , S, D																					
General Information		Site Information																					
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB																				
Agency or Company		From/To	After toll plaza																				
Date Performed	2/11/2010	Jurisdiction																					
Analysis Time Period	Sunday PM	Analysis Year	No Project (EIR)																				
Project Description	HPS																						
<input checked="checked" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																					
<input type="checkbox"/> Planning Data																							
Flow Inputs																							
Volume, V	8318 veh/h	Peak-Hour Factor, PHF	0.92																				
AADT	veh/day	%Trucks and Buses, P _T	4																				
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																				
Peak-Hr Direction Prop, D		General Terrain:	Level																				
DDHV = AADT x K x D	veh/h	Grade % Length	mi																				
Driver type adjustment	1.00	Up/Down %																					
Calculate Flow Adjustments																							
f _p	1.00	E _R	1.2																				
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980																				
Speed Inputs		Calc Speed Adj and FFS																					
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																				
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																				
Interchange Density	1.00 l/mi	f _{ID}	2.5 mi/h																				
Number of Lanes, N	4	f _N	1.5 mi/h																				
FFS (measured)	mi/h	FFS	56.0 mi/h																				
Base free-flow Speed, BFFS	60.0 mi/h																						
LOS and Performance Measures		Design (N)																					
<u>Operational (LOS)</u>		<u>Design (N)</u>																					
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2306 pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																				
S	mi/h	S	mi/h																				
D = v _p / S	pc/mi/ln	D = v _p / S	pc/mi/ln																				
LOS	F	Required Number of Lanes, N																					
Glossary		Factor Location																					
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																				
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																				
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																				
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																				
DDHV - Directional design hour volume																							

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Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 NB
Agency or Company		From/To	S. of US 101 (Alemany Off/On)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	Sunday PM	Analysis Year	No Project (EIR)
Project Description HPS			

Flow Inputs			
Volume, V	4338 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade	% Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T-1) + P_R(E_R-1))$	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1208 pc/h/ln	Design LOS	
S	56.0 mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	21.6 pc/mi/ln	S	mi/h
LOS	C	$D = v_p / S$	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 SB
Agency or Company		From/To	S. of US 101 (Alemany On/Off)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	Sunday PM	Analysis Year	No Project (EIR)
Project Description HPS			

Flow Inputs			
Volume, V	5924 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade	% Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T-1) + P_R(E_R-1))$	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1650 pc/h/ln	Design LOS	
S	56.0 mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	29.5 pc/mi/ln	S	mi/h
LOS	D	$D = v_p / S$	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information				Site Information			
Analyst	pliao	Highway/Direction of Travel	US 101 NB				
Agency or Company		From/To	SF County Line (Alana/3rd St)				
Date Performed	2/16/2010	Jurisdiction					
Analysis Time Period	Gameday	Analysis Year	No Project (EIR)				
Project Description HPS							
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data					

Flow Inputs			
Volume, V	10906 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T-1) + P_R(E_R-1))$	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	3038 pc/h/ln	Design LOS	
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	pc/mi/ln	S	mi/h
LOS	F	$D = v_p / S$	pc/mi/ln
Required Number of Lanes, N		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information				Site Information			
Analyst	pliao	Highway/Direction of Travel	US 101 SB				
Agency or Company		From/To	SF County Line (3rd St/Alana)				
Date Performed	2/11/2010	Jurisdiction					
Analysis Time Period	Gameday	Analysis Year	No Project (EIR)				
Project Description HPS							
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data					

Flow Inputs			
Volume, V	9512 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T-1) + P_R(E_R-1))$	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2649 pc/h/ln	Design LOS	
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	pc/mi/ln	S	mi/h
LOS	F	$D = v_p / S$	pc/mi/ln
Required Number of Lanes, N		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

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Application	Input	Output																																																																																																																																																											
Operational (LOS)	FFS, N , v_p	LOS, S, D																																																																																																																																																											
Design (N)	FFS, LOS, v_p	N , S, D																																																																																																																																																											
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BASIC FREEWAY SEGMENTS WORKSHEET

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DDHV = AADT x K x D	veh/h	Grade	mi																																																																																																																																																										
Driver type adjustment	1.00	Length	mi																																																																																																																																																										
		Up/Down %																																																																																																																																																											
Calculate Flow Adjustments																																																																																																																																																													
f_p	1.00	E_R	1.2																																																																																																																																																										
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976																																																																																																																																																										
Speed Inputs		Calc Speed Adj and FFS																																																																																																																																																											
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																																																																																																																																																										
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																																																																																																																																																										
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																																																																																																																																																										
Number of Lanes, N	4	f_N	1.5 mi/h																																																																																																																																																										
FFS (measured)	mi/h	FFS	56.0 mi/h																																																																																																																																																										
Base free-flow Speed, BFFS	60.0 mi/h																																																																																																																																																												
LOS and Performance Measures		Design (N)																																																																																																																																																											
<u>Operational (LOS)</u>		<u>Design (N)</u>																																																																																																																																																											
$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	1954 pc/h/ln	Design LOS																																																																																																																																																											
S	55.3 mi/h	$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																																																																																																																																																										
$D = v_p / S$	35.3 pc/mi/ln	S	mi/h																																																																																																																																																										
LOS	E	$D = v_p / S$	pc/mi/ln																																																																																																																																																										
		Required Number of Lanes, N																																																																																																																																																											
Glossary		Factor Location																																																																																																																																																											
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																																																																																																																																																										
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																																																																																																																																																										
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																																																																																																																																																										
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																																																																																																																																																										
DDHV - Directional design hour volume																																																																																																																																																													

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BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 NB																					
Agency or Company		From/To	SF County Line (Alana/3rd St)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	ALT 1																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	9020 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2512 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 SB																					
Agency or Company		From/To	SF County Line (3rd St/Alana)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	ALT 1																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	10710 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2983 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information

Analyst: pliao
 Agency or Company:
 Date Performed: 2/11/2010
 Analysis Time Period: AM Peak

Site Information

Highway/Direction of Travel: SF/Oakland Bay Bridge EB
 From/To: Before toll plaza
 Jurisdiction:
 Analysis Year: ALT 1

Oper.(LOS)

Des.(N)

Planning Data

Flow Inputs

Volume, V	8682 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	4
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980

Speed Inputs

Lane Width: 12.0 ft
 Rt-Shoulder Lat. Clearance: 6.0 ft
 Interchange Density: 1.00 I/mi
 Number of Lanes, N: 4
 FFS (measured): mi/h
 Base free-flow Speed, BFFS: 60.0 mi/h

Calc Speed Adj and FFS

f_{LW}: 0.0 mi/h
 f_{LC}: 0.0 mi/h
 f_{ID}: 2.5 mi/h
 f_N: 1.5 mi/h
 FFS: 56.0 mi/h

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p) = 2406 pc/h/ln
 S = mi/h
 D = v_p / S = pc/mi/ln
 LOS = F

Design (N)

Design LOS
 v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p) = pc/h
 S = mi/h
 D = v_p / S = pc/mi/ln
 Required Number of Lanes, N

Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information

Analyst: pliao
 Agency or Company:
 Date Performed: 2/11/2010
 Analysis Time Period: AM Peak

Site Information

Highway/Direction of Travel: SF/Oakland Bay Bridge WB
 From/To: After toll plaza
 Jurisdiction:
 Analysis Year: ALT 1

Oper.(LOS)

Des.(N)

Planning Data

Flow Inputs

Volume, V	10107 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	4
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980

Speed Inputs

Lane Width: 12.0 ft
 Rt-Shoulder Lat. Clearance: 6.0 ft
 Interchange Density: 1.00 I/mi
 Number of Lanes, N: 4
 FFS (measured): mi/h
 Base free-flow Speed, BFFS: 60.0 mi/h

Calc Speed Adj and FFS

f_{LW}: 0.0 mi/h
 f_{LC}: 0.0 mi/h
 f_{ID}: 2.5 mi/h
 f_N: 1.5 mi/h
 FFS: 56.0 mi/h

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p) = 2801 pc/h/ln
 S = mi/h
 D = v_p / S = pc/mi/ln
 LOS = F

Design (N)

Design LOS
 v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p) = pc/h
 S = mi/h
 D = v_p / S = pc/mi/ln
 Required Number of Lanes, N

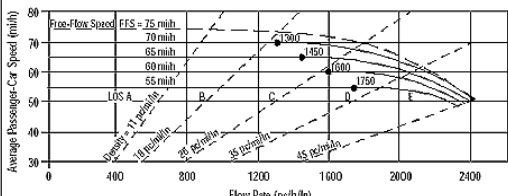
Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

BASIC FREEWAY SEGMENTS WORKSHEET



Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 NB
Agency or Company		From/To	S. of US 101 (Alemany Off/On)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	ALT 1
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

Flow Inputs			
Volume, V	8200 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

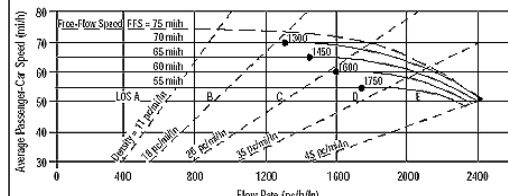
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2284 pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
S	mi/h	S	mi/h
D = v _p / S	pc/mi/ln	D = v _p / S	pc/mi/ln
LOS	F	Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET



Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 SB
Agency or Company		From/To	S. of US 101 (Alemany On/Off)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	ALT 1
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

Flow Inputs			
Volume, V	6900 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1922 pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
S	55.6 mi/h	S	mi/h
D = v _p / S	34.6 pc/mi/ln	D = v _p / S	pc/mi/ln
LOS	D	Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

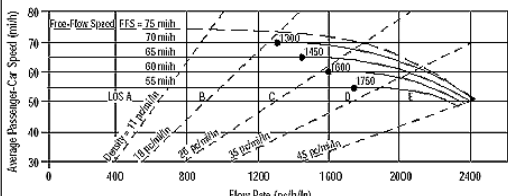
General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 NB
Agency or Company		From/To	SF County Line (Alana/3rd St)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	ALT 1
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	10160 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T-1) + P_R(E_R-1))$	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2830 pc/h/ln	Design LOS	
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	pc/mi/ln	S	mi/h
LOS	F	$D = v_p / S$	pc/mi/ln
		Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 SB
Agency or Company		From/To	SF County Line (3rd St/Alana)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	ALT 1
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	10190 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T-1) + P_R(E_R-1))$	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2838 pc/h/ln	Design LOS	
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	pc/mi/ln	S	mi/h
LOS	F	$D = v_p / S$	pc/mi/ln
		Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

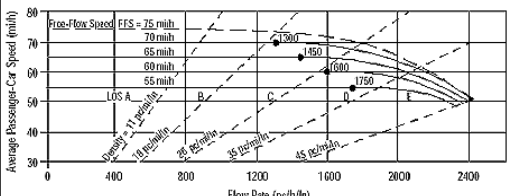
BASIC FREEWAY SEGMENTS WORKSHEET



Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB
Agency or Company		From/To	Before toll plaza
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	ALT 1
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	10276 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	4
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2848 pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
S	mi/h	S	mi/h
D = v _p / S	pc/mi/ln	D = v _p / S	pc/mi/ln
LOS	F	Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET



Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB
Agency or Company		From/To	After toll plaza
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	ALT 1
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	9214 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	4
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2554 pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
S	mi/h	S	mi/h
D = v _p / S	pc/mi/ln	D = v _p / S	pc/mi/ln
LOS	F	Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v_p	LOS, S, D	Design (N)	FFS, LOS, v_p	N, S, D	Design (v_p)	FFS, LOS, N	v_p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v_p)	FFS, LOS, N	v_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	I-280 NB																					
Agency or Company		From/To	S. of US 101 (Alemany Off/On)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	PM Peak	Analysis Year	ALT 1																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	6680 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1861 pc/h/ln	Design LOS																						
S	55.8 mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
D = v_p / S	33.3 pc/mi/ln	S	mi/h																					
LOS	D	D = v_p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	I-280 SB																					
Agency or Company		From/To	S. of US 101 (Alemany On/Off)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	PM Peak	Analysis Year	ALT 1																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	9140 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
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f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2546 pc/h/ln	Design LOS																						
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
D = v_p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v_p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
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Application	Input	Output																						
Operational (LOS)	FFS, N , v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 NB																					
Agency or Company		From/To	SF County Line (Alana/3rd St)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	ALT 1																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	6480 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1805 pc/h/ln	Design LOS																						
S	56.0 mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
D = v_p / S	32.3 pc/mi/ln	S	mi/h																					
LOS	D	D = v_p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 SB																					
Agency or Company		From/To	SF County Line (3rd St/Alana)																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	ALT 1																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	6850 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1908 pc/h/ln	Design LOS																						
S	55.6 mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
D = v_p / S	34.3 pc/mi/ln	S	mi/h																					
LOS	D	D = v_p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB																					
Agency or Company		From/To	Before toll plaza																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	ALT 1																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	9278 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2572 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB																					
Agency or Company		From/To	After toll plaza																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	ALT 1																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	8529 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2364 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information Analyst: pliao Agency or Company: Date Performed: 2/16/2010 Analysis Time Period: Sunday PM Project Description: HPS		Site Information Highway/Direction of Travel: I-280 NB From/To: S. of US 101 (Alemany Off/On) Jurisdiction: Analysis Year: ALT 1																						
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs Volume, V: 4350 veh/h Peak-Hour Factor, PHF: 0.92 AADT: veh/day %Trucks and Buses, P _T : 5 Peak-Hr Prop. of AADT, K: %RVs, P _R : 0 Peak-Hr Direction Prop, D: General Terrain: Level DDHV = AADT x K x D: veh/h Grade % Length mi Driver type adjustment: 1.00 Up/Down %																								
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]: 0.976																								
Speed Inputs Lane Width: 12.0 ft Rt-Shoulder Lat. Clearance: 6.0 ft Interchange Density: 1.00 I/mi Number of Lanes, N: 4 FFS (measured): mi/h Base free-flow Speed, BFFS: 60.0 mi/h		Calc Speed Adj and FFS f _{LW} : 0.0 mi/h f _{LC} : 0.0 mi/h f _{ID} : 2.5 mi/h f _N : 1.5 mi/h FFS: 56.0 mi/h																						
LOS and Performance Measures Operational (LOS) v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p): 1212 pc/h/ln S: 56.0 mi/h D = v _p / S: 21.6 pc/mi/ln LOS: C Required Number of Lanes, N:		Design (N) Design (N) Design LOS v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p): pc/h f _p : S: mi/h D = v _p / S: pc/mi/ln Required Number of Lanes, N:																						
Glossary N - Number of lanes S - Speed V - Hourly volume D - Density v _p - Flow rate FFS - Free-flow speed LOS - Level of service BFFS - Base free-flow speed DDHV - Directional design hour volume		Factor Location E _R - Exhibits 23-8, 23-10 f _{LW} - Exhibit 23-4 E _T - Exhibits 23-8, 23-10, 23-11 f _{LC} - Exhibit 23-5 f _p - Page 23-12 f _N - Exhibit 23-6 LOS, S, FFS, v _p - Exhibits 23-2, 23-3 f _{ID} - Exhibit 23-7																						

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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information Analyst: pliao Agency or Company: Date Performed: 2/16/2010 Analysis Time Period: Sunday PM Project Description: HPS		Site Information Highway/Direction of Travel: I-280 SB From/To: S. of US 101 (Alemany On/Off) Jurisdiction: Analysis Year: ALT 1																						
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs Volume, V: 5940 veh/h Peak-Hour Factor, PHF: 0.92 AADT: veh/day %Trucks and Buses, P _T : 5 Peak-Hr Prop. of AADT, K: %RVs, P _R : 0 Peak-Hr Direction Prop, D: General Terrain: Level DDHV = AADT x K x D: veh/h Grade % Length mi Driver type adjustment: 1.00 Up/Down %																								
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]: 0.976																								
Speed Inputs Lane Width: 12.0 ft Rt-Shoulder Lat. Clearance: 6.0 ft Interchange Density: 1.00 I/mi Number of Lanes, N: 4 FFS (measured): mi/h Base free-flow Speed, BFFS: 60.0 mi/h		Calc Speed Adj and FFS f _{LW} : 0.0 mi/h f _{LC} : 0.0 mi/h f _{ID} : 2.5 mi/h f _N : 1.5 mi/h FFS: 56.0 mi/h																						
LOS and Performance Measures Operational (LOS) v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p): 1654 pc/h/ln S: 56.0 mi/h D = v _p / S: 29.5 pc/mi/ln LOS: D Required Number of Lanes, N:		Design (N) Design (N) Design LOS v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p): pc/h f _p : S: mi/h D = v _p / S: pc/mi/ln Required Number of Lanes, N:																						
Glossary N - Number of lanes S - Speed V - Hourly volume D - Density v _p - Flow rate FFS - Free-flow speed LOS - Level of service BFFS - Base free-flow speed DDHV - Directional design hour volume		Factor Location E _R - Exhibits 23-8, 23-10 f _{LW} - Exhibit 23-4 E _T - Exhibits 23-8, 23-10, 23-11 f _{LC} - Exhibit 23-5 f _p - Page 23-12 f _N - Exhibit 23-6 LOS, S, FFS, v _p - Exhibits 23-2, 23-3 f _{ID} - Exhibit 23-7																						

BASIC FREEWAY SEGMENTS WORKSHEET																									
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Application	Input	Output																							
Operational (LOS)	FFS, N, v _p	LOS, S, D																							
Design (N)	FFS, LOS, v _p	N, S, D																							
Design (v _p)	FFS, LOS, N	v _p , S, D																							
Planning (LOS)	FFS, N, AADT	LOS, S, D																							
Planning (H)	FFS, LOS, AADT	N, S, D																							
Planning (v _p)	FFS, LOS, N	v _p , S, D																							
General Information		Site Information																							
Analyst: pliao		Highway/Direction of Travel: US 101 NB																							
Agency or Company:		From/To: SF County Line (Alana/3rd St)																							
Date Performed: 2/16/2010		Jurisdiction:																							
Analysis Time Period: Gameday		Analysis Year: ALT 1																							
Project Description: HPS																									
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)		<input type="checkbox"/> Planning Data																					
Flow Inputs																									
Volume, V: 10510 veh/h		Peak-Hour Factor, PHF: 0.92																							
AADT: veh/day		%Trucks and Buses, P _T : 5																							
Peak-Hr Prop. of AADT, K:		%RVs, P _R : 0																							
Peak-Hr Direction Prop, D:		General Terrain: Level																							
DDHV = AADT x K x D: veh/h		Grade: %		Length: mi																					
Driver type adjustment: 1.00		Up/Down %:																							
Calculate Flow Adjustments																									
f _p : 1.00		E _R : 1.2																							
E _T : 1.5		f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1)): 0.976																							
Speed Inputs		Calc Speed Adj and FFS																							
Lane Width: 12.0 ft		f _{LW} : 0.0 mi/h																							
Rt-Shoulder Lat. Clearance: 6.0 ft		f _{LC} : 0.0 mi/h																							
Interchange Density: 1.00 I/mi		f _{ID} : 2.5 mi/h																							
Number of Lanes, N: 4		f _N : 1.5 mi/h																							
FFS (measured): mi/h		FFS: 56.0 mi/h																							
Base free-flow Speed, BFFS: 60.0 mi/h																									
LOS and Performance Measures		Design (N)																							
Operational (LOS)		Design (N)																							
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p): 2927 pc/h/ln		Design LOS																							
S: mi/h		v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p): pc/h																							
D = v _p / S: pc/mi/ln		S: mi/h																							
LOS: F		D = v _p / S: pc/mi/ln																							
		Required Number of Lanes, N:																							
Glossary		Factor Location																							
N - Number of lanes		E _R - Exhibits 23-8, 23-10		f _{LW} - Exhibit 23-4																					
V - Hourly volume		E _T - Exhibits 23-8, 23-10, 23-11		f _{LC} - Exhibit 23-5																					
v _p - Flow rate		f _p - Page 23-12		f _N - Exhibit 23-6																					
LOS - Level of service		LOS, S, FFS, v _p - Exhibits 23-2, 23-3		f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																									

BASIC FREEWAY SEGMENTS WORKSHEET																									
			<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																							
Operational (LOS)	FFS, N, v _p	LOS, S, D																							
Design (N)	FFS, LOS, v _p	N, S, D																							
Design (v _p)	FFS, LOS, N	v _p , S, D																							
Planning (LOS)	FFS, N, AADT	LOS, S, D																							
Planning (H)	FFS, LOS, AADT	N, S, D																							
Planning (v _p)	FFS, LOS, N	v _p , S, D																							
General Information		Site Information																							
Analyst: pliao		Highway/Direction of Travel: US 101 SB																							
Agency or Company:		From/To: SF County Line (3rd St/Alana)																							
Date Performed: 2/11/2010		Jurisdiction:																							
Analysis Time Period: Sunday PM		Analysis Year: ALT 1																							
Project Description: HPS																									
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)		<input type="checkbox"/> Planning Data																					
Flow Inputs																									
Volume, V: 9850 veh/h		Peak-Hour Factor, PHF: 0.92																							
AADT: veh/day		%Trucks and Buses, P _T : 5																							
Peak-Hr Prop. of AADT, K:		%RVs, P _R : 0																							
Peak-Hr Direction Prop, D:		General Terrain: Level																							
DDHV = AADT x K x D: veh/h		Grade: %		Length: mi																					
Driver type adjustment: 1.00		Up/Down %:																							
Calculate Flow Adjustments																									
f _p : 1.00		E _R : 1.2																							
E _T : 1.5		f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1)): 0.976																							
Speed Inputs		Calc Speed Adj and FFS																							
Lane Width: 12.0 ft		f _{LW} : 0.0 mi/h																							
Rt-Shoulder Lat. Clearance: 6.0 ft		f _{LC} : 0.0 mi/h																							
Interchange Density: 1.00 I/mi		f _{ID} : 2.5 mi/h																							
Number of Lanes, N: 4		f _N : 1.5 mi/h																							
FFS (measured): mi/h		FFS: 56.0 mi/h																							
Base free-flow Speed, BFFS: 60.0 mi/h																									
LOS and Performance Measures		Design (N)																							
Operational (LOS)		Design (N)																							
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p): 2744 pc/h/ln		Design LOS																							
S: mi/h		v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p): pc/h																							
D = v _p / S: pc/mi/ln		S: mi/h																							
LOS: F		D = v _p / S: pc/mi/ln																							
		Required Number of Lanes, N:																							
Glossary		Factor Location																							
N - Number of lanes		E _R - Exhibits 23-8, 23-10		f _{LW} - Exhibit 23-4																					
V - Hourly volume		E _T - Exhibits 23-8, 23-10, 23-11		f _{LC} - Exhibit 23-5																					
v _p - Flow rate		f _p - Page 23-12		f _N - Exhibit 23-6																					
LOS - Level of service		LOS, S, FFS, v _p - Exhibits 23-2, 23-3		f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																									

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB																					
Agency or Company		From/To	Before toll plaza																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	ALT 1																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	9923 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2750 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	I-280 SB																					
Agency or Company		From/To	S. of US 101 (Alemay On/Off)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	ALT 1																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	6190 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1724 pc/h/ln	Design LOS																						
S	56.0 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	30.8 pc/mi/ln	S	mi/h																					
LOS	D	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N , v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N , S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N , AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N , S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 NB
Agency or Company		From/To	SF County Line (Alana/3rd St)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	ALT 2
Project Description	HPS		
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

Flow Inputs

Volume, V	9180 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976

Speed Inputs

Lane Width	12.0	ft	f_{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f_{LC}	0.0	mi/h
Interchange Density	1.00	I/mi	f_{ID}	2.5	mi/h
Number of Lanes, N	4		f_N	1.5	mi/h
FFS (measured)		mi/h	FFS	56.0	mi/h
Base free-flow Speed, BFFS	60.0	mi/h			

LOS and Performance Measures

Operational (LOS)		Design (N)			
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2557	pc/h/ln	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	3000	pc/h/ln
S		mi/h	S		mi/h
$D = v_p / S$		pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	F		Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

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BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N , v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N , S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N , AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N , S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 SB
Agency or Company		From/To	SF County Line (3rd St/Alana)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	ALT 2
Project Description	HPS		
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

Flow Inputs

Volume, V	10770 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976

Speed Inputs

Lane Width	12.0	ft	f_{LW}	0.0	mi/h
Rt-Shoulder Lat. Clearance	6.0	ft	f_{LC}	0.0	mi/h
Interchange Density	1.00	I/mi	f_{ID}	2.5	mi/h
Number of Lanes, N	4		f_N	1.5	mi/h
FFS (measured)		mi/h	FFS	56.0	mi/h
Base free-flow Speed, BFFS	60.0	mi/h			

LOS and Performance Measures

Operational (LOS)		Design (N)			
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	3000	pc/h/ln	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	3000	pc/h/ln
S		mi/h	S		mi/h
$D = v_p / S$		pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	F		Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

HCS2000™

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Version 4.1f

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Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information Analyst: pliao Agency or Company: Date Performed: 2/11/2010 Analysis Time Period: AM Peak Project Description: HPS		Site Information Highway/Direction of Travel: SF/Oakland Bay Bridge EB From/To: Before toll plaza Jurisdiction: Analysis Year: ALT 2																						
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Flow Inputs Volume, V: 3702 veh/h Peak-Hour Factor, PHF: 0.92 AADT: veh/day %Trucks and Buses, P _T : 4 Peak-Hr Prop. of AADT, K: %RVs, P _R : 0 Peak-Hr Direction Prop, D: General Terrain: Level DDHV = AADT x K x D: veh/h Grade % Length: mi Driver type adjustment: 1.00 Up/Down %:																								
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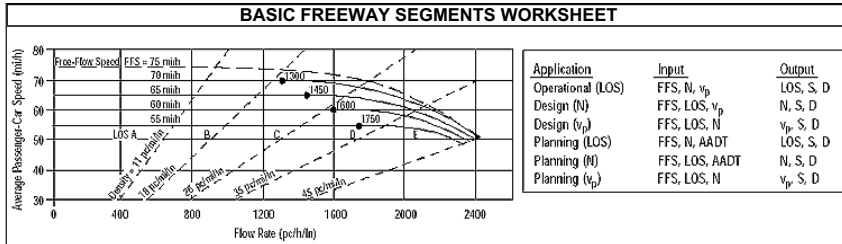
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Flow Inputs Volume, V: 10190 veh/h Peak-Hour Factor, PHF: 0.92 AADT: veh/day %Trucks and Buses, P _T : 4 Peak-Hr Prop. of AADT, K: %RVs, P _R : 0 Peak-Hr Direction Prop, D: General Terrain: Level DDHV = AADT x K x D: veh/h Grade % Length: mi Driver type adjustment: 1.00 Up/Down %:																								
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Flow Inputs Volume, V: 8200 veh/h Peak-Hour Factor, PHF: 0.92 AADT: veh/day %Trucks and Buses, P _T : 5 Peak-Hr Prop. of AADT, K: %RVs, P _R : 0 Peak-Hr Direction Prop, D: General Terrain: Level DDHV = AADT x K x D: veh/h Grade % Length: mi Driver type adjustment: 1.00 Up/Down %:																								
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Analyst	pliao	Highway/Direction of Travel	US 101 NB																					
Agency or Company		From/To	SF County Line (Alana/3rd St)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	PM Peak	Analysis Year	ALT 2																					
Project Description HPS																								
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<input type="checkbox"/> Planning Data																								
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S	mi/h	S	mi/h																					
D = v _p / S	pc/mi/ln	D = v _p / S	pc/mi/ln																					
LOS	F	Required Number of Lanes, N																						
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DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 SB																					
Agency or Company		From/To	SF County Line (3rd St/Alana)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	PM Peak	Analysis Year	ALT 2																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	10260 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade	% Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
<u>Operational (LOS)</u>		<u>Design (N)</u>																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2858 pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
S	mi/h	S	mi/h																					
D = v _p / S	pc/mi/ln	D = v _p / S	pc/mi/ln																					
LOS	F	Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								



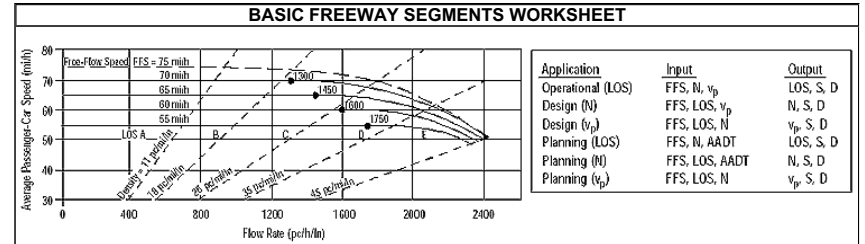
General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB
Agency or Company		From/To	Before toll plaza
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	ALT 2
Project Description HPS			

Flow Inputs		Calculate Flow Adjustments	
Volume, V	10409 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	4
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain: Level	
DDHV = AADT x K x D	veh/h	Grade % Length	mi
Driver type adjustment	1.00	Up/Down %	

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2885 pc/h/ln	Design LOS	
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	pc/mi/ln	S	mi/h
LOS	F	$D = v_p / S$	pc/mi/ln
Required Number of Lanes, N			

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			



General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB
Agency or Company		From/To	After toll plaza
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	ALT 2
Project Description HPS			

Flow Inputs		Calculate Flow Adjustments	
Volume, V	9228 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	4
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain: Level	
DDHV = AADT x K x D	veh/h	Grade % Length	mi
Driver type adjustment	1.00	Up/Down %	

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2558 pc/h/ln	Design LOS	
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	pc/mi/ln	S	mi/h
LOS	F	$D = v_p / S$	pc/mi/ln
Required Number of Lanes, N			

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 NB
Agency or Company		From/To	S. of US 101 (Alemany Off/On)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	ALT 2
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data	

Flow Inputs			
Volume, V	6680 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1861 pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
S	55.8 mi/h	S	mi/h
D = v _p / S	33.3 pc/mi/ln	D = v _p / S	pc/mi/ln
LOS	D	Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 SB
Agency or Company		From/To	S. of US 101 (Alemany On/Off)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	ALT 2
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data	

Flow Inputs			
Volume, V	9140 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2546 pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
S	mi/h	S	mi/h
D = v _p / S	pc/mi/ln	D = v _p / S	pc/mi/ln
LOS	F	Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v_p	LOS, S, D	Design (N)	FFS, LOS, v_p	N, S, D	Design (v_p)	FFS, LOS, N	v_p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v_p)	FFS, LOS, N	v_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 NB																					
Agency or Company		From/To	SF County Line (Alana/3rd St)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	ALT 2																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	6480 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1805 pc/h/ln	Design LOS																						
S	56.0 mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
$D = v_p / S$	32.3 pc/mi/ln	S	mi/h																					
LOS	D	$D = v_p / S$	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
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Date Performed	2/11/2010	Jurisdiction																						
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<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
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Volume, V	6880 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
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Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
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FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1916 pc/h/ln	Design LOS																						
S	55.6 mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
$D = v_p / S$	34.5 pc/mi/ln	S	mi/h																					
LOS	D	$D = v_p / S$	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB																					
Agency or Company		From/To	Before toll plaza																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	ALT 2																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	9385 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
<u>Operational (LOS)</u>		<u>Design (N)</u>																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2601 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB																					
Agency or Company		From/To	After toll plaza																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	ALT 2																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	8585 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
<u>Operational (LOS)</u>		<u>Design (N)</u>																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2380 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

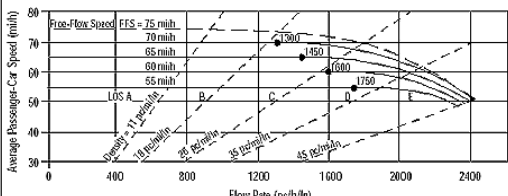
General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 NB
Agency or Company		From/To	S. of US 101 (Alemany Off/On)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	Sunday PM	Analysis Year	ALT 2
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data	
Flow Inputs			
Volume, V	4350 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1212 pc/h/ln	Design LOS	
S	56.0 mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	21.6 pc/mi/ln	S	mi/h
LOS	C	$D = v_p / S$	pc/mi/ln
Required Number of Lanes, N			
Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 SB
Agency or Company		From/To	S. of US 101 (Alemany On/Off)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	Sunday PM	Analysis Year	ALT 2
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data	
Flow Inputs			
Volume, V	5940 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1654 pc/h/ln	Design LOS	
S	56.0 mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	29.5 pc/mi/ln	S	mi/h
LOS	D	$D = v_p / S$	pc/mi/ln
Required Number of Lanes, N			
Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

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Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 NB
Agency or Company		From/To	SF County Line (Alana/3rd St)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	ALT 3
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

Flow Inputs			
Volume, V	9010 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade	% Length mi
Driver type adjustment	1.00	Up/Down %	

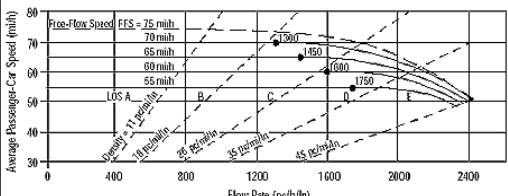
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2510 pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
S	mi/h	S	mi/h
D = v _p / S	pc/mi/ln	D = v _p / S	pc/mi/ln
LOS	F	Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

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Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 SB
Agency or Company		From/To	SF County Line (3rd St/Alana)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	ALT 3
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

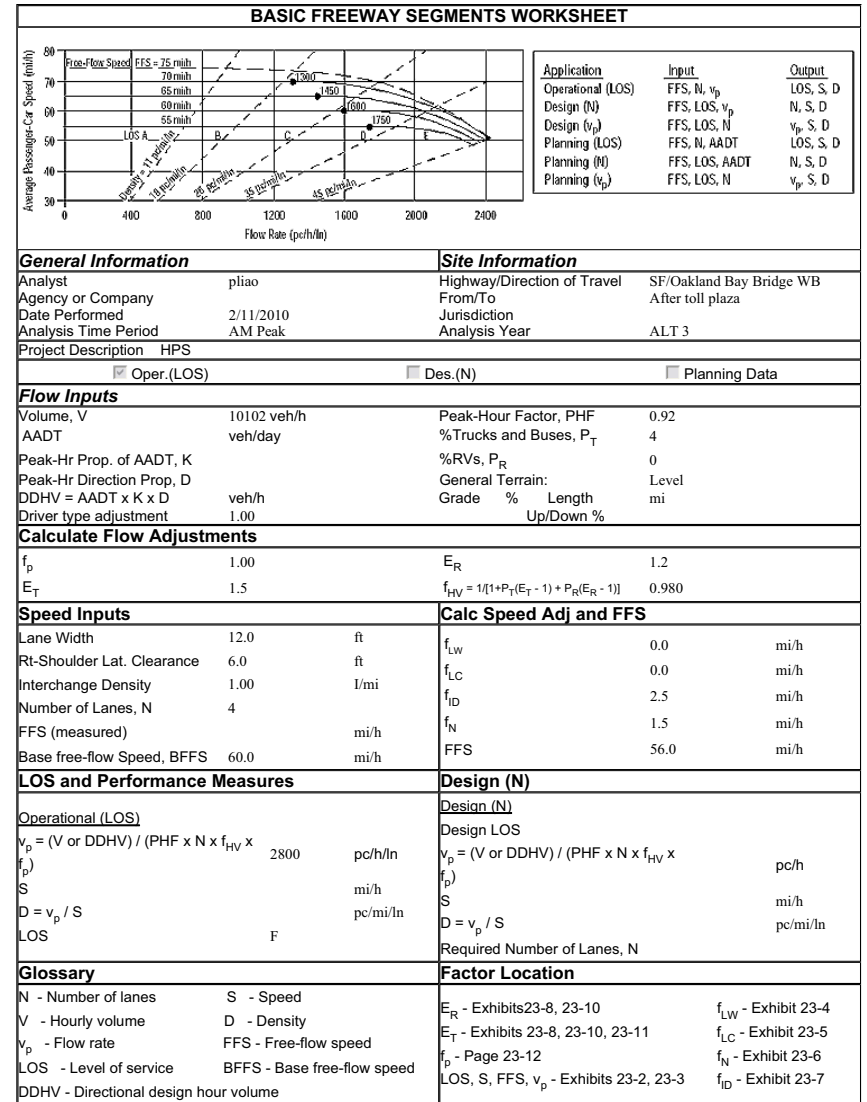
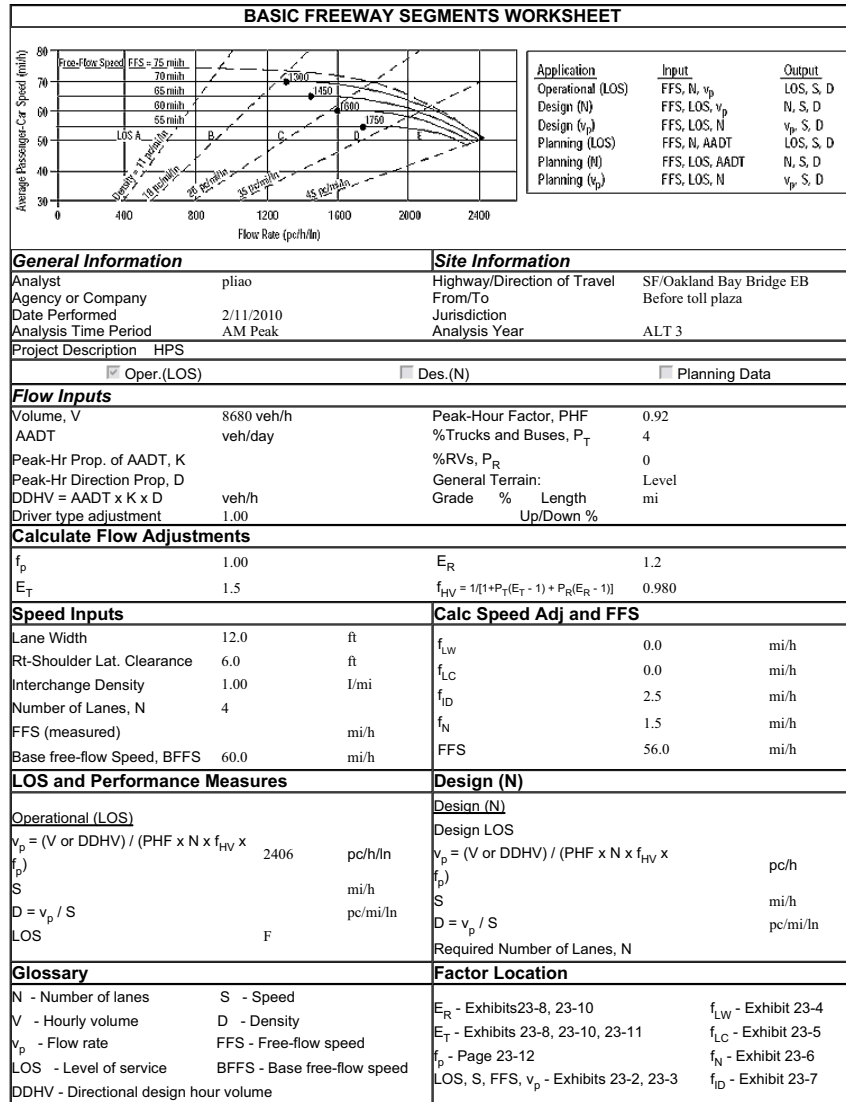
Flow Inputs			
Volume, V	10720 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade	% Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2986 pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
S	mi/h	S	mi/h
D = v _p / S	pc/mi/ln	D = v _p / S	pc/mi/ln
LOS	F	Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			



BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v_p	LOS, S, D	Design (N)	FFS, LOS, v_p	N, S, D	Design (v_p)	FFS, LOS, N	v_p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v_p)	FFS, LOS, N	v_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	I-280 NB																					
Agency or Company		From/To	S. of US 101 (Alemany Off/On)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	ALT 3																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	8200 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2284 pc/h/ln	Design LOS																						
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
D = v_p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v_p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v_p	LOS, S, D	Design (N)	FFS, LOS, v_p	N, S, D	Design (v_p)	FFS, LOS, N	v_p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v_p)	FFS, LOS, N	v_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	I-280 SB																					
Agency or Company		From/To	S. of US 101 (Alemany On/Off)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	ALT 3																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	6900 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1922 pc/h/ln	Design LOS																						
S	55.6 mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
D = v_p / S	34.6 pc/mi/ln	S	mi/h																					
LOS	D	D = v_p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET

The graph plots Average Passenger-Car Speed (mi/h) on the y-axis (30 to 80) against Flow Rate (pc/h/ln) on the x-axis (0 to 2400). It shows curves for different Levels of Service (LOS) and Free-Flow Speeds (FFS). Key points on the graph include:

- LOS A: 75 mi/h at 400 pc/h/ln
- LOS B: 65 mi/h at 800 pc/h/ln
- LOS C: 55 mi/h at 1200 pc/h/ln
- LOS D: 45 mi/h at 1600 pc/h/ln
- LOS E: 35 mi/h at 2000 pc/h/ln

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information

Analyst: pliao
 Agency or Company: pliao
 Date Performed: 2/16/2010
 Analysis Time Period: PM Peak
 Project Description: HPS

Site Information

Highway/Direction of Travel: US 101 NB
 From/To: SF County Line (Alana/3rd St)
 Jurisdiction: SF County Line (Alana/3rd St)
 Analysis Year: ALT 3

Flow Inputs

Volume, V: 10180 veh/h
 AADT: veh/day
 Peak-Hr Prop. of AADT, K: 0
 Peak-Hr Direction Prop, D: 0
 DDHV = AADT x K x D: veh/h
 Driver type adjustment: 1.00

Calc Flow Adj

Peak-Hour Factor, PHF: 0.92
 %Trucks and Buses, P_T : 5
 %RVs, P_R : 0
 General Terrain: Level
 Grade: mi
 % Length: mi
 Up/Down %

Speed Inputs

Lane Width: 12.0 ft
 Rt-Shoulder Lat. Clearance: 6.0 ft
 Interchange Density: 1.00 I/mi
 Number of Lanes, N: 4
 FFS (measured): mi/h
 Base free-flow Speed, BFFS: 60.0 mi/h

Calc Speed Adj and FFS

f_{LW} : 0.0 mi/h
 f_{LC} : 0.0 mi/h
 f_{ID} : 2.5 mi/h
 f_N : 1.5 mi/h
 FFS: 56.0 mi/h

LOS and Performance Measures

Operational (LOS)
 $v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$
 S: mi/h
 $D = v_p / S$: pc/mi/ln
 LOS: F
 Required Number of Lanes, N

Design (N)

Design LOS
 $v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$
 f_p : pc/h
 S: mi/h
 $D = v_p / S$: pc/mi/ln
 Required Number of Lanes, N

Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

BASIC FREEWAY SEGMENTS WORKSHEET

The graph plots Average Passenger-Car Speed (mi/h) on the y-axis (30 to 80) against Flow Rate (pc/h/ln) on the x-axis (0 to 2400). It shows curves for different Levels of Service (LOS) and Free-Flow Speeds (FFS). Key points on the graph include:

- LOS A: 75 mi/h at 400 pc/h/ln
- LOS B: 65 mi/h at 800 pc/h/ln
- LOS C: 55 mi/h at 1200 pc/h/ln
- LOS D: 45 mi/h at 1600 pc/h/ln
- LOS E: 35 mi/h at 2000 pc/h/ln

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information

Analyst: pliao
 Agency or Company: pliao
 Date Performed: 2/16/2010
 Analysis Time Period: PM Peak
 Project Description: HPS

Site Information

Highway/Direction of Travel: US 101 SB
 From/To: SF County Line (3rd St/Alana)
 Jurisdiction: SF County Line (3rd St/Alana)
 Analysis Year: ALT 3

Flow Inputs

Volume, V: 10200 veh/h
 AADT: veh/day
 Peak-Hr Prop. of AADT, K: 0
 Peak-Hr Direction Prop, D: 0
 DDHV = AADT x K x D: veh/h
 Driver type adjustment: 1.00

Calc Flow Adj

Peak-Hour Factor, PHF: 0.92
 %Trucks and Buses, P_T : 5
 %RVs, P_R : 0
 General Terrain: Level
 Grade: mi
 % Length: mi
 Up/Down %

Speed Inputs

Lane Width: 12.0 ft
 Rt-Shoulder Lat. Clearance: 6.0 ft
 Interchange Density: 1.00 I/mi
 Number of Lanes, N: 4
 FFS (measured): mi/h
 Base free-flow Speed, BFFS: 60.0 mi/h

Calc Speed Adj and FFS

f_{LW} : 0.0 mi/h
 f_{LC} : 0.0 mi/h
 f_{ID} : 2.5 mi/h
 f_N : 1.5 mi/h
 FFS: 56.0 mi/h

LOS and Performance Measures

Operational (LOS)
 $v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$
 S: mi/h
 $D = v_p / S$: pc/mi/ln
 LOS: F
 Required Number of Lanes, N

Design (N)

Design LOS
 $v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$
 f_p : pc/h
 S: mi/h
 $D = v_p / S$: pc/mi/ln
 Required Number of Lanes, N

Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

BASIC FREEWAY SEGMENTS WORKSHEET

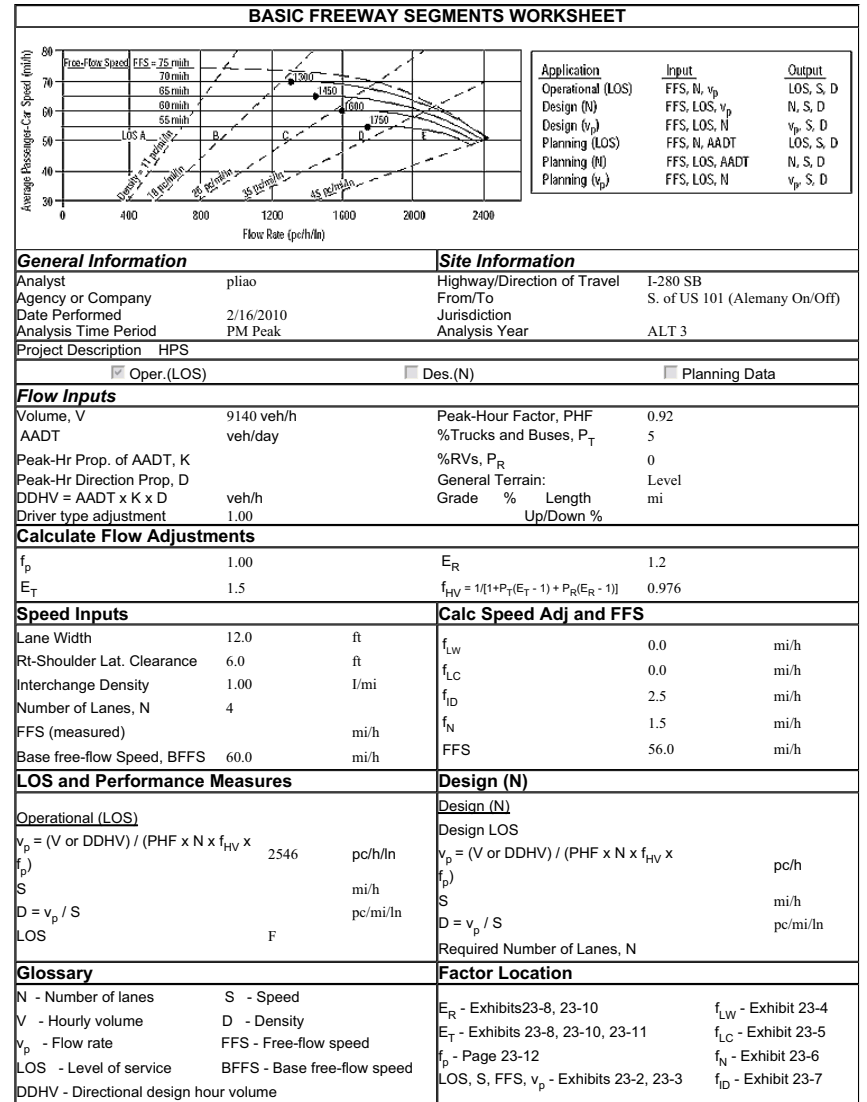
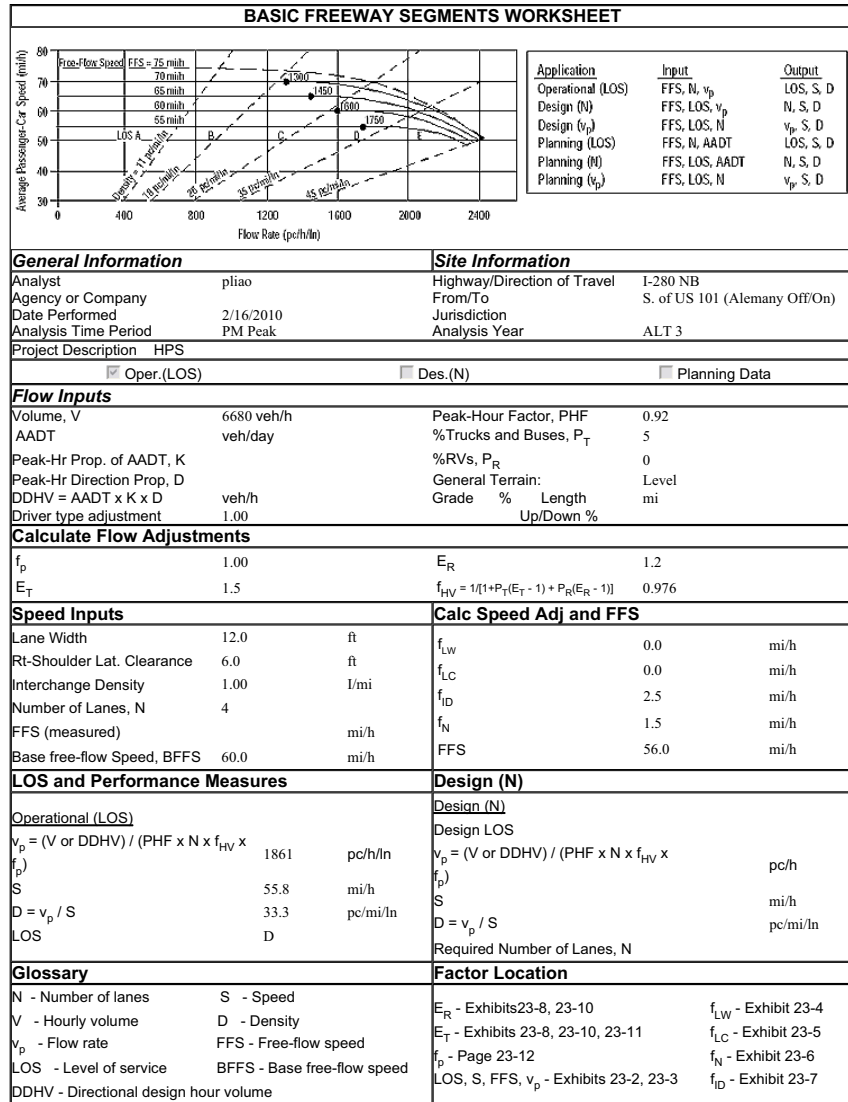
Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB
Agency or Company		From/To	Before toll plaza
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	ALT 3
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	10276 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	4
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2848 pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
S	mi/h	S	mi/h
D = v _p / S	pc/mi/ln	D = v _p / S	pc/mi/ln
LOS	F	Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB
Agency or Company		From/To	After toll plaza
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	ALT 3
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	9217 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	4
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2555 pc/h/ln	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
S	mi/h	S	mi/h
D = v _p / S	pc/mi/ln	D = v _p / S	pc/mi/ln
LOS	F	Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			



BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 NB
Agency or Company		From/To	SF County Line (Alana/3rd St)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	Sunday PM	Analysis Year	ALT 3
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

Flow Inputs			
Volume, V	6500 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1810 pc/h/ln	Design LOS	
S	55.9 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
D = v _p / S	32.4 pc/mi/ln	S	mi/h
LOS	D	D = v _p / S	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	US 101 SB
Agency or Company		From/To	SF County Line (3rd St/Alana)
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	Sunday PM	Analysis Year	ALT 3
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			

Flow Inputs			
Volume, V	6860 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>		<u>Design (N)</u>	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1911 pc/h/ln	Design LOS	
S	55.6 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
D = v _p / S	34.4 pc/mi/ln	S	mi/h
LOS	D	D = v _p / S	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N , v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB
Agency or Company		From/To	Before toll plaza
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	Sunday PM	Analysis Year	ALT 3
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data	

Flow Inputs			
Volume, V	9343 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	4
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade % Length	mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.980

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2590 pc/h/ln	Design LOS	
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
D = v_p / S	pc/mi/ln	S	mi/h
LOS	F	D = v_p / S	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB
Agency or Company		From/To	After toll plaza
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	Sunday PM	Analysis Year	ALT 3
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data	

Flow Inputs			
Volume, V	8580 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	4
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade % Length	mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.980

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2378 pc/h/ln	Design LOS	
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
D = v_p / S	pc/mi/ln	S	mi/h
LOS	F	D = v_p / S	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	I-280 NB																					
Agency or Company		From/To	S. of US 101 (Alemany Off/On)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	ALT 3																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	4350 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1212 pc/h/ln	Design LOS																						
S	56.0 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	21.6 pc/mi/ln	S	mi/h																					
LOS	C	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	I-280 SB																					
Agency or Company		From/To	S. of US 101 (Alemany On/Off)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	ALT 3																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	5940 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1654 pc/h/ln	Design LOS																						
S	56.0 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	29.5 pc/mi/ln	S	mi/h																					
LOS	D	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
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BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 NB																					
Agency or Company		From/To	SF County Line (Alana/3rd St)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	Proposed Project Alternative 4																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	8990 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
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f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2504 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 SB																					
Agency or Company		From/To	SF County Line (3rd St/Alana)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	Proposed Project Alternative 4																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	10670 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2972 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB																					
Agency or Company		From/To	Before toll plaza																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	Proposed Project Alternative 4																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	8617 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2388 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB																					
Agency or Company		From/To	After toll plaza																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	Proposed Project Alternative 4																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	10084 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2795 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 NB
Agency or Company		From/To	S. of US 101 (Alemany Off/On)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	Proposed Project Alternative 4
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data	
Flow Inputs			
Volume, V	8200 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2284 pc/h/ln	Design LOS	
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
D = v _p / S	pc/mi/ln	S	mi/h
LOS	F	D = v _p / S	pc/mi/ln
		Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 SB
Agency or Company		From/To	S. of US 101 (Alemany On/Off)
Date Performed	2/16/2010	Jurisdiction	
Analysis Time Period	AM Peak	Analysis Year	Proposed Project Alternative 4
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data	
Flow Inputs			
Volume, V	6900 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	5
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1922 pc/h/ln	Design LOS	
S	55.6 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
D = v _p / S	34.6 pc/mi/ln	S	mi/h
LOS	D	D = v _p / S	pc/mi/ln
		Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

The graph shows Average Passenger-Car Speed (mi/h) on the y-axis (30 to 80) and Flow Rate (pc/h/ln) on the x-axis (0 to 2400). It includes curves for LOS A, B, C, D and FFS values of 75, 70, 65, 60, and 55 mi/h. A dashed line represents the 1.5 pc/mi/ln density threshold.

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information

Analyst: pliao
 Agency or Company: pliao
 Date Performed: 9/14/2010
 Analysis Time Period: AM Peak
 Project Description: HPS

Site Information

Highway/Direction of Travel: US 101 NB
 From/To: SF County Line (Alana/3rd St)
 Jurisdiction: Jan 2010
 Analysis Year: Var2A

Flow Inputs

Volume, V: 9070 veh/h
 AADT: veh/day
 Peak-Hr Prop. of AADT, K: 0
 Peak-Hr Direction Prop, D: 0
 DDHV = AADT x K x D: veh/h
 Driver type adjustment: 1.00

Calculate Flow Adjustments

f_p: 1.00
 E_T: 1.5
 E_R: 1.2
 f_{HV} = 1/(1+P_T(E_T-1) + P_R(E_R-1)): 0.976

Speed Inputs

Lane Width: 12.0 ft
 Rt-Shoulder Lat. Clearance: 6.0 ft
 Interchange Density: 1.00 I/mi
 Number of Lanes, N: 4
 FFS (measured): mi/h
 Base free-flow Speed, BFFS: 60.0 mi/h

LOS and Performance Measures

Operational (LOS)
 v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p): 2526 pc/h/ln
 S: mi/h
 D = v_p / S: pc/mi/ln
 LOS: F
 Required Number of Lanes, N: 4

Design (N)

Design (N)
 Design LOS: F
 v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p): pc/h
 f_p:
 S: mi/h
 D = v_p / S: pc/mi/ln
 Required Number of Lanes, N: 4

Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

BASIC FREEWAY SEGMENTS WORKSHEET

The graph shows Average Passenger-Car Speed (mi/h) on the y-axis (30 to 80) and Flow Rate (pc/h/ln) on the x-axis (0 to 2400). It includes curves for LOS A, B, C, D and FFS values of 75, 70, 65, 60, and 55 mi/h. A dashed line represents the 1.5 pc/mi/ln density threshold.

Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information

Analyst: pliao
 Agency or Company: pliao
 Date Performed: 9/14/2010
 Analysis Time Period: AM Peak
 Project Description: HPS

Site Information

Highway/Direction of Travel: US 101 SB
 From/To: SF County Line (3rd St/Alana)
 Jurisdiction: Jan 2010
 Analysis Year: Var2A

Flow Inputs

Volume, V: 10720 veh/h
 AADT: veh/day
 Peak-Hr Prop. of AADT, K: 0
 Peak-Hr Direction Prop, D: 0
 DDHV = AADT x K x D: veh/h
 Driver type adjustment: 1.00

Calculate Flow Adjustments

f_p: 1.00
 E_T: 1.5
 E_R: 1.2
 f_{HV} = 1/(1+P_T(E_T-1) + P_R(E_R-1)): 0.976

Speed Inputs

Lane Width: 12.0 ft
 Rt-Shoulder Lat. Clearance: 6.0 ft
 Interchange Density: 1.00 I/mi
 Number of Lanes, N: 4
 FFS (measured): mi/h
 Base free-flow Speed, BFFS: 60.0 mi/h

LOS and Performance Measures

Operational (LOS)
 v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p): 2986 pc/h/ln
 S: mi/h
 D = v_p / S: pc/mi/ln
 LOS: F
 Required Number of Lanes, N: 4

Design (N)

Design (N)
 Design LOS: F
 v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p): pc/h
 f_p:
 S: mi/h
 D = v_p / S: pc/mi/ln
 Required Number of Lanes, N: 4

Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB																					
Agency or Company		From/To	Before toll plaza																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	8679 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2406 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB																					
Agency or Company		From/To	After toll plaza																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	10122 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2806 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	I-280 NB																					
Agency or Company		From/To	S. of US 101 (Alemany Off/On)																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	8200 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2284 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	I-280 SB																					
Agency or Company		From/To	S. of US 101 (Alemany On/Off)																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	AM Peak	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	6900 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1922 pc/h/ln	Design LOS																						
S	55.6 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	34.6 pc/mi/ln	S	mi/h																					
LOS	D	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 NB																					
Agency or Company		From/To	SF County Line (Alana/3rd St)																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	PM Peak	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	10230 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2849 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 SB																					
Agency or Company		From/To	SF County Line (3rd St/Alana)																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	PM Peak	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	10190 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2838 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB																					
Agency or Company		From/To	Before toll plaza																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	PM Peak	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	10308 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2857 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB																					
Agency or Company		From/To	After toll plaza																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	PM Peak	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	9225 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/[1+P _T (E _T -1) + P _R (E _R -1)]	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2557 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	I-280 NB																					
Agency or Company		From/To	S. of US 101 (Alemany Off/On)																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	PM Peak	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	6680 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1861 pc/h/ln	Design LOS																						
S	55.8 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	33.3 pc/mi/ln	S	mi/h																					
LOS	D	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	I-280 SB																					
Agency or Company		From/To	S. of US 101 (Alemany On/Off)																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	PM Peak	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	9140 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2546 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 NB																					
Agency or Company		From/To	SF County Line (Alana/3rd St)																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	6500 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1810 pc/h/ln	Design LOS																						
S	55.9 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	32.4 pc/mi/ln	S	mi/h																					
LOS	D	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 SB																					
Agency or Company		From/To	SF County Line (3rd St/Alana)																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	6810 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1897 pc/h/ln	Design LOS																						
S	55.7 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	34.1 pc/mi/ln	S	mi/h																					
LOS	D	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB																					
Agency or Company		From/To	Before toll plaza																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	9342 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2589 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v _p	LOS, S, D	Design (N)	FFS, LOS, v _p	N, S, D	Design (v _p)	FFS, LOS, N	v _p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v _p)	FFS, LOS, N	v _p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB																					
Agency or Company		From/To	After toll plaza																					
Date Performed	9/14/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	Var2A																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	8586 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2380 pc/h/ln	Design LOS																						
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	pc/mi/ln	S	mi/h																					
LOS	F	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

BASIC FREEWAY SEGMENTS WORKSHEET

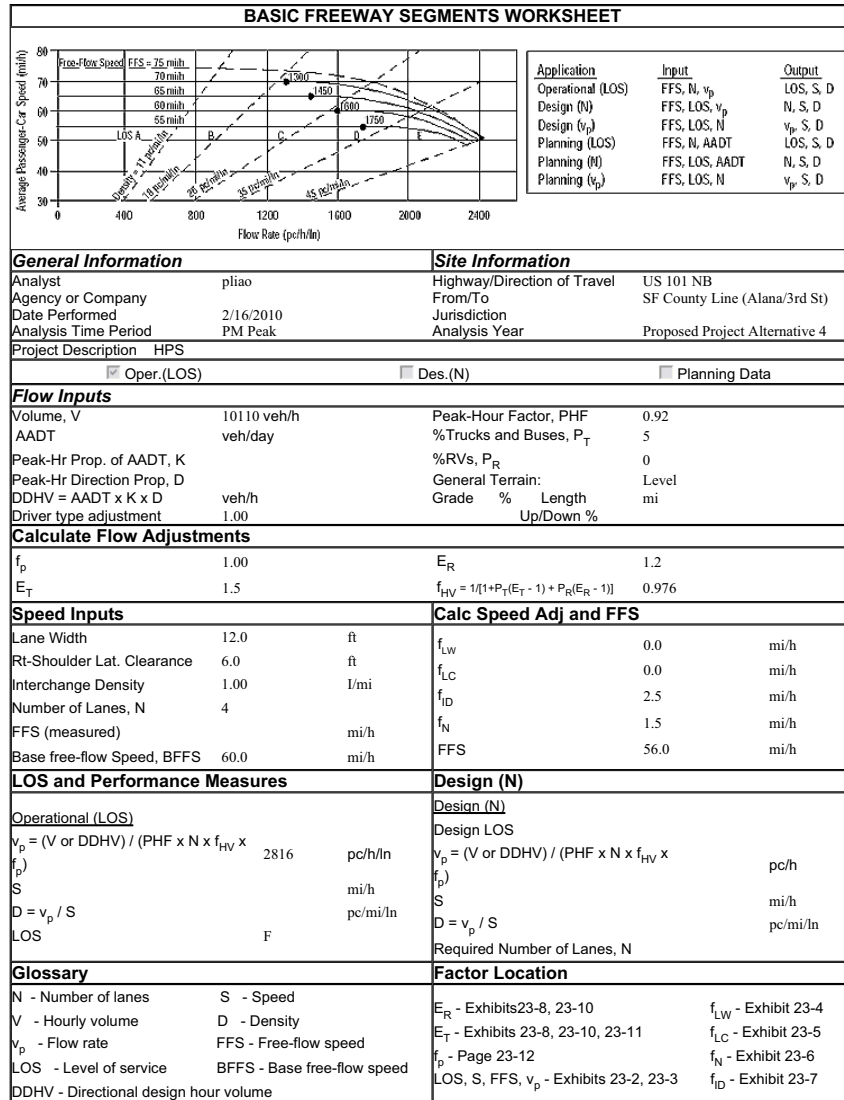
Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 NB
Agency or Company		From/To	S. of US 101 (Alemany Off/On)
Date Performed	9/14/2010	Jurisdiction	
Analysis Time Period	Sunday PM	Analysis Year	Var2A
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	4350 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1212 pc/h/ln	Design LOS	
S	56.0 mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	21.6 pc/mi/ln	S	mi/h
LOS	C	$D = v_p / S$	pc/mi/ln
Required Number of Lanes, N			
Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Application	Input	Output
Operational (LOS)	FFS, N, v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N, S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	I-280 SB
Agency or Company		From/To	S. of US 101 (Alemany On/Off)
Date Performed	9/14/2010	Jurisdiction	
Analysis Time Period	Sunday PM	Analysis Year	Var2A
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	5940 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1654 pc/h/ln	Design LOS	
S	56.0 mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	29.5 pc/mi/ln	S	mi/h
LOS	D	$D = v_p / S$	pc/mi/ln
Required Number of Lanes, N			
Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			



General Information	Site Information
Analyst: pliao	Highway/Direction of Travel: US 101 NB
Agency or Company:	From/To: SF County Line (Alana/3rd St)
Date Performed: 2/16/2010	Jurisdiction:
Analysis Time Period: PM Peak	Analysis Year: Proposed Project Alternative 4
Project Description: HPS	

<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data
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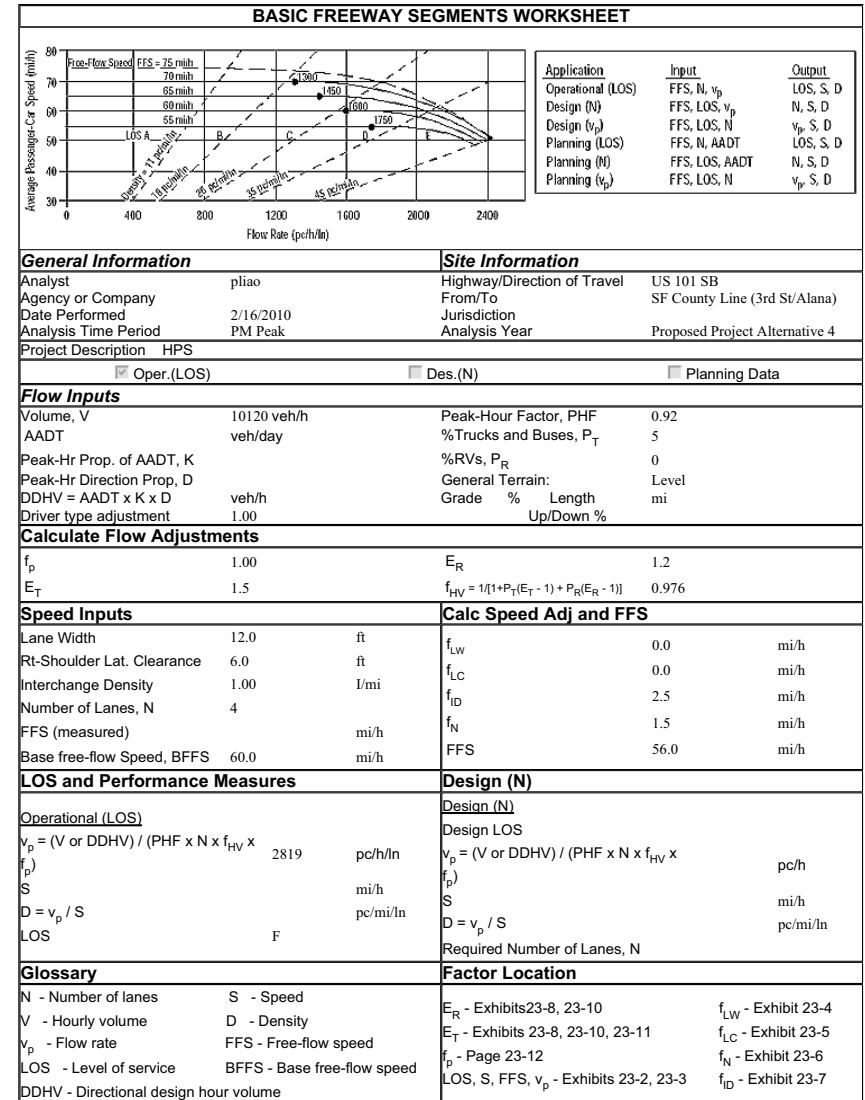
Flow Inputs			
Volume, V	10110 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade % Length	mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>			
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2816 pc/h/ln	Design LOS	
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	pc/mi/ln	S	mi/h
LOS	F	$D = v_p / S$	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			



General Information	Site Information
Analyst: pliao	Highway/Direction of Travel: US 101 SB
Agency or Company:	From/To: SF County Line (3rd St/Alana)
Date Performed: 2/16/2010	Jurisdiction:
Analysis Time Period: PM Peak	Analysis Year: Proposed Project Alternative 4
Project Description: HPS	

<input checked="" type="checkbox"/> Oper.(LOS)	<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data
--	----------------------------------	--

Flow Inputs			
Volume, V	10120 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade % Length	mi
Driver type adjustment	1.00	Up/Down %	

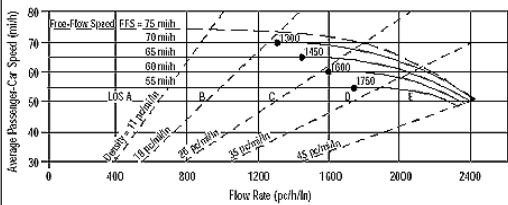
Calculate Flow Adjustments			
f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976

Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f_{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h
Number of Lanes, N	4	f_N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		

LOS and Performance Measures		Design (N)	
<u>Operational (LOS)</u>			
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2819 pc/h/ln	Design LOS	
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h
$D = v_p / S$	pc/mi/ln	S	mi/h
LOS	F	$D = v_p / S$	pc/mi/ln
		Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

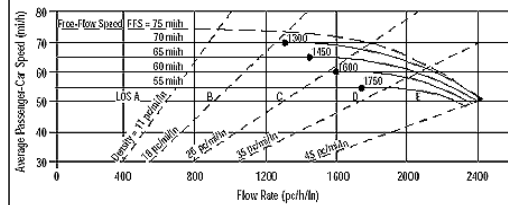
BASIC FREEWAY SEGMENTS WORKSHEET



Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB
Agency or Company		From/To	Before toll plaza
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	Proposed Project Alternative 4
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	9959 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	4
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2760 pc/h/ln	Design LOS	
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
D = v _p / S	pc/mi/ln	S	mi/h
LOS	F	D = v _p / S	pc/mi/ln
		Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET



Application	Input	Output
Operational (LOS)	FFS, N, v _p	LOS, S, D
Design (N)	FFS, LOS, v _p	N, S, D
Design (v _p)	FFS, LOS, N	v _p , S, D
Planning (LOS)	FFS, N, AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N, S, D
Planning (v _p)	FFS, LOS, N	v _p , S, D

General Information		Site Information	
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB
Agency or Company		From/To	After toll plaza
Date Performed	2/11/2010	Jurisdiction	
Analysis Time Period	PM Peak	Analysis Year	Proposed Project Alternative 4
Project Description HPS			
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	
<input type="checkbox"/> Planning Data			
Flow Inputs			
Volume, V	9167 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P _T	4
Peak-Hr Prop. of AADT, K		%RVs, P _R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	
Calculate Flow Adjustments			
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.980
Speed Inputs		Calc Speed Adj and FFS	
Lane Width	12.0 ft	f _{LW}	0.0 mi/h
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h
Number of Lanes, N	4	f _N	1.5 mi/h
FFS (measured)	mi/h	FFS	56.0 mi/h
Base free-flow Speed, BFFS	60.0 mi/h		
LOS and Performance Measures		Design (N)	
Operational (LOS)		Design (N)	
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	2541 pc/h/ln	Design LOS	
S	mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h
D = v _p / S	pc/mi/ln	S	mi/h
LOS	F	D = v _p / S	pc/mi/ln
		Required Number of Lanes, N	
Glossary		Factor Location	
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7
DDHV - Directional design hour volume			

BASIC FREEWAY SEGMENTS WORKSHEET

Graph showing Average Passenger-Car Speed (mi/h) vs Flow Rate (pc/h/ln) for various design speeds and LOS levels. The y-axis ranges from 30 to 80 mi/h, and the x-axis ranges from 0 to 2400 pc/h/ln. Curves represent design speeds of 75, 70, 65, 60, and 55 mi/h. LOS levels A, B, C, D, and E are indicated on the graph.

Application	Input	Output
Operational (LOS)	FFS, N , v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N , S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N , AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N , S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information

Analyst: pliao
 Agency or Company: pliao
 Date Performed: 2/16/2010
 Analysis Time Period: PM Peak
 Project Description: HPS

Site Information

Highway/Direction of Travel: I-280 NB
 From/To: S. of US 101 (Alemany Off/On)
 Jurisdiction:
 Analysis Year: Proposed Project Alternative 4

Oper.(LOS)

Des.(N)

Planning Data

Flow Inputs

Volume, V	6680 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976

Speed Inputs

Lane Width: 12.0 ft
 Rt-Shoulder Lat. Clearance: 6.0 ft
 Interchange Density: 1.00 I/mi
 Number of Lanes, N: 4
 FFS (measured): mi/h
 Base free-flow Speed, BFFS: 60.0 mi/h

Calc Speed Adj and FFS

f_{LW} : 0.0 mi/h
 f_{LC} : 0.0 mi/h
 f_{ID} : 2.5 mi/h
 f_N : 1.5 mi/h
 FFS: 56.0 mi/h

LOS and Performance Measures

Operational (LOS)

$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$: 1861 pc/h/ln
 S : 55.8 mi/h
 $D = v_p / S$: 33.3 pc/mi/ln
 LOS: D

Design (N)

Design LOS
 $v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$: pc/h
 f_p : pc/h
 S : mi/h
 $D = v_p / S$: pc/mi/ln
 Required Number of Lanes, N

Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

f_{LW} - Exhibit 23-4
 f_{LC} - Exhibit 23-5
 f_N - Exhibit 23-6
 f_{ID} - Exhibit 23-7

BASIC FREEWAY SEGMENTS WORKSHEET

Graph showing Average Passenger-Car Speed (mi/h) vs Flow Rate (pc/h/ln) for various design speeds and LOS levels. The y-axis ranges from 30 to 80 mi/h, and the x-axis ranges from 0 to 2400 pc/h/ln. Curves represent design speeds of 75, 70, 65, 60, and 55 mi/h. LOS levels A, B, C, D, and E are indicated on the graph.

Application	Input	Output
Operational (LOS)	FFS, N , v_p	LOS, S, D
Design (N)	FFS, LOS, v_p	N , S, D
Design (v_p)	FFS, LOS, N	v_p , S, D
Planning (LOS)	FFS, N , AADT	LOS, S, D
Planning (H)	FFS, LOS, AADT	N , S, D
Planning (v_p)	FFS, LOS, N	v_p , S, D

General Information

Analyst: pliao
 Agency or Company: pliao
 Date Performed: 2/16/2010
 Analysis Time Period: PM Peak
 Project Description: HPS

Site Information

Highway/Direction of Travel: I-280 SB
 From/To: S. of US 101 (Alemany On/Off)
 Jurisdiction:
 Analysis Year: Proposed Project Alternative 4

Oper.(LOS)

Des.(N)

Planning Data

Flow Inputs

Volume, V	9140 veh/h	Peak-Hour Factor, PHF	0.92
AADT	veh/day	%Trucks and Buses, P_T	5
Peak-Hr Prop. of AADT, K		%RVs, P_R	0
Peak-Hr Direction Prop, D		General Terrain:	Level
DDHV = AADT x K x D	veh/h	Grade %	Length mi
Driver type adjustment	1.00	Up/Down %	

Calculate Flow Adjustments

f_p	1.00	E_R	1.2
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976

Speed Inputs

Lane Width: 12.0 ft
 Rt-Shoulder Lat. Clearance: 6.0 ft
 Interchange Density: 1.00 I/mi
 Number of Lanes, N: 4
 FFS (measured): mi/h
 Base free-flow Speed, BFFS: 60.0 mi/h

Calc Speed Adj and FFS

f_{LW} : 0.0 mi/h
 f_{LC} : 0.0 mi/h
 f_{ID} : 2.5 mi/h
 f_N : 1.5 mi/h
 FFS: 56.0 mi/h

LOS and Performance Measures

Operational (LOS)

$v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$: 2546 pc/h/ln
 S : 55.8 mi/h
 $D = v_p / S$: 45.8 pc/mi/ln
 LOS: F

Design (N)

Design LOS
 $v_p = (V \text{ or DDHV}) / (PHF \times N \times f_{HV} \times f_p)$: pc/h
 f_p : pc/h
 S : mi/h
 $D = v_p / S$: pc/mi/ln
 Required Number of Lanes, N

Glossary

N - Number of lanes
 V - Hourly volume
 v_p - Flow rate
 LOS - Level of service
 DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 23-8, 23-10
 E_T - Exhibits 23-8, 23-10, 23-11
 f_p - Page 23-12
 LOS, S, FFS, v_p - Exhibits 23-2, 23-3

f_{LW} - Exhibit 23-4
 f_{LC} - Exhibit 23-5
 f_N - Exhibit 23-6
 f_{ID} - Exhibit 23-7

BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v_p	LOS, S, D	Design (N)	FFS, LOS, v_p	N, S, D	Design (v_p)	FFS, LOS, N	v_p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v_p)	FFS, LOS, N	v_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 NB																					
Agency or Company		From/To	SF County Line (Alana/3rd St)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	Proposed Project Alternative 4																					
Project Description	HPS																							
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data																					
Flow Inputs																								
Volume, V	6260 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1744 pc/h/ln	Design LOS																						
f_p		$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
S	56.0 mi/h	f_p																						
D = v_p / S	31.1 pc/mi/ln	S	mi/h																					
LOS	D	D = v_p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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BASIC FREEWAY SEGMENTS WORKSHEET																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Design (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (H)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (v_p)</td> <td>FFS, LOS, N</td> <td>v_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N, v_p	LOS, S, D	Design (N)	FFS, LOS, v_p	N, S, D	Design (v_p)	FFS, LOS, N	v_p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, D	Planning (H)	FFS, LOS, AADT	N, S, D	Planning (v_p)	FFS, LOS, N	v_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	US 101 SB																					
Agency or Company		From/To	SF County Line (3rd St/Alana)																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	Proposed Project Alternative 4																					
Project Description	HPS																							
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)	<input type="checkbox"/> Planning Data																					
Flow Inputs																								
Volume, V	6810 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T - 1) + P_R(E_R - 1))$	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	1897 pc/h/ln	Design LOS																						
f_p		$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
S	55.7 mi/h	f_p																						
D = v_p / S	34.1 pc/mi/ln	S	mi/h																					
LOS	D	D = v_p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

HCS2000™

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Version 4.1f

BASIC FREEWAY SEGMENTS WORKSHEET																								
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Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge EB																					
Agency or Company		From/To	Before toll plaza																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	Proposed Project Alternative 4																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	9226 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade % Length	mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T-1) + P_R(E_R-1))$	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2557 pc/h/ln	Design LOS																						
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
$D = v_p / S$	pc/mi/ln	S	mi/h																					
LOS	F	$D = v_p / S$	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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Application	Input	Output																						
Operational (LOS)	FFS, N, v_p	LOS, S, D																						
Design (N)	FFS, LOS, v_p	N, S, D																						
Design (v_p)	FFS, LOS, N	v_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v_p)	FFS, LOS, N	v_p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	SF/Oakland Bay Bridge WB																					
Agency or Company		From/To	After toll plaza																					
Date Performed	2/11/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	Proposed Project Alternative 4																					
Project Description HPS																								
<input checked="" type="checkbox"/> Oper.(LOS) <input type="checkbox"/> Des.(N) <input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	8496 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P_T	4																					
Peak-Hr Prop. of AADT, K		%RVs, P_R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade % Length	mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f_p	1.00	E_R	1.2																					
E_T	1.5	$f_{HV} = 1/(1+P_T(E_T-1) + P_R(E_R-1))$	0.980																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f_{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f_{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f_{ID}	2.5 mi/h																					
Number of Lanes, N	4	f_N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	2355 pc/h/ln	Design LOS																						
S	mi/h	$v_p = (V \text{ or } DDHV) / (PHF \times N \times f_{HV} \times f_p)$	pc/h																					
$D = v_p / S$	pc/mi/ln	S	mi/h																					
LOS	F	$D = v_p / S$	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E_R - Exhibits 23-8, 23-10	f_{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E_T - Exhibits 23-8, 23-10, 23-11	f_{LC} - Exhibit 23-5																					
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 23-12	f_N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 23-2, 23-3	f_{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	I-280 NB																					
Agency or Company		From/To	S. of US 101 (Alemany Off/On)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	Proposed Project Alternative 4																					
Project Description	HPS																							
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	4350 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1212 pc/h/ln	Design LOS																						
S	56.0 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	21.6 pc/mi/ln	S	mi/h																					
LOS	C	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
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Application	Input	Output																						
Operational (LOS)	FFS, N, v _p	LOS, S, D																						
Design (N)	FFS, LOS, v _p	N, S, D																						
Design (v _p)	FFS, LOS, N	v _p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, D																						
Planning (H)	FFS, LOS, AADT	N, S, D																						
Planning (v _p)	FFS, LOS, N	v _p , S, D																						
General Information		Site Information																						
Analyst	pliao	Highway/Direction of Travel	I-280 SB																					
Agency or Company		From/To	S. of US 101 (Alemany On/Off)																					
Date Performed	2/16/2010	Jurisdiction																						
Analysis Time Period	Sunday PM	Analysis Year	Proposed Project Alternative 4																					
Project Description	HPS																							
<input checked="" type="checkbox"/> Oper.(LOS)		<input type="checkbox"/> Des.(N)																						
<input type="checkbox"/> Planning Data																								
Flow Inputs																								
Volume, V	5940 veh/h	Peak-Hour Factor, PHF	0.92																					
AADT	veh/day	%Trucks and Buses, P _T	5																					
Peak-Hr Prop. of AADT, K		%RVs, P _R	0																					
Peak-Hr Direction Prop, D		General Terrain:	Level																					
DDHV = AADT x K x D	veh/h	Grade %	Length mi																					
Driver type adjustment	1.00	Up/Down %																						
Calculate Flow Adjustments																								
f _p	1.00	E _R	1.2																					
E _T	1.5	f _{HV} = 1/(1+P _T (E _T -1) + P _R (E _R -1))	0.976																					
Speed Inputs		Calc Speed Adj and FFS																						
Lane Width	12.0 ft	f _{LW}	0.0 mi/h																					
Rt-Shoulder Lat. Clearance	6.0 ft	f _{LC}	0.0 mi/h																					
Interchange Density	1.00 I/mi	f _{ID}	2.5 mi/h																					
Number of Lanes, N	4	f _N	1.5 mi/h																					
FFS (measured)	mi/h	FFS	56.0 mi/h																					
Base free-flow Speed, BFFS	60.0 mi/h																							
LOS and Performance Measures		Design (N)																						
Operational (LOS)		Design (N)																						
v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	1654 pc/h/ln	Design LOS																						
S	56.0 mi/h	v _p = (V or DDHV) / (PHF x N x f _{HV} x f _p)	pc/h																					
D = v _p / S	29.5 pc/mi/ln	S	mi/h																					
LOS	D	D = v _p / S	pc/mi/ln																					
		Required Number of Lanes, N																						
Glossary		Factor Location																						
N - Number of lanes	S - Speed	E _R - Exhibits 23-8, 23-10	f _{LW} - Exhibit 23-4																					
V - Hourly volume	D - Density	E _T - Exhibits 23-8, 23-10, 23-11	f _{LC} - Exhibit 23-5																					
v _p - Flow rate	FFS - Free-flow speed	f _p - Page 23-12	f _N - Exhibit 23-6																					
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v _p - Exhibits 23-2, 23-3	f _{ID} - Exhibit 23-7																					
DDHV - Directional design hour volume																								

No.	Freeway Direction/Ramps	Analysis Time Period	Freeway Data			Freeway Volume Adjustment						Effective Flow Rate				Ramp Data			Project V_s			Accel Lane (ft)			Flow Rate V_p (pcph)	P_{15}/P_{10}
			Lanes	S_{FR} (mph)	V (vph)	PHF	Terrain %	RV %	E_T	E_R	f_{IU}	f_P	V_s (pcph)	V_{sHE} (pcph)	Type	Lanes	S_{FR} (mph)	V_s (vph)	(vph)	%	L_{A1}	L_{A2}	L_{Aeff}			
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	5	60	9,587	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,681	8,181	Right	1	45	1,349	0	0%	350	0	1,503	0.436	
		PM	5	60	6,843	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,624	5,451	Right	1	45	1,251	0	0%	350	0	1,394	0.436	
		Sunday	5	60	5,213	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	5,808	4,414	Right	1	45	913	0	0%	350	0	1,017	0.436	
2	US 101 NB On from Bayshore/Cesar Chavez	AM	4	60	8,238	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,178	6,678	Right	1	45	1,860	0	0%	100	0	250	2,072	0.021
		PM	4	60	5,592	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,230	4,735	Right	1	45	1,131	0	0%	100	0	250	1,260	0.122
		Sunday	4	60	4,300	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,791	3,737	Right	1	45	885	0	0%	100	0	250	986	0.156
3	US 101 SB Off to Cesar Chavez	AM	4	60	8,377	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,333	6,833	Right	1	45	1,435	0	0%	125	0	125	1,599	0.436
		PM	4	60	8,458	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,423	6,923	Right	1	45	1,460	0	0%	125	0	125	1,627	0.436
		Sunday	4	60	7,236	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,062	5,764	Right	1	45	768	0	0%	125	0	125	856	0.436
4	US 101 NB Off to Third/Bayshore	AM	5	60	6,757	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,528	5,383	Right	1	45	1,153	0	0%	100	0	1,285	0.436	
		PM	5	60	7,879	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,778	6,278	Right	1	45	678	0	0%	100	0	755	0.436	
		Sunday	5	60	4,414	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,918	3,836	Right	1	45	395	0	0%	100	0	440	0.436	
5	US 101 NB On from Third St/Bayshore	AM	5	60	8,051	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,970	6,470	Right	1	45	1,455	0	0%	220	0	350	1,621	0.102
		PM	5	60	6,189	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,895	5,034	Right	1	45	903	0	0%	220	0	350	1,006	0.179
		Sunday	5	60	5,034	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	5,609	4,262	Right	1	45	286	0	0%	220	0	350	319	0.265
6	US 101 SB Off to Bayshore/Third	AM	5	60	8,071	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,992	6,492	Right	1	45	799	0	0%	100	0	890	0.436	
		PM	5	60	7,595	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,462	6,050	Right	1	45	862	0	0%	100	0	960	0.436	
		Sunday	5	60	4,735	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	5,275	4,115	Right	1	45	545	0	0%	100	0	607	0.436	
7	US 101 SB On from Bayshore Blvd/Third	AM	4	60	7,272	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,102	5,793	Right	1	45	674	0	0%	1,060	0	1,000	751	0.372
		PM	4	60	6,733	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,501	5,364	Right	1	45	387	0	0%	1,060	0	1,000	431	0.412
		Sunday	4	60	4,190	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,668	3,641	Right	1	45	105	0	0%	1,060	0	1,000	117	0.451
8	I-280 NB Off to Cesar Chavez	AM	3	60	6,482	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,222	5,272	Right	2	45	1,096	0	0%	100	50	250	1,221	0.450
		PM	3	60	4,825	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	5,376	4,193	Right	2	45	680	0	0%	100	50	250	758	0.450
		Sunday	3	60	3,136	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	3,494	2,725	Right	2	45	442	0	0%	100	50	250	492	0.450
9	I-280 NB On from Indiana	AM	3	60	5,386	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,001	4,561	Right	1	45	474	0	0%	400	0	600	528	0.594
		PM	3	60	4,145	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,618	3,602	Right	1	45	520	0	0%	400	0	600	579	0.594
		Sunday	3	60	2,694	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	3,011	2,341	Right	1	45	338	0	0%	400	0	600	377	0.594
10	I-280 SB Off to Pennsylvania	AM	3	60	3,055	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	3,404	2,655	Right	1	45	499	0	0%	150	0	150	556	0.649
		PM	3	60	5,724	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,377	4,847	Right	1	45	652	0	0%	150	0	150	726	0.567
		Sunday	3	60	3,721	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,146	3,234	Right	1	45	424	0	0%	150	0	150	472	0.635

No.	Freeway Direction/Ramps	Analysis Time Period	Capacity Checks					Results																	
			V_{12} (pcph)	V_{12} (pcph)	Max V_{12} (pcph)	LOS F?	V_{10} (pcph)	Max V_{10} (pcph)	LOS F?	V_{3} , V_{av34} (pcphpl)	V_{3} , V_{av34} >2,700?	V_{3} , V_{av34} >1.5* $V_{12}/2$?	V_{12} (pcph)	Max V_{R12a} (pcph)	LOS F?	V_s (pcph)	Max V_s (pcph)	LOS F?	Density, D (pcplpm)	LOS	Int. Var, M_s (mph)	Inf. Area S_a (mph)	V_{0a} (mph)	Out Lns. S_0 (mph)	All vehs. S (mph)
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	3,567	8,181	11,750	No	6,678	11,750	No	2,307	No	No	3,567	4,400	No	1,503	2,100	No	34.9	D	0.433	52.2	2,371	60.5	57.4
		PM	2,377	5,451	11,750	No	4,057	11,750	No	1,537	No	No	2,377	4,400	No	1,394	2,100	No	24.7	C	0.423	52.4	1,749	62.9	59.2
		Sunday	1,925	4,414	11,750	No	3,397	11,750	No	1,245	No	No	1,925	4,400	No	1,017	2,100	No	20.8	C	0.390	53.0	1,294	64.7	60.3
2	US 101 NB On from Bayshore/Cesar Chavez	AM	190	9,178	9,400	No	11,250	9,400	Yes	4,494	Yes	Yes	3,778	5,850	Yes	2,072	2,100	No	-	F	1.653	30.2	1,800	55.3	38.6
		PM	762	6,230	9,400	No	7,490	9,400	No	2,734	Yes	Yes	830	2,090	Yes	1,260	2,100	No	19.6	B	0.330	54.1	1,800	55.3	55.0
		Sunday	750	4,791	9,400	No	5,777	9,400	No	2,021	No	Yes	1,916	2,902	Yes	986	2,100	No	26.1	C	0.370	53.3	958	58.4	55.7
3	US 101 SB Off to Cesar Chavez	AM	4,971	9,333	9,400	No	7,734	9,400	No	2,181	No	No	4,971	4,400	Yes	1,599	2,100	No	-	F	0.442	52.0	2,181	61.2	56.0
		PM	5,026	9,423	9,400	Yes	7,797	9,400	No	2,199	No	No	5,026	4,400	Yes	1,627	2,100	No	-	F	0.444	52.0	2,199	61.1	55.9
		Sunday	3,998	8,062	9,400	No	7,206	9,400	No	2,032	No	No	3,998	4,400	No	856	2,100	No	37.5	E	0.375	53.2	2,032	61.8	57.2
4	US 101 NB Off to Third/Bayshore	AM	2,347	5,383	11,750	No	4,098	11,750	No	1,518	No	No	2,347	4,400	No	1,285	2,100	No	24.4	C	0.414	52.6	1,727	63.0	59.3
		PM	2,737	6,278	11,750	No	5,523	11,750	No	1,770	No	No	2,737	4,400	No	755	2,100	No	27.8	C	0.366	53.4	2,014	61.9	59.0
		Sunday	1,672	3,836	11,750	No	3,396	11,750	No	1,082	No	No	1,672	4,400	No	440	2,100	No	18.6	B	0.338	53.9	1,082	65.5	61.0
5	US 101 NB On from Third St/Bayshore	AM	659	6,470	11,750	No	8,091	11,750	No	2,905	Yes	Yes	1,070	2,691	Yes	1,621	2,100	No	23.5	C	0.347	53.8	2,633	51.5	52.0
		PM	900	5,034	11,750	No	6,040	11,750	No	2,067	No	Yes	2,013	3,020	Yes	1,006	2,100	No	26.4	C	0.369	53.4	1,627	55.9	54.9
		Sunday	1,128	4,262	11,750	No	4,581	11,750	No	1,567	No	Yes	1,705	2,024	Yes	319	2,100	No	18.9	B	0.319	54.3	1,301	57.1	56.1
6	US 101 SB Off to Bayshore/Third	AM	2,831	6,492	11,750	No	5,602	11,750	No	1,831	No	No	2,831	4,400	No	890	2,100	No	28.6	D	0.378	53.2	2,054	61.7	58.7
		PM	2,638	6,050	11,750	No	5,090	11,750	No	1,706	No	No	2,638	4,400	No	960	2,100	No	26.9	C	0.384	53.1	1,941	62.1	59.0
		Sunday	1,794	4,115	11,750	No	3,508	11,750	No	1,160	No	No	1,794	4,400	No	607	2,100	No	19.7	B	0.353	53.7	1,160	65.2	60.7
7	US 101 SB On from Bayshore Blvd/Third	AM	3,012	8,102	9,400	No	8,853	9,400	No	2,545	No	Yes	3,241	3,992</											

No.	Freeway Direction/Ramps	Analysis Time Period	Freeway Data			Freeway Volume Adjustment						Effective Flow Rate				Ramp Data			Project V_R		Accel Lane (ft)			Flow Rate V_R (pcph)	P_{12}/P_{10}	
			Lanes	S_R (mph)	V (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{10}	f_p	V_L (pcph)	V_{Ramp} (pcph)	Type	Lanes	S_R (mph)	V_R (vph)	(vph)	%	L_{A1}	L_{A2}			L_{Aeff}
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	5	60	11,337	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,631	10,131	Right	1	45	1,977	0	0%	350	0	250	2,203	0.436
		PM	5	60	10,673	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,891	9,391	Right	1	45	1,603	0	0%	350	0	250	1,786	0.436
		Sunday	5	60	8,360	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,314	6,814	Right	1	45	1,190	0	0%	350	0	250	1,326	0.436
2	US 101 NB On from Bayshore/Cesar Chavez	AM	4	60	9,360	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,428		Right	1	45	1,923	0	0%	100	0	250	2,142	0.012
		PM	4	60	9,070	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,105		Right	1	45	1,244	0	0%	100	0	250	1,386	0.106
		Sunday	4	60	7,170	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,988		Right	1	45	901	0	0%	100	0	250	1,004	0.154
3	US 101 SB Off to Cesar Chavez	AM	4	60	10,636	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,850		Right	1	45	1,446	0	0%	125	0	125	1,611	0.436
		PM	4	60	10,803	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,036		Right	1	45	1,513	0	0%	125	0	125	1,686	0.436
		Sunday	4	60	8,331	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,282		Right	1	45	791	0	0%	125	0	125	881	0.436
4	US 101 NB Off to Third/Bayshore	AM	5	60	8,760	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,760	7,260	Right	1	45	1,503	0	0%	100	0		1,675	0.436
		PM	5	60	9,742	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,854	8,354	Right	1	45	799	0	0%	100	0		890	0.436
		Sunday	5	60	6,120	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,818	4,977	Right	1	45	488	0	0%	100	0		544	0.436
5	US 101 NB On from Third St/Bayshore	AM	5	60	7,877	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,776	6,276	Right	1	45	1,520	0	0%	220	0	350	1,693	0.093
		PM	5	60	8,993	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,019	7,519	Right	1	45	1,000	0	0%	220	0	350	1,114	0.165
		Sunday	5	60	5,910	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,585	4,807	Right	1	45	450	0	0%	220	0	350	501	0.242
6	US 101 SB Off to Bayshore/Third	AM	5	60	10,756	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,984	9,484	Right	1	45	1,226	0	0%	100	0		1,366	0.436
		PM	5	60	9,861	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,986	8,486	Right	1	45	1,161	0	0%	100	0		1,294	0.436
		Sunday	5	60	6,674	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,436	5,428	Right	1	45	734	0	0%	100	0		818	0.436
7	US 101 SB On from Bayshore Blvd/Third	AM	4	60	9,530	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,618	811	Right	1	45	831	0	0%	1,060	0	1,000	926	0.350
		PM	4	60	8,700	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,693	981	Right	1	45	994	0	0%	1,060	0	1,000	1,107	0.327
		Sunday	4	60	5,940	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,618	439	Right	1	45	452	0	0%	1,060	0	1,000	504	0.403
8	I-280 NB Off to Cesar Chavez	AM	3	60	7,110	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,921		Right	2	45	1,470	0	0%	100	50	250	1,638	0.450
		PM	3	60	6,670	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,431		Right	2	45	930	0	0%	100	50	250	1,036	0.450
		Sunday	3	60	4,390	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,891		Right	2	45	500	0	0%	100	50	250	557	0.450
9	I-280 NB On from Indiana	AM	3	60	5,640	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,284		Right	1	45	756	0	0%	400	0	600	842	0.594
		PM	3	60	5,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,395		Right	1	45	894	0	0%	400	0	600	996	0.594
		Sunday	3	60	3,890	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,334		Right	1	45	427	0	0%	400	0	600	476	0.594
10	I-280 SB Off to Pennsylvania	AM	3	60	5,640	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,284		Right	1	45	610	0	0%	150	0	150	680	0.572
		PM	3	60	6,719	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,486		Right	1	45	829	0	0%	150	0	150	924	0.530
		Sunday	3	60	4,394	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,895		Right	1	45	554	0	0%	150	0	150	617	0.609

No.	Freeway Direction/Ramps	Analysis Time Period	Capacity Checks			Max V_{R10}			V_{10} V_{R034}			V_{10} V_{R034}			Max V_{R12a}			Results			Density, D (pcplpm)	LOS	Int. Var. M_3	Inf. Area S_R (mph)	V_{0a}	Out Lns. S_0 (mph)	All vehs. S (mph)
			V_{10} (pcph)	V_L (pcph)	Max V_{R10} (pcph)	LOS F?	V_{10} (pcph)	Max V_{R10} (pcph)	LOS F?	V_{10} V_{R034} (pcphpl)	V_{10} V_{R034} >2,700?	V_{10} V_{R034} >1.5 $V_{10}/2?$	V_{12a} (pcph)	V_{R12a} (pcph)	Max V_{R12a} (pcph)	LOS F?	V_R (pcph)	Max V_R (pcph)	LOS F?	Density, D (pcplpm)							
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	4,417	10,131	11,750	No	7,928	11,750	No	2,857	Yes	No	4,731	4,400	Yes	2,203	2,100	Yes	-	F	0.496	51.1	2,633	59.5	56.0		
		PM	4,095	9,391	11,750	No	7,605	11,750	No	2,648	No	No	4,095	4,400	No	1,786	2,100	No	39.5	E	0.459	51.7	2,599	59.6	56.6		
		Sunday	2,971	6,814	11,750	No	5,488	11,750	No	1,922	No	No	2,971	4,400	No	1,326	2,100	No	29.8	D	0.417	52.5	2,114	61.5	58.3		
2	US 101 NB On from Bayshore/Cesar Chavez	AM	124	10,428	9,400	Yes	12,571	9,400	Yes	5,152	Yes	Yes	5,028	7,171	4,600	Yes	2,142	2,100	Yes	-	F	5.372	-36.7	1,800	55.3	-128.5	
		PM	1,076	10,105	9,400	Yes	11,491	9,400	Yes	4,514	Yes	Yes	4,705	6,091	4,600	Yes	1,386	2,100	No	-	F	2.022	23.6	1,800	55.3	32.3	
		Sunday	1,232	7,988	9,400	No	8,992	9,400	No	3,378	Yes	Yes	2,588	3,592	4,600	No	1,004	2,100	No	31.5	D	0.440	52.1	1,800	55.3	54.0	
3	US 101 SB Off to Cesar Chavez	AM	6,075	11,850	9,400	Yes	10,239	9,400	Yes	2,887	Yes	No	6,450	4,400	Yes	1,611	2,100	No	-	F	0.443	52.0	2,700	59.2	55.1		
		PM	6,198	12,036	9,400	Yes	10,350	9,400	Yes	2,919	Yes	No	6,636	4,400	Yes	1,686	2,100	No	-	F	0.450	51.9	2,700	59.2	54.9		
		Sunday	4,544	9,282	9,400	No	8,401	9,400	No	2,369	No	No	4,544	4,400	Yes	881	2,100	No	-	F	0.377	53.2	2,369	60.5	56.7		
4	US 101 NB Off to Third/Bayshore	AM	3,165	7,260	11,750	No	5,585	11,750	No	2,047	No	No	3,165	4,400	No	1,675	2,100	No	31.5	E	0.449	51.9	2,198	61.1	57.8		
		PM	3,642	8,354	11,750	No	7,464	11,750	No	2,356	No	No	3,642	4,400	No	890	2,100	No	35.6	D	0.378	53.2	2,404	60.3	57.7		
		Sunday	2,170	4,977	11,750	No	4,434	11,750	No	1,404	No	No	2,170	4,400	No	544	2,100	No	22.9	C	0.347	53.8	1,549	63.7	60.1		
5	US 101 NB On from Third St/Bayshore	AM	583	6,276	11,750	No	7,969	11,750	No	2,847	Yes	Yes	876	2,569	4,600	No	1,693	2,100	No	22.5	C	0.340	53.9	2,633	51.5	52.0	
		PM	1,243	7,519	11,750	No	8,634	11,750	No	3,138	Yes	Yes	2,119	3,234	4,600	No	1,114	2,100	No	28.0	C	0.388	53.0	2,633	51.5	51.9	
		Sunday	1,163	4,807	11,750	No	5,308	11,750	No	1,822	No	Yes	1,923	2,424	4,600	No	501	2,100	No	22.0	C	0.334	54.0	1,554	56.2	55.4	
6	US 101 SB Off to Bayshore/Third	AM	4,135	9,484	11,750	No	8,118	11,750	No	3,770	Yes	Yes	4,545	5,046	4,600	Yes	501	2,100	No	42.4	E	0.896	43.9	2,633	51.5	48.2	
		PM	4,135	9,484	11,750	No	8,118	11,750	No	3,770	Yes	Yes	4,135	4,400	No	1,366	2,100	No	39.8	E	0.421	52.4	2,616	59.5			

No.	Freeway Direction/Ramps	Analysis Time Period	Freeway Data			Freeway Volume Adjustment				Effective Flow Rate				Ramp Data			Project V_k		Accel Lane (ft)			Flow Rate V_k (pcph)	P_{95}/P_{10}			
			Lanes	S_{FR} (mph)	V (vph)	PHF	Terrain	Truck/Bus %	RV %	E_T	E_R	f_{RW}	f_R	V_{01} (pcph)	V_{4left} (pcph)	Type	Lanes	S_{FR} (mph)	V_k (vph)	%	L_{k1}			L_{k2}	L_{kleft}	
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	5	60	11,327	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,620	10,120	Right	1	45	1,967	0	0%	350	0	2,191	0.436	
		PM	5	60	10,657	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,873	9,373	Right	1	45	1,587	0	0%	350	0	1,768	0.436	
		Sunday	5	60	8,330	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,281	6,781	Right	1	45	1,160	0	0%	350	0	1,292	0.436	
2	US 101 NB On from Bayshore/Cesar Chavez	AM	4	60	9,360	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,428		Right	1	45	1,919	0	0%	100	0	250	2,138	0.012
		PM	4	60	9,070	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,105		Right	1	45	1,238	0	0%	100	0	250	1,379	0.107
		Sunday	4	60	7,170	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,988		Right	1	45	897	0	0%	100	0	250	999	0.155
3	US 101 SB Off to Cesar Chavez	Gameday	4	60	11,980	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	13,347		Right	1	45	2,427	0	0%	100	0	250	2,704	-0.058
		AM	4	60	10,629	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,842		Right	1	45	1,439	0	0%	125	0	125	1,603	0.436
		PM	4	60	10,799	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,031		Right	1	45	1,509	0	0%	125	0	125	1,681	0.436
4	US 101 NB Off to Third/Bayshore	Sunday	4	60	8,324	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,274		Right	1	45	784	0	0%	125	0	125	873	0.436
		AM	5	60	8,730	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,726	7,226	Right	1	45	1,503	0	0%	100	0		1,675	0.436
		PM	5	60	9,726	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,836	8,336	Right	1	45	799	0	0%	100	0		890	0.436
5	US 101 NB On from Third St/Bayshore	Sunday	5	60	6,090	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,785	4,953	Right	1	45	488	0	0%	100	0		544	0.436
		AM	5	60	7,847	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,743	6,243	Right	1	45	1,520	0	0%	220	0	350	1,693	0.093
		PM	5	60	8,977	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,002	7,502	Right	1	45	1,000	0	0%	220	0	350	1,114	0.165
6	US 101 SB Off to Bayshore/Third	Sunday	5	60	5,880	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,551	4,782	Right	1	45	450	0	0%	220	0	350	501	0.242
		Gameday	5	60	11,140	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,411	9,911	Right	1	45	450	0	0%	220	0	350	501	0.242
		AM	5	60	10,756	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,984	9,484	Right	1	45	1,226	0	0%	100	0		1,366	0.436
7	US 101 SB On from Bayshore Blvd/Third	PM	5	60	9,861	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,986	8,486	Right	1	45	1,161	0	0%	100	0		1,294	0.436
		Sunday	5	60	6,674	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,436	5,428	Right	1	45	734	0	0%	100	0		818	0.436
		AM	4	60	9,530	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,618	811	Right	1	45	831	0	0%	1,060	0	1,000	926	0.350
8	I-280 NB Off to Cesar Chavez	PM	4	60	8,700	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,693	981	Right	1	45	994	0	0%	1,060	0	1,000	1,107	0.327
		Sunday	4	60	5,940	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,618	439	Right	1	45	452	0	0%	1,060	0	1,000	504	0.403
		Gameday	4	60	5,940	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,618	3,559	Right	1	45	3,559	0	0%	1,060	0	1,000	3,965	-0.030
9	I-280 NB Off to Indiana	AM	3	60	7,110	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,921		Right	2	45	1,470	0	0%	100	50	250	1,638	0.450
		PM	3	60	6,670	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,431		Right	2	45	930	0	0%	100	50	250	1,036	0.450
		Sunday	3	60	4,390	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,891		Right	2	45	500	0	0%	100	50	250	557	0.450
10	I-280 SB Off to Pennsylvania	AM	3	60	5,640	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,284		Right	1	45	747	0	0%	400	0	600	832	0.594
		PM	3	60	5,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,395		Right	1	45	881	0	0%	400	0	600	982	0.594
		Sunday	3	60	3,890	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,334		Right	1	45	418	0	0%	400	0	600	466	0.594
10	I-280 SB Off to Pennsylvania	Gameday	3	60	3,890	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,334		Right	1	45	3,698	0	0%	400	0	600	4,120	0.594
		AM	3	60	5,626	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,268		Right	1	45	596	0	0%	150	0	150	664	0.573
		PM	3	60	6,711	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,477		Right	1	45	821	0	0%	150	0	150	915	0.531
Sunday	3	60	4,380	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,880		Right	1	45	540	0	0%	150	0	150	602	0.610		

No.	Freeway Direction/Ramps	Analysis Time Period	Capacity Checks										Results													
			V_{12} (pcph)	V_k (pcph)	Max V_k (pcph)	LOS F?	V_{10} (pcph)	Max V_{10} (pcph)	LOS F?	$V_{10} V_{12}$ (pcph ²)	$V_{10} V_{k12}$ (pcph ²)	LOS F?	Max V_k (pcph)	LOS F?	Density, D (pcpl/m)	LOS	Int. Var, M_5 (mph)	Inf. Area S_R (mph)	V_{0k} (mph)	Out Lns. S_0 (mph)	All vehs. S (mph)					
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	4,412	10,120	11,750	No	7,928	11,750	No	2,854	Yes	No	4,720	4,400	Yes	2,191	2,100	Yes	F	0.495	51.1	2,633	59.5	56.0		
		PM	4,087	9,373	11,750	No	7,605	11,750	No	2,643	No	No	4,087	4,400	No	1,768	2,100	No	F	0.457	51.8	2,596	59.6	56.7		
		Sunday	2,956	6,781	11,750	No	5,488	11,750	No	1,912	No	No	2,956	4,400	No	1,292	2,100	No	D	0.414	52.5	2,108	61.5	58.3		
2	US 101 NB On from Bayshore/Cesar Chavez	AM	130	10,428	9,400	Yes	12,566	9,400	Yes	5,149	Yes	Yes	5,028	7,166	4,600	Yes	2,138	2,100	Yes	-	F	5.349	-36.3	1,800	55.3	-125.8
		PM	1,085	10,105	9,400	Yes	11,484	9,400	Yes	4,510	Yes	Yes	4,705	6,084	4,600	Yes	1,379	2,100	No	-	F	2.011	23.8	1,800	55.3	32.5
		Sunday	1,237	7,988	9,400	No	8,988	9,400	No	3,376	Yes	Yes	2,588	3,588	4,600	No	999	2,100	No	31.4	D	0.439	52.1	1,800	55.3	54.0
3	US 101 SB Off to Cesar Chavez	Gameday	-778	13,347	9,400	Yes	16,051	9,400	Yes	7,062	Yes	Yes	7,947	10,651	4,600	Yes	2,704	2,100	Yes	-	F	165.060	-2911.1	2,700	51.1	157.2
		AM	6,067	11,842	9,400	Yes	10,239	9,400	Yes	2,887	Yes	No	6,442	4,400	Yes	1,603	2,100	No	-	F	0.442	52.0	2,700	59.2	55.1	
		PM	6,194	12,031	9,400	Yes	10,350	9,400	Yes	2,919	Yes	No	6,631	4,400	Yes	1,681	2,100	No	-	F	0.449	51.9	2,700	59.2	54.9	
4	US 101 NB Off to Third/Bayshore	Sunday	4,536	9,274	9,400	No	8,401	9,400	No	4,536	No	No	4,536	4,400	Yes	873	2,100	No	-	F	0.377	53.2	2,369	60.5	56.7	
		AM	3,151	7,226	11,750	No	5,552	11,750	No	2,038	No	No	3,151	4,400	No	1,675	2,100	No	31.3	D	0.449	51.9	2,192	61.2	57.8	
		PM	3,635	8,336	11,750	No	7,446	11,750	No	2,351	No	No	3,635	4,400	No	890	2,100	No	35.5	E	0.378	53.2	2,401	60.4	57.7	
5	US 101 NB On from Third St/Bayshore	Sunday	2,160	4,953	11,750	No	4,409	11,750	No	1,397	No	No	2,160	4,400	No	544	2,100	No	22.8	C	0.347	53.8	1,542	63.7	60.2	
		AM	580	6,243	11,750	No	7,936	11,750	No	2,832	Yes	Yes	843	2,536	4,600	No	1,693	2,100	No	22.3	C	0.339	53.9	2,633	51.5	52.0
		PM	1,240	7,502	11,750	No	8,616	11,750	No	3,131	Yes	Yes	2,102	3,216												

No.	Freeway Direction/Ramps	Analysis Time Period	Freeway Data				Freeway Volume Adjustment				Effective Flow Rate				Ramp Data				Project V_R			Accel Lane (ft)			Flow Rate V_R (pcph)	P_{RV}/P_{RD}
			Lanes	S_R (mph)	V (vph)	PHF	Terrain	Truck/ Bus %	RV %	E_T	E_R	f_{RV}	f_R	V_R (pcph)	V_{Radj} (pcph)	Type	Lanes	S_R (mph)	V_R (vph)	(vph)	%	L_{L1}	L_{L2}	L_{Ladj}		
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	5	60	11,450	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,757	10,257	Right	1	45	1,990	49	2%	350	0	2,217	0.436	
		PM	5	60	10,890	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,133	9,633	Right	1	45	1,590	23	1%	350	0	1,771	0.436	
		Sunday	5	60	8,520	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,492	6,992	Right	1	45	1,160	18	2%	350	0	1,292	0.436	
2	US 101 NB On from Bayshore/Cesar Chavez	AM	4	60	9,460	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,540		Right	1	45	2,090	59	3%	100	0	250	2,329	-0.011
		PM	4	60	9,300	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,361		Right	1	45	1,490	101	7%	100	0	250	1,660	0.072
		Sunday	4	60	7,360	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,200		Right	1	45	1,080	62	6%	100	0	250	1,203	0.129
3	US 101 SB Off to Cesar Chavez	AM	4	60	10,910	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,155		Right	1	45	1,570	77	5%	125	0	125	1,749	0.436
		PM	4	60	10,980	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,233		Right	1	45	1,760	101	6%	125	0	125	1,961	0.436
		Sunday	4	60	8,520	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,492		Right	1	45	980	55	6%	125	0	125	1,092	0.436
4	US 101 NB Off to Third/Bayshore	AM	5	60	9,020	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,049	7,549	Right	1	45	1,626	100	6%	100	0		1,812	0.436
		PM	5	60	10,160	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,320	8,820	Right	1	45	982	107	11%	100	0		1,094	0.436
		Sunday	5	60	6,480	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,220	5,270	Right	1	45	684	116	17%	100	0		762	0.436
5	US 101 NB On from Third St/Bayshore	AM	5	60	8,000	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,913	6,413	Right	1	45	1,520	0	0%	220	0	350	1,693	0.093
		PM	5	60	9,220	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,272	7,772	Right	1	45	1,000	0	0%	220	0	350	1,114	0.165
		Sunday	5	60	6,070	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,763	4,937	Right	1	45	450	0	0%	220	0	350	501	0.242
6	US 101 SB Off to Bayshore/Third	AM	5	60	10,966	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,218	9,718	Right	1	45	1,226	0	0%	100	0		1,366	0.436
		PM	5	60	10,151	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,310	8,810	Right	1	45	1,161	0	0%	100	0		1,294	0.436
		Sunday	5	60	6,954	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,748	5,540	Right	1	45	734	0	0%	100	0		818	0.436
7	US 101 SB On from Bayshore Blvd/Third	AM	4	60	9,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,852		Right	1	45	970	99	10%	1,060	0	1,000	1,081	0.330
		PM	4	60	8,990	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,016		Right	1	45	1,200	141	12%	1,060	0	1,000	1,337	0.298
		Sunday	4	60	6,220	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,930		Right	1	45	630	114	18%	1,060	0	1,000	702	0.378
8	I-280 NB Off to Cesar Chavez	AM	3	60	7,110	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,921		Right	2	45	1,470	0	0%	100	50	250	1,638	0.450
		PM	3	60	6,670	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,431		Right	2	45	930	0	0%	100	50	250	1,036	0.450
		Sunday	3	60	4,390	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,891		Right	2	45	500	0	0%	100	50	250	557	0.450
9	I-280 NB On from Indiana	AM	3	60	5,640	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,284		Right	1	45	810	93	11%	400	0	600	902	0.594
		PM	3	60	5,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,395		Right	1	45	1,020	159	16%	400	0	600	1,136	0.594
		Sunday	3	60	3,890	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,334		Right	1	45	490	83	17%	400	0	600	546	0.594
10	I-280 SB Off to Pennsylvania	AM	3	60	5,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,395		Right	1	45	710	126	18%	150	0	150	791	0.594
		PM	3	60	6,780	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,554		Right	1	45	890	100	11%	150	0	150	992	0.526
		Sunday	3	60	4,440	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,947		Right	1	45	600	75	13%	150	0	150	668	0.606

No.	Freeway Direction/Ramps	Analysis Time Period	Capacity Checks												Results											
			V_{12} (pcph)	V_4 (pcph)	Max V_4 (pcph)	LOS F?	V_{10} (pcph)	Max V_{10} (pcph)	LOS F?	V_{10} (pcph)	V_{10} (pcph)	V_{10} (pcph)	V_{12} (pcph)	Max V_{12} (pcph)	LOS F?	V_R (pcph)	Max V_R (pcph)	LOS F?	Density, D (pc/plm)	LOS	Int. Var. M_S	Inf. Area S_R (mph)	V_{0A}	Out Lns. S_0 (mph)	All vehs. S (mph)	
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	4,472	10,257	11,750	No	8,040	11,750	No	2,892	Yes	No	4,857	4,400	Yes	2,217	2,100	Yes	-	F	0.498	51.0	2,633	59.5	55.9	
		PM	4,200	9,633	11,750	No	7,861	11,750	No	2,716	Yes	No	4,233	4,400	No	1,771	2,100	No	40.7	E	0.457	51.8	2,633	59.5	56.5	
		Sunday	3,049	6,992	11,750	No	5,700	11,750	No	1,972	No	No	3,049	4,400	No	1,292	2,100	No	30.5	D	0.414	52.5	2,148	61.3	58.2	
2	US 101 NB On from Bayshore/Cesar Chavez	AM	-119	10,540	9,400	Yes	12,868	9,400	Yes	5,330	Yes	Yes	5,140	7,468	4,600	Yes	2,329	2,100	Yes	-	F	7.129	-68.3	1,800	55.3	-1100.9
		PM	748	10,361	9,400	Yes	12,021	9,400	Yes	4,806	Yes	Yes	4,961	6,621	4,600	Yes	1,660	2,100	No	-	F	3.228	1.9	1,800	55.3	3.4
		Sunday	1,061	8,200	9,400	No	9,403	9,400	Yes	3,570	Yes	Yes	2,800	4,003	4,600	No	1,203	2,100	No	-	F	0.512	50.8	1,800	55.3	53.3
3	US 101 SB Off to Cesar Chavez	AM	6,286	12,155	9,400	Yes	10,406	9,400	Yes	2,934	Yes	No	6,755	4,400	Yes	1,749	2,100	No	-	F	0.455	51.8	2,700	59.2	54.8	
		PM	6,440	12,233	9,400	Yes	10,272	9,400	Yes	2,897	Yes	No	6,833	4,400	Yes	1,961	2,100	No	-	F	0.474	51.5	2,700	59.2	54.6	
		Sunday	4,754	9,492	9,400	Yes	8,401	9,400	No	2,369	No	No	4,754	4,400	Yes	1,092	2,100	No	-	F	0.396	52.9	2,369	60.5	56.4	
4	US 101 NB Off to Third/Bayshore	AM	3,292	7,549	11,750	No	5,738	11,750	No	2,129	No	No	3,292	4,400	No	1,812	2,100	No	32.6	D	0.461	51.7	2,253	60.9	57.6	
		PM	3,845	8,820	11,750	No	7,725	11,750	No	2,487	No	No	3,845	4,400	No	1,094	2,100	No	37.3	E	0.396	52.9	2,491	60.0	57.4	
		Sunday	2,298	5,270	11,750	No	4,508	11,750	No	1,486	No	No	2,298	4,400	No	762	2,100	No	24.0	C	0.367	53.4	1,641	63.3	59.8	
5	US 101 NB On from Third St/Bayshore	AM	595	6,413	11,750	No	8,107	11,750	No	2,909	Yes	Yes	1,013	2,707	4,600	No	1,693	2,100	No	23.6	C	0.348	53.7	2,633	51.5	52.0
		PM	1,284	7,772	11,750	No	8,886	11,750	No	3,244	Yes	Yes	2,372	3,486	4,600	No	1,114	2,100	No	30.0	D	0.417	52.5	2,633	51.5	51.8
		Sunday	1,194	4,937	11,750	No	5,438	11,750	No	1,871	No	Yes	1,975	2,476	4,600	No	501	2,100	No	22.4	C	0.336	54.0	1,596	56.1	55.3
6	US 101 SB Off to Bayshore/Third	AM	4,237	9,718	11,750	No	8,352	11,750	No	2,740	Yes	No	4,318	4,400	No	1,366	2,100	No	41.4	E	0.421	52.4	2,633	59.5	56.8	
		PM	3,841	8,810	11,750	No	7,516	11,750	No	2,484	No	No	3,841	4,400	No	1,294	2,100	No	37.3	E	0.414	52.5	2,490	60.0	57.2	
		Sunday	2,415	5,540	11,750	No	4,722	11,750	No	1,562	No	No	2,415	4,400	No	818	2,100	No	25.0	C	0.372	53.3	1,777	62.8	59.5	
7	US 101 SB On from Bayshore Blvd/Third																									

No.	Freeway Direction/Ramps	Analysis Time Period	Freeway Data				Freeway Volume Adjustment					Effective Flow Rate				Ramp Data				Acceler Lane (ft)						
			Lanes	S _{FF}	V	PHF	Terrain	Truck/ Bus %	RV %	E ₁	E _R	f _{TR}	f _B	V ₁	V _{Eff}	Type	Lanes	S _{TR}	V _R	Project V _R	%	L _{L1}	L _{L2}	L _{Eff}	V _P	P _{TR} /P _{ID}
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	5	60	11,540	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,857	10,357	Right	1	45	2,030	91	4%	350	0		2,262	0.436
		PM	5	60	10,900	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,144	9,644	Right	1	45	1,600	28	2%	350	0		1,783	0.436
		Sunday	5	60	8,540	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,515	7,015	Right	1	45	1,160	20	2%	350	0		1,292	0.436
2	US 101 NB On from Bayshore/Cesar Chavez	AM	4	60	9,510	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,595		Right	1	45	2,100	67	3%	100	0	250	2,340	-0.113
		PM	4	60	9,300	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,361		Right	1	45	1,540	147	10%	100	0	250	1,716	0.065
		Sunday	4	60	7,380	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,222		Right	1	45	1,060	94	9%	100	0	250	1,181	0.132
3	US 101 SB Off to Cesar Chavez	AM	4	60	10,910	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,155		Right	1	45	1,620	130	8%	125	0	125	1,805	0.436
		PM	4	60	10,980	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,233		Right	1	45	1,770	67	4%	125	0	125	1,972	0.436
		Sunday	4	60	8,490	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,459		Right	1	45	1,040	79	8%	125	0	125	1,159	0.436
4	US 101 NB Off to Third/Bayshore	AM	5	60	9,180	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,228	7,728	Right	1	45	1,692	167	10%	100	0		1,885	0.436
		PM	5	60	10,180	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,342	8,842	Right	1	45	995	121	12%	100	0		1,109	0.436
		Sunday	5	60	6,480	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,220	5,270	Right	1	45	672	115	17%	100	0		749	0.436
5	US 101 NB On from Third St/Bayshore	AM	5	60	8,090	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,013	6,513	Right	1	45	1,520	0	0%	220	0	350	1,693	0.093
		PM	5	60	9,220	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,272	7,772	Right	1	45	1,000	0	0%	220	0	350	1,114	0.165
		Sunday	5	60	6,090	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,785	4,953	Right	1	45	450	0	0%	220	0	350	501	0.242
6	US 101 SB Off to Bayshore/Third	AM	5	60	11,016	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,273	9,773	Right	1	45	1,226	0	0%	100	0		1,366	0.436
		PM	5	60	10,161	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,321	8,821	Right	1	45	1,161	0	0%	100	0		1,294	0.436
		Sunday	5	60	6,984	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,781	5,563	Right	1	45	734	0	0%	100	0		818	0.436
7	US 101 SB On from Bayshore Blvd/Third	AM	4	60	9,790	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,907		Right	1	45	980	110	11%	1,060	0	1,000	1,092	0.329
		PM	4	60	9,000	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,027		Right	1	45	1,260	201	16%	1,060	0	1,000	1,404	0.290
		Sunday	4	60	6,250	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,963		Right	1	45	630	124	20%	1,060	0	1,000	702	0.378
8	I-280 NB Off to Cesar Chavez	AM	3	60	7,110	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,921		Right	2	45	1,470	0	0%	100	50	250	1,638	0.500
		PM	3	60	6,670	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,431		Right	2	45	930	0	0%	100	50	250	1,036	0.450
		Sunday	3	60	4,390	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,891		Right	2	45	500	0	0%	100	50	250	557	0.450
9	I-280 NB On from Indiana	AM	3	60	5,640	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,284		Right	1	45	930	109	12%	400	0	600	1,036	0.594
		PM	3	60	5,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,395		Right	1	45	1,100	240	22%	400	0	600	1,226	0.594
		Sunday	3	60	3,890	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,334		Right	1	45	540	128	24%	400	0	600	602	0.594
10	I-280 SB Off to Pennsylvania	AM	3	60	5,840	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,507		Right	1	45	810	220	27%	150	0	150	902	0.556
		PM	3	60	6,790	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,565		Right	1	45	900	109	12%	150	0	150	1,003	0.525
		Sunday	3	60	4,470	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,980		Right	1	45	630	105	17%	150	0	150	702	0.603

No.	Freeway Direction/Ramps	Analysis Time Period	Capacity Checks				V ₁₂ , V _{av34}			V ₁₂ , V _{av34}			Results													
			V ₁₂	V _{E1}	Max V _{E1}	LOS F?	V ₁₂	Max V ₁₂	LOS F?	V ₁₂	Max V ₁₂	LOS F?	Density, D	LOS	Int. Var, M _S	Inf. Area S _Q	V _{0A}	Out Lns. S ₀	All vehs. S							
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	4,516	10,357	11,750	No	8,095	11,750	No	2,921	Yes	No	4,957	2,262	2,100	Yes	-	F	0.502	51.0	2,633	59.5	55.9			
		PM	4,205	9,644	11,750	No	7,861	11,750	No	2,720	Yes	No	4,244	1,783	2,100	No	40.8	E	0.458	51.7	2,633	59.5	56.5			
		Sunday	3,058	7,015	11,750	No	5,722	11,750	No	1,978	No	No	3,058	4,400	No	30.6	D	0.414	52.5	2,152	61.3	58.2				
2	US 101 NB On from Bayshore/Cesar Chavez	AM	-135	10,595	9,400	Yes	12,935	9,400	Yes	5,365	Yes	Yes	5,195	7,535	4,600	Yes	2,340	2,100	Yes	-	F	7.601	-76.8	1,800	55.3	-27761.5
		PM	676	10,361	9,400	Yes	12,077	9,400	Yes	4,843	Yes	Yes	4,961	6,677	4,600	Yes	1,716	2,100	No	-	F	3.395	-1.1	1,800	55.3	-2.1
		Sunday	1,086	8,222	9,400	No	9,403	9,400	Yes	3,568	Yes	Yes	2,822	4,003	4,600	No	1,181	2,100	No	-	F	0.512	50.8	1,800	55.3	53.3
3	US 101 SB Off to Cesar Chavez	AM	6,318	12,155	9,400	Yes	10,350	9,400	Yes	2,919	Yes	No	6,755	4,400	4,400	Yes	1,805	2,100	No	-	F	0.460	51.7	2,700	59.2	54.8
		PM	6,446	12,233	9,400	Yes	10,261	9,400	Yes	2,894	Yes	No	6,833	4,400	4,400	Yes	1,972	2,100	No	-	F	0.475	51.4	2,700	59.2	54.6
		Sunday	4,778	9,459	9,400	Yes	8,300	9,400	No	2,341	No	No	4,778	4,400	4,400	Yes	1,159	2,100	No	-	F	0.402	52.8	2,341	60.6	56.4
4	US 101 NB Off to Third/Bayshore	AM	3,369	7,728	11,750	No	5,843	11,750	No	2,179	No	No	3,369	4,400	4,400	No	1,885	2,100	No	33.2	D	0.468	51.6	2,286	60.8	57.4
		PM	3,855	8,842	11,750	No	7,733	11,750	No	2,493	No	No	3,855	4,400	4,400	No	1,109	2,100	No	37.4	E	0.398	52.8	2,496	60.0	57.4
		Sunday	2,298	5,270	11,750	No	4,522	11,750	No	1,486	No	No	2,298	4,400	4,400	No	749	2,100	No	24.0	C	0.365	53.4	1,641	63.3	59.8
5	US 101 NB On from Third St/Bayshore	AM	605	6,513	11,750	No	8,207	11,750	No	2,954	Yes	Yes	1,113	2,807	4,600	No	1,693	2,100	No	24.4	C	0.354	53.6	2,633	51.5	52.0
		PM	1,284	7,772	11,750	No	8,886	11,750	No	3,244	Yes	Yes	2,372	3,486	4,600	No	1,114	2,100	No	30.0	D	0.417	52.5	2,633	51.5	51.8
		Sunday	1,198	4,953	11,750	No	5,454	11,750	No	1,878	No	Yes	1,981	2,483	4,600	No	501	2,100	No	21.9	C	0.336	53.9	1,601	56.0	55.3
6	US 101 SB Off to Bayshore/Third	AM	4,261	9,773	11,750	No	8,407	11,750	No	2,756	Yes	No	4,373	4,400	4,400	No	1,366	2,100	No	42.4	E	0.421	52.4	2,633	59.5	56.7
		PM	3,846	8,821	11,750	No	7,527	11,750	No	2,487	No	No	3,846	4,400	4,400	No	1,294	2,100	No	37.3	E	0.414	52.5	2,492	60.0	57.2
		Sunday	2,426	5,563	11,750	No	4,746	11,750	No	1,569	No	No	2,426	4,400	4,400	No	818	2,100	No	25.1	C	0.372	53.3	1,785	62.8	59.5
7	US 101 SB On from Bayshore Blvd/Third	AM	3,590	10,907	9,400	Yes																				

No.	Freeway Direction/Ramps	Analysis Time Period	Freeway Data			Freeway Volume Adjustment					Effective Flow Rate				Ramp Data			Acceler Lane (ft)								
			Lanes	S _{FF}	V	PHF	Terrain	Truck/ Bus %	RV %	E ₁	E _R	f _{TR}	f _B	V ₁	V _{2,eff}	Type	Lanes	S _{TR}	V _R	Project V _R	%	L _{L1}	L _{L2}	L _{eff}	V _B	P _{TR} /P _{ID}
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	5	60	11,450	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,757	10,257	Right	1	45	1,990	46	2%	350	0		2,217	0.436
		PM	5	60	10,900	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,144	9,644	Right	1	45	1,590	23	1%	350	0		1,771	0.436
		Sunday	5	60	8,550	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,526	7,026	Right	1	45	1,160	18	2%	350	0		1,292	0.436
2	US 101 NB On from Bayshore/Cesar Chavez	AM	4	60	9,460	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,540		Right	1	45	2,080	65	3%	100	0	250	2,317	-0.010
		PM	4	60	9,310	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,373		Right	1	45	1,480	96	6%	100	0	250	1,649	0.074
		Sunday	4	60	7,390	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,233		Right	1	45	1,110	74	7%	100	0	250	1,237	0.125
3	US 101 SB Off to Cesar Chavez	AM	4	60	10,920	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,166		Right	1	45	1,560	71	5%	125	0	125	1,738	0.436
		PM	4	60	11,000	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,255		Right	1	45	1,750	68	4%	125	0	125	1,950	0.436
		Sunday	4	60	8,500	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,470		Right	1	45	1,030	76	7%	125	0	125	1,148	0.436
4	US 101 NB Off to Third/Bayshore	AM	5	60	9,010	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,038	7,538	Right	1	45	1,621	95	6%	100	0		1,806	0.436
		PM	5	60	10,180	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,342	8,842	Right	1	45	997	127	13%	100	0		1,111	0.436
		Sunday	5	60	6,500	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,242	5,287	Right	1	45	673	119	18%	100	0		750	0.436
5	US 101 NB On from Third St/Bayshore	AM	5	60	7,990	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,902	6,402	Right	1	45	1,520	0	0%	220	0	350	1,693	0.093
		PM	5	60	9,230	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,283	7,783	Right	1	45	1,000	0	0%	220	0	350	1,114	0.165
		Sunday	5	60	6,100	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,796	4,961	Right	1	45	450	0	0%	220	0	350	501	0.242
6	US 101 SB Off to Bayshore/Third	AM	5	60	10,966	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,218	9,718	Right	1	45	1,226	0	0%	100	0		1,366	0.436
		PM	5	60	10,161	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,321	8,821	Right	1	45	1,161	0	0%	100	0		1,294	0.436
		Sunday	5	60	6,984	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,781	5,563	Right	1	45	734	0	0%	100	0		818	0.436
7	US 101 SB On from Bayshore Blvd/Third	AM	4	60	9,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,852		Right	1	45	980	113	12%	1,060	0	1,000	1,092	0.329
		PM	4	60	9,000	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,027		Right	1	45	1,200	143	12%	1,060	0	1,000	1,337	0.298
		Sunday	4	60	6,250	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,963		Right	1	45	610	104	17%	1,060	0	1,000	680	0.381
8	I-280 NB Off to Cesar Chavez	AM	3	60	7,110	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,921		Right	2	45	1,470	0	0%	100	50	250	1,638	0.450
		PM	3	60	6,670	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,431		Right	2	45	930	0	0%	100	50	250	1,036	0.450
		Sunday	3	60	4,390	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,891		Right	2	45	500	0	0%	100	50	250	557	0.450
9	I-280 NB On from Indiana	AM	3	60	5,640	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,284		Right	1	45	820	103	13%	400	0	600	914	0.594
		PM	3	60	5,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,395		Right	1	45	1,020	154	15%	400	0	600	1,136	0.594
		Sunday	3	60	3,890	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,334		Right	1	45	510	98	19%	400	0	600	568	0.594
10	I-280 SB Off to Pennsylvania	AM	3	60	5,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,395		Right	1	45	710	119	17%	150	0	150	791	0.564
		PM	3	60	6,790	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,565		Right	1	45	900	106	12%	150	0	150	1,003	0.525
		Sunday	3	60	4,460	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,969		Right	1	45	620	103	17%	150	0	150	691	0.604

No.	Freeway Direction/Ramps	Analysis Time Period	Capacity Checks								Results															
			V ₁₂	V _{E1}	Max V _{E1}	LOS F?	V _{F0}	Max V _{F0}	LOS F?	V _{S1} , V _{av34}	V _{S1} , V _{av34}	V _{S2a}	Max V _{R12a}	LOS F?	V _R	Max V _R	LOS F?	Density, D	LOS	Int. Var, M ₅	Inf. Area S ₀	V _{0a}	Out Lns. S ₀	All vehs. S		
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	4,472	10,257	11,750	No	8,040	11,750	No	2,892	Yes	No	4,857	2,210	Yes	-	F	0.498	51.0	2,633	59.5	55.9				
		PM	4,205	9,644	11,750	No	7,873	11,750	No	2,720	Yes	No	4,244	2,100	No	40.8	F	0.457	51.8	2,633	59.5	56.5				
		Sunday	3,063	7,026	11,750	No	5,733	11,750	No	1,981	No	No	3,063	4,400	No	30.6	D	0.414	52.5	2,154	61.3	58.2				
2	US 101 NB On from Bayshore/Cesar Chavez	AM	-105	10,540	9,400	Yes	12,857	9,400	Yes	5,322	Yes	Yes	5,140	7,457	4,600	Yes	2,317	2,100	Yes	-	F	7.054	-67.0	1,800	55.3	-935.3
		PM	764	10,373	9,400	Yes	12,021	9,400	Yes	4,804	Yes	Yes	4,973	6,621	4,600	Yes	1,649	2,100	No	-	F	3.228	1.9	1,800	55.3	3.4
		Sunday	1,030	8,233	9,400	No	9,470	9,400	Yes	3,601	Yes	Yes	2,833	4,070	4,600	No	1,237	2,100	No	-	F	0.527	50.5	1,800	55.3	53.1
3	US 101 SB Off to Cesar Chavez	AM	6,285	12,166	9,400	Yes	10,428	9,400	Yes	2,941	Yes	No	6,766	4,400	Yes	1,738	2,100	No	-	F	0.454	51.8	2,700	59.2	54.9	
		PM	6,443	12,255	9,400	Yes	10,306	9,400	Yes	2,906	Yes	No	6,855	4,400	Yes	1,950	2,100	No	-	F	0.473	51.5	2,700	59.2	54.6	
		Sunday	4,776	9,470	9,400	Yes	8,323	9,400	No	2,347	No	No	4,776	4,400	Yes	1,148	2,100	No	-	F	0.401	52.8	2,347	60.6	56.4	
4	US 101 NB Off to Third/Bayshore	AM	3,287	7,538	11,750	No	5,732	11,750	No	2,126	No	No	3,287	4,400	No	1,806	2,100	No	32.5	D	0.461	51.7	2,251	60.9	57.6	
		PM	3,855	8,842	11,750	No	7,731	11,750	No	2,493	No	No	3,855	4,400	No	1,111	2,100	No	37.4	E	0.398	52.8	2,496	60.0	57.3	
		Sunday	2,305	5,287	11,750	No	4,537	11,750	No	1,491	No	No	2,305	4,400	No	750	2,100	No	24.1	C	0.365	53.4	1,646	63.3	59.8	
5	US 101 NB On from Third St/Bayshore	AM	594	6,402	11,750	No	8,095	11,750	No	2,904	Yes	Yes	1,002	2,695	4,600	No	1,693	2,100	No	23.5	C	0.347	53.7	2,633	51.5	52.0
		PM	1,286	7,783	11,750	No	8,898	11,750	No	3,249	Yes	Yes	2,383	3,498	4,600	No	1,114	2,100	No	30.0	D	0.418	52.5	2,633	51.5	51.8
		Sunday	1,200	4,961	11,750	No	5,463	11,750	No	1,881	No	Yes	1,984	2,486	4,600	No	501	2,100	No	22.4	C	0.336	53.9	1,604	56.0	55.3
6	US 101 SB Off to Bayshore/Third	AM	4,237	9,718	11,750	No	8,352	11,750	No	2,740	Yes	No	4,318	4,400	No	1,366	2,100	No	41.4	E	0.421	52.4	2,633	59.5	56.8	
		PM	3,846	8,821	11,750	No	7,527	11,750	No	2,487	No	No	3,846	4,400	No	1,294	2,100	No	37.3	E	0.414	52.5	2,492	60.0	57.2	
		Sunday	2,426	5,563	11,750	No	4,746	11,750	No	1,569	No	No	2,426	4,400	No	818	2,100	No	25.1	C	0.372	53.3	1,785	62.8	59.5	
7	US 101 SB On from Bayshore Blvd/Third	AM	3,571	10,852	9,400	Yes	11,943	9,400	Yes	3,640	Yes															

No.	Freeway Direction/Ramps	Analysis Time Period	Freeway Data			Freeway Volume Adjustment						Effective Flow Rate				Ramp Data			Acceler Lane (ft)							
			Lanes	S _{FF}	V	PHF	Terrain	Truck/ Bus %	RV %	E ₁	E ₂	f _{HW}	f ₀	V ₁	V _{2,eff}	Type	Lanes	S _{RA}	V _R	Project V _R	%	L _{L1}	L _{L2}	L _{eff}	V ₀	P ₁₀₀ /P ₁₀
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	5	60	11,493	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,805	10,305	Right	1	45	2,033	50	2%	350	0		2,265	0.436
		PM	5	60	10,936	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,184	9,684	Right	1	45	1,626	7	0%	350	0		1,812	0.436
		Sunday	5	60	8,550	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,526	7,026	Right	1	45	1,160	2	0%	350	0		1,292	0.436
2	US 101 NB On from Bayshore/Cesar Chavez	AM	4	60	9,460	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,540		Right	1	45	2,090	53	3%	100	0	250	2,329	-0.011
		PM	4	60	9,310	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,373		Right	1	45	1,510	107	7%	100	0	250	1,682	0.436
		Sunday	4	60	7,390	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,233		Right	1	45	1,120	73	7%	100	0	250	1,248	0.124
3	US 101 SB Off to Cesar Chavez	AM	4	60	10,920	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,166		Right	1	45	1,570	78	5%	125	0	125	1,749	0.436
		PM	4	60	11,000	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,255		Right	1	45	1,760	58	3%	125	0	125	1,961	0.436
		Sunday	4	60	8,500	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,470		Right	1	45	1,030	70	7%	125	0	125	1,148	0.436
4	US 101 NB Off to Third/Bayshore	AM	5	60	9,010	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,038	7,538	Right	1	45	1,642	105	6%	100	0		1,829	0.436
		PM	5	60	10,180	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,342	8,842	Right	1	45	1,030	115	11%	100	0		1,148	0.436
		Sunday	5	60	6,500	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,242	5,287	Right	1	45	705	105	15%	100	0		785	0.436
5	US 101 NB On from Third St/Bayshore	AM	5	60	7,990	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,902	6,402	Right	1	45	1,520	0	0%	220	0	350	1,693	0.093
		PM	5	60	9,230	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,283	7,783	Right	1	45	1,000	0	0%	220	0	350	1,114	0.165
		Sunday	5	60	6,100	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,796	4,961	Right	1	45	450	0	0%	220	0	350	501	0.242
6	US 101 SB Off to Bayshore/Third	AM	5	60	10,966	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,218	9,718	Right	1	45	1,226	0	0%	100	0		1,366	0.436
		PM	5	60	10,161	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,321	8,821	Right	1	45	1,161	0	0%	100	0		1,294	0.436
		Sunday	5	60	6,984	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,781	5,563	Right	1	45	734	0	0%	100	0		818	0.436
7	US 101 SB On from Bayshore Blvd/Third	AM	4	60	9,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,852		Right	1	45	980	103	11%	1,060	0	1,000	1,092	0.329
		PM	4	60	9,000	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,027		Right	1	45	1,220	152	12%	1,060	0	1,000	1,359	0.296
		Sunday	4	60	6,250	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,963		Right	1	45	620	98	16%	1,060	0	1,000	691	0.379
8	I-280 NB Off to Cesar Chavez	AM	3	60	7,110	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,921		Right	2	45	1,470	0	0%	100	50	250	1,638	0.450
		PM	3	60	6,670	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,431		Right	2	45	930	0	0%	100	50	250	1,036	0.450
		Sunday	3	60	4,390	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,891		Right	2	45	500	0	0%	100	50	250	557	0.450
9	I-280 NB On from Indiana	AM	3	60	5,640	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,284		Right	1	45	830	83	10%	400	0	600	925	0.594
		PM	3	60	5,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,395		Right	1	45	1,040	166	16%	400	0	600	1,159	0.594
		Sunday	3	60	3,890	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,334		Right	1	45	520	96	18%	400	0	600	579	0.594
10	I-280 SB Off to Pennsylvania	AM	3	60	5,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,395		Right	1	45	720	130	18%	150	0	150	802	0.563
		PM	3	60	6,790	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,565		Right	1	45	910	87	10%	150	0	150	1,014	0.524
		Sunday	3	60	4,460	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,969		Right	1	45	630	67	11%	150	0	150	702	0.603

No.	Freeway Direction/Ramps	Analysis Time Period	Capacity Checks				V ₁₂ , V ₀₃₄				V ₁₂ , V ₀₃₄				Results											
			V ₁₂	V _{E1}	Max V _{E1}	LOS F?	V _{F0}	Max V _{F0}	LOS F?	V _{V12>2,700?}	V _{V034>1.5*V12/2?}	V _{12a}	Max V _{12a}	LOS F?	V _R	Max V _R	LOS F?	Density, D	LOS	Int. Var, M _s	Inf. Area S ₀	V _{0a}	Out Lns. S ₀	All vehs. S		
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	4,493	10,305	11,750	No	8,040	11,750	No	2,906	Yes	No	4,905	4,400	Yes	2,265	2,100	Yes	-	F	0.502	51.0	2,633	59.5	55.9	
		PM	4,222	9,684	11,750	No	7,873	11,750	No	2,731	Yes	No	4,284	4,400	No	1,812	2,100	No	41.1	E	0.461	51.7	2,633	59.5	56.5	
		Sunday	3,063	7,026	11,750	No	5,733	11,750	No	1,981	No	No	3,063	4,400	No	1,292	2,100	No	30.6	D	0.414	52.5	2,154	61.3	58.2	
2	US 101 NB On from Bayshore/Cesar Chavez	AM	-119	10,540	9,400	Yes	12,868	9,400	Yes	5,330	Yes	Yes	5,140	7,468	4,600	Yes	2,329	2,100	Yes	-	F	7.129	-68.3	1,800	55.3	-1100.9
		PM	720	10,373	9,400	Yes	12,055	9,400	Yes	4,826	Yes	Yes	4,973	6,655	4,600	Yes	1,682	2,100	No	-	F	3.327	0.1	1,800	55.3	0.2
		Sunday	1,019	8,233	9,400	No	9,481	9,400	Yes	3,607	Yes	Yes	2,833	4,081	4,600	No	1,248	2,100	No	-	F	0.529	50.5	1,800	55.3	53.1
3	US 101 SB Off to Cesar Chavez	AM	6,291	12,166	9,400	Yes	10,417	9,400	Yes	2,938	Yes	No	6,766	4,400	Yes	1,749	2,100	No	-	F	0.455	51.8	2,700	59.2	54.8	
		PM	6,449	12,255	9,400	Yes	10,295	9,400	Yes	2,903	Yes	No	6,855	4,400	Yes	1,961	2,100	No	-	F	0.474	51.5	2,700	59.2	54.6	
		Sunday	4,776	9,470	9,400	Yes	8,323	9,400	No	2,347	No	No	4,776	4,400	Yes	1,148	2,100	No	-	F	0.401	52.8	2,347	60.6	56.4	
4	US 101 NB Off to Third/Bayshore	AM	3,287	7,538	11,750	No	5,709	11,750	No	2,126	No	No	3,287	4,400	No	1,829	2,100	No	32.5	D	0.463	51.7	2,251	60.9	57.6	
		PM	3,855	8,842	11,750	No	7,694	11,750	No	2,493	No	No	3,855	4,400	No	1,148	2,100	No	37.4	E	0.401	52.8	2,496	60.0	57.3	
		Sunday	2,305	5,287	11,750	No	4,501	11,750	No	1,491	No	No	2,305	4,400	No	785	2,100	No	24.1	C	0.369	53.4	1,646	63.3	59.8	
5	US 101 NB On from Third St/Bayshore	AM	594	6,402	11,750	No	8,095	11,750	No	2,904	Yes	Yes	1,002	2,695	4,600	No	1,693	2,100	No	23.5	C	0.347	53.7	2,633	51.5	52.0
		PM	1,286	7,783	11,750	No	8,898	11,750	No	3,249	Yes	Yes	2,383	3,498	4,600	No	1,114	2,100	No	30.0	D	0.418	52.5	2,633	51.5	51.8
		Sunday	1,200	4,961	11,750	No	5,463	11,750	No	1,881	No	Yes	1,984	2,486	4,600	No	501	2,100	No	22.4	C	0.336	53.9	1,604	56.0	55.3
6	US 101 SB Off to Bayshore/Third	AM	4,237	9,718	11,750	No	8,352	11,750	No	2,740	Yes	No	4,318	4,400	No	1,366	2,100	No	41.4	E	0.421	52.4	2,633	59.5	56.8	
		PM	3,846	8,821	11,750	No	7,527	11,750	No	2,487	No	No	3,846	4,400	No	1,294	2,100	No	37.3	E	0.414	52.5	2,492	60.0	57.2	
		Sunday	2,426	5,563	11,750	No	4,746	11,750	No	1,569	No	No	2,426	4,400	No	818	2,100	No	25.1	C	0.372	53.3	1,785	62.8	59.5	
7	US 101 SB On from Bayshore Blvd/Third	AM	3,571																							

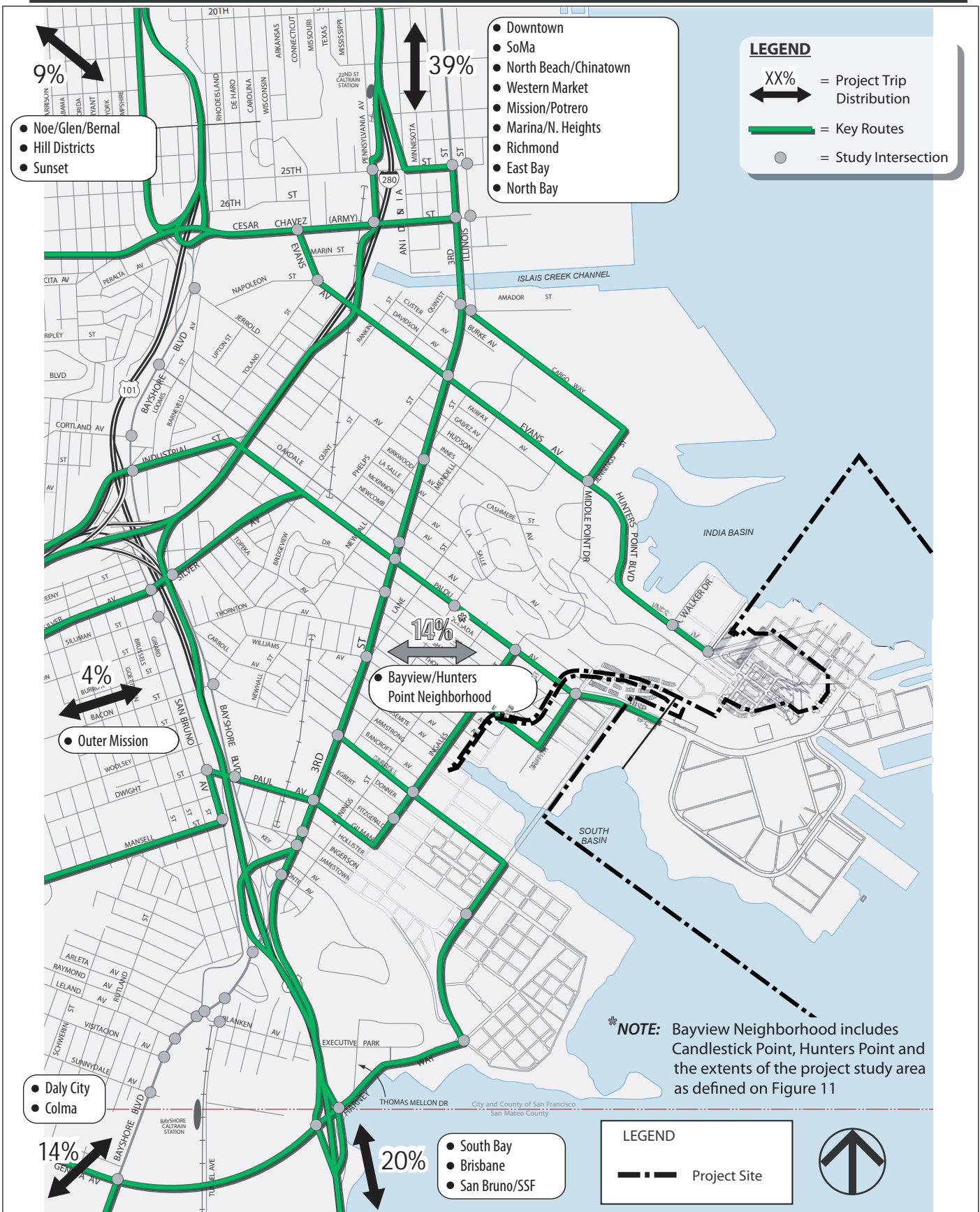
No.	Freeway Direction/Ramps	Analysis Time Period	Freeway Data			Freeway Volume Adjustment				Effective Flow Rate				Ramp Data			Accel Lane (ft)									
			Lanes	S _{FF}	V	PHF	Terrain	Truck/ Bus %	RV %	E ₁	E _R	f _{TR}	f _p	V ₁	V _{2,eff}	Type	Lanes	S _{TR}	V _R	Project V _R	%	L _{L1}	L _{L2}	L _{eff}	V ₁	P _{L10} /P _{L10}
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	5	60	11,440	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,746	10,246	Right	1	45	1,980	41	2%	350	0	250	2,206	0.436
		PM	5	60	10,870	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,111	9,611	Right	1	45	1,590	22	1%	350	0	250	1,771	0.436
		Sunday	5	60	8,330	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,281	6,781	Right	1	45	1,160	18	2%	350	0	250	1,292	0.436
2	US 101 NB On from Bayshore/Cesar Chavez	AM	4	60	9,460	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,540	8,040	Right	1	45	2,060	47	2%	100	0	250	2,295	-0.007
		PM	4	60	9,280	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,339	7,839	Right	1	45	1,460	84	6%	100	0	250	1,627	0.076
		Sunday	4	60	7,170	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,988	5,488	Right	1	45	1,050	56	5%	100	0	250	1,170	0.134
3	US 101 SB Off to Cesar Chavez	AM	4	60	10,930	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,177	9,677	Right	1	45	1,550	65	4%	125	0	125	1,727	0.436
		PM	4	60	10,980	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,233	9,733	Right	1	45	1,720	51	3%	125	0	125	1,916	0.436
		Sunday	4	60	8,530	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,504	7,004	Right	1	45	950	50	5%	125	0	125	1,058	0.436
4	US 101 NB Off to Third/Bayshore	AM	5	60	8,990	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,016	7,516	Right	1	45	1,606	83	5%	100	0	100	1,789	0.436
		PM	5	60	10,110	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,264	8,764	Right	1	45	947	88	9%	100	0	100	1,055	0.436
		Sunday	5	60	6,260	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,974	5,091	Right	1	45	658	102	16%	100	0	100	733	0.436
5	US 101 NB On from Third St/Bayshore	AM	5	60	7,990	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	8,902	6,402	Right	1	45	1,520	0	0%	220	0	350	1,693	0.093
		PM	5	60	9,200	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,250	7,750	Right	1	45	1,000	0	0%	220	0	350	1,114	0.165
		Sunday	5	60	5,880	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,551	4,782	Right	1	45	450	0	0%	220	0	350	501	0.242
6	US 101 SB Off to Bayshore/Third	AM	5	60	10,966	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	12,218	9,718	Right	1	45	1,226	0	0%	100	0	100	1,366	0.436
		PM	5	60	10,121	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	11,276	8,776	Right	1	45	1,161	0	0%	100	0	100	1,294	0.436
		Sunday	5	60	6,934	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,725	5,524	Right	1	45	734	0	0%	100	0	100	818	0.436
7	US 101 SB On from Bayshore Blvd/Third	AM	4	60	9,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	10,852	8,352	Right	1	45	930	77	8%	1,060	0	1,000	1,036	0.336
		PM	4	60	8,960	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	9,983	7,483	Right	1	45	1,160	117	10%	1,060	0	1,000	1,292	0.304
		Sunday	4	60	6,200	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,908	4,908	Right	1	45	610	102	17%	1,060	0	1,000	680	0.381
8	I-280 NB Off to Cesar Chavez	AM	3	60	7,110	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,921	5,921	Right	2	45	1,470	0	0%	100	50	250	1,638	0.450
		PM	3	60	6,670	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,431	5,431	Right	2	45	930	0	0%	100	50	250	1,036	0.450
		Sunday	3	60	4,390	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,891	2,891	Right	2	45	500	0	0%	100	50	250	557	0.450
9	I-280 NB On from Indiana	AM	3	60	5,640	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,284	4,284	Right	1	45	790	76	10%	400	0	600	880	0.594
		PM	3	60	5,740	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,395	4,395	Right	1	45	990	133	13%	400	0	600	1,103	0.594
		Sunday	3	60	3,890	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,334	2,334	Right	1	45	480	72	15%	400	0	600	535	0.594
10	I-280 SB Off to Pennsylvania	AM	3	60	5,720	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	6,373	4,373	Right	1	45	690	106	15%	150	0	150	769	0.565
		PM	3	60	6,760	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	7,532	5,532	Right	1	45	870	79	9%	150	0	150	969	0.527
		Sunday	3	60	4,430	0.92	Level	5%	0%	1.5	1.2	0.98	1.00	4,936	2,936	Right	1	45	590	67	11%	150	0	150	657	0.606

No.	Freeway Direction/Ramps	Analysis Time Period	Capacity Checks				V ₃ V _{av34}			V ₃ V _{av34}			Results			Results										
			V ₁₂	V _{E1}	Max V _{E1}	LOS F?	V _{F0}	Max V _{F0}	LOS F?	V ₃ V _{av34}	>2,700?	V ₃ V _{av34}	>1.5*V ₁₂ /2?	V _{12a}	Max V _{R12a}	LOS F?	V _R	Max V _R	LOS F?	Density, D	Int. Var, M _S	Inf. Area S _R	V _{OA}	Out Lns. S _O	All vehs. S	
1	US 101 NB Off to Bayshore Blvd/ Cesar Chavez	AM	4,467	10,246	11,750	No	8,040	11,750	No	2,889	Yes	No	4,846	4,400	Yes	2,206	2,100	Yes	-	F	0.497	51.1	2,633	59.5	56.0	
		PM	4,190	9,611	11,750	No	7,839	11,750	No	2,710	Yes	No	4,211	4,400	No	1,771	2,100	No	40.5	E	0.457	51.8	2,633	59.5	56.5	
		Sunday	2,956	6,781	11,750	No	5,488	11,750	No	1,912	No	No	2,956	4,400	No	1,292	2,100	No	29.7	D	0.414	52.5	2,108	61.5	58.3	
2	US 101 NB On from Bayshore/Cesar Chavez	AM	-75	10,540	9,400	Yes	12,835	9,400	Yes	5,307	Yes	Yes	5,140	7,435	4,600	Yes	2,295	2,100	Yes	-	F	6.905	-64.3	1,800	55.3	-711.4
		PM	790	10,339	9,400	Yes	11,966	9,400	Yes	4,775	Yes	Yes	4,939	6,566	4,600	Yes	1,627	2,100	No	-	F	3.069	4.8	1,800	55.3	8.1
		Sunday	1,067	7,988	9,400	No	9,158	9,400	No	3,461	Yes	Yes	2,588	3,758	4,600	No	1,170	2,100	No	32.7	D	0.466	51.6	1,800	55.3	53.7
3	US 101 SB Off to Cesar Chavez	AM	6,283	12,177	9,400	Yes	10,451	9,400	Yes	2,947	Yes	No	6,777	4,400	Yes	1,727	2,100	No	-	F	0.453	51.8	2,700	59.2	54.9	
		PM	6,414	12,233	9,400	Yes	10,317	9,400	Yes	2,909	Yes	No	6,833	4,400	Yes	1,916	2,100	No	-	F	0.470	51.5	2,700	59.2	54.7	
		Sunday	4,740	9,504	9,400	Yes	8,445	9,400	No	2,382	No	No	4,740	4,400	Yes	1,058	2,100	No	-	F	0.393	52.9	2,382	60.4	56.4	
4	US 101 NB Off to Third/Bayshore	AM	3,277	7,516	11,750	No	5,727	11,750	No	2,120	No	No	3,277	4,400	No	1,789	2,100	No	32.4	D	0.459	51.7	2,246	61.0	57.6	
		PM	3,821	8,764	11,750	No	7,709	11,750	No	2,471	No	No	3,821	4,400	No	1,055	2,100	No	37.1	E	0.393	52.9	2,481	60.0	57.4	
		Sunday	2,220	5,091	11,750	No	4,358	11,750	No	1,436	No	No	2,220	4,400	No	733	2,100	No	23.3	C	0.364	53.4	1,585	63.5	59.9	
5	US 101 NB On from Third St/Bayshore	AM	594	6,402	11,750	No	8,095	11,750	No	2,904	Yes	Yes	1,002	2,695	4,600	No	1,693	2,100	No	23.5	C	0.347	53.7	2,633	51.5	52.0
		PM	1,281	7,750	11,750	No	8,864	11,750	No	3,235	Yes	Yes	2,350	3,464	4,600	No	1,114	2,100	No	29.8	D	0.414	52.5	2,633	51.5	51.8
		Sunday	1,157	4,782	11,750	No	5,284	11,750	No	1,813	No	Yes	1,913	2,414	4,600	No	501	2,100	No	21.9	C	0.333	54.0	1,546	56.2	55.5
6	US 101 SB Off to Bayshore/Third	AM	4,237	9,718	11,750	No	8,352	11,750	No	2,740	Yes	No	4,318	4,400	No	1,366	2,100	No	41.4	E	0.421	52.4	2,633	59.5	56.8	
		PM	3,826	8,776	11,750	No	7,483	11,750	No	2,475	No	No	3,826	4,400	No	1,294	2,100	No	37.2	E	0.414	52.5	2,483	60.0	57.3	
		Sunday	2,408	5,524	11,750	No	4,706	11,750	No	1,558	No	No	2,408													

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Trip Distribution

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SOURCE: Fehr & Peers

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Game Day Traffic Plans

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SOURCE: Fehr & Peers; AECOM

Hunters Point Shipyard Supplemental EIS



SOURCE: Fehr & Peers; AECOM





SOURCE: Fehr & Peers; AECOM

Hunters Point Shipyard Supplemental EIS



CHS Consulting Group



SOURCE: Fehr & Peers; AECOM

Hunters Point Shipyard Supplemental EIS



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Construction Workers and Trucks by Phase

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**Table A-1
Construction Workers and Trucks by Phase
Hunters Point Shipyard and Candlestick Point**

Project Area/Construction Phase	Construction Duration	Daily Construction Workers	Daily Construction Truck Trips
Hunters Point Shipyard			
Phase 1 – Site Preparation ¹			
Abatement & Demolition	2011 – 2015	10-63	8-48
Grading and Infrastructure	2013 – 2017	25-130	8-288
Phase 1 – Building Construction ¹			
Structure/Rough In	2011 – 2016	18-100	8-32
Interior and Exterior Finishes	2011 – 2016	10-70	8-32
Phase 2 – Site Preparation			
Abatement & Demolition	2016 – 2019	13-65	8-56
Grading and Infrastructure	2018 - 2021	38-100	96-224
Phase 2 – Building Construction			
Structure/Rough In	2016 – 2019	60-80	16-32
Interior and Exterior Finishes	2016 – 2019	25-83	16-40
Phase 3 – Site Preparation			
Abatement & Demolition	2020 – 2023	13-35	8-32
Grading and Infrastructure	2022 - 2025	35-60	24-40
Phase 3 – Building Construction			
Structure/Rough In	2021 – 2024	16-20	8-16
Interior and Exterior Finishes	2021 – 2025	25-35	8-16
Phase 4 – Site Preparation			
Abatement & Demolition	2024 – 2028	13-28	8-32
Grading and Infrastructure	2026 - 2030	18-60	8-128
Phase 4 – Building Construction			
Interior and Exterior Finishes	2026 – 2031	10-50	8-40
Candlestick Point			
Phase 1 – Site Preparation			
Abatement & Demolition	2013 - 2015	10-13	8-16
Grading and Infrastructure	2013 – 2017	30-55	12-96
Phase 1 – Building Construction			
Structure/Rough In	2013 – 2016	14-18	8-16
Interior and Exterior Finishes	2013 - 2016	8-10	4-8
Phase 2 – Site Preparation			
Abatement & Demolition	2016 – 2019	13-38	8-32
Grading and Infrastructure	2018 – 2021	30-93	8-32
Phase 2 – Building Construction			
Structure/Rough In	2016 – 2021	18-35	16-32
Interior and Exterior Finishes	2016 – 2021	10-33	8-20
Phase 3 – Building Construction			
Structure/Rough In	2021 – 2025	40-100	16-48
Interior and Exterior Finishes	2021 – 2025	20-75	16-36
Phase 4 – Site Preparation			
Abatement & Demolition	2024 – 2028	13-43	8-32
Grading and Infrastructure	2026 - 2030	30-135	16-52
Phase 4 – Building Construction			
Structure/Rough In	2024 – 2030	40-80	16-32
Interior and Exterior Finishes	2024 – 2031	33-90	16-48
Yosemite Slough Bridge	2015 – 2016	62-78	18-24
HPS Off-site Improvements	2015 – 2017	24-30	8-12
CP Off-site Improvements	2013 – 2018	24-30	8-12

Notes:

1. Includes stadium construction.

2. Does not include trips associated with field management. Estimated to be between 5 and 20 construction workers and 4 to 8 construction truck trips per day at Hunters Point Shipyard, and between 15 and 25 construction workers and 4 to 8 construction truck trips per day at Candlestick Point.

Source: MACTEC, 2010.

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Transit Ridership and Capacity Utilization

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The following was excerpted from Appendix D (Development Plan Transportation Study November 4, 2009) of the Candlestick Point–Hunters Point Shipyard Phase II Draft Environmental Impact Report

3.4.3 Transit Ridership and Capacity Utilization

This section presents the ridership and capacity utilization for Muni and regional transit providers for the AM and PM peak hours. Transportation Study Appendix H includes the ridership and capacity assumptions, and capacity utilization calculations.

Muni

Table 15 on the following page presents Muni’s ridership and capacity utilization at the maximum load point for the local lines serving the study area for the weekday AM and PM peak hours. For each line, the number peak hour riders inbound and outbound from downtown San Francisco were obtained at the maximum load point (i.e., the point of greatest demand) from Muni monitoring data. The service capacity of each line was estimated by multiplying the passenger capacity standard for transit vehicles by the number of actual bus trips that occurred at the time that the ridership data was collected. The capacity includes seated passengers and an appreciable number of standing passengers per vehicle (the number of standing passengers is between 30 and 80 percent of the seated passengers depending upon the specific transit vehicle configuration). The maximum loads, including both seated and standing passengers, vary by vehicle type and are 45 passengers for a 30-foot bus, 63 passengers for a 40-foot bus, 94 passengers for a 60-foot bus, and 119 passengers for a light rail vehicle. The comparison of the ridership demand to the capacity provided is expressed as a percent utilization of capacity

As indicated in **Table 15**, the maximum load point of two of the ten bus and rail lines occur within the study area. For the 54-Felton bus line, the AM and PM peak hour maximum load points in both the inbound and outbound directions occur at the stops at the intersection of San Bruno Avenue and Bacon Street. For the T-Third light rail line, the maximum load point in the outbound direction during the AM peak hour is at the stop at Third Street and Evans Avenue.

Muni has established a capacity utilization standard of 85 percent. As shown in **Table 15**, the weekday AM and PM capacity utilization for most lines serving the study area do not exceed Muni’s standards. However, during the AM peak hour in the inbound direction, the 44-O’Shaughnessey has capacity utilization at the maximum load point exceeding the 85 percent standard, indicating noticeably crowded conditions. Additionally, the 29-Sunset and 48-

Quintara-24th Street are operating at 84 percent of their capacity, nearly exceeding Muni's standard.

Route	Ridership	Capacity Utilization ¹	Destination	Maximum Load Point
AM PEAK HOUR				
Inbound ²				
9-San Bruno	415	55%	Downtown	Potrero & 23 rd
19-Polk	186	49%	Fisherman's Wharf	DeHaro & 20 th
23-Monterey	111	44%	Bayview	Diamond & Bosworth
24-Divisadero	260	68%	Pacific Heights	Castro St & 19 th St
28L-19 th Avenue Limited	110	29%	The Richmond	19 th Ave & Quintara St
29-Sunset	321	84%	The Presidio	Balboa Park BART
44-O'Shaughnessey	442	87%	The Richmond	Silver Ave & Mission St
48-Quintara-24 th St	268	84%	Potrero Hill	24 th St & Harrison St
54-Felton	111	58%	Hunters Point	Bacon St & San Bruno Ave
56-Rutland	13	14%	Visitacion Valley	Wilde St & Brussels St
T-Third	336	35%	Sunnydale	4th St & King St
Outbound ²				
9-San Bruno	218	29%	Visitacion Valley	Potrero Ave & 25 th St
19-Polk	201	53%	Hunters Point	Eighth St & Market St
23-Monterey	140	55%	The Zoo	Diamond St & Bosworth St
24-Divisadero	142	37%	Bayview	Castro St & Duboce Ave
28L-19 th Avenue Limited	104	27%	Daly City BART	19 th Ave & Quintara St
29-Sunset	216	57%	Bayview	Ocean Ave & Geneva Ave
44-O'Shaughnessey	167	33%	Hunters Point	Silver Ave & Gambier St
48-Quintara-24 th St	155	49%	Ocean Beach	24 th St & Folsom St
54-Felton	100	52%	Daly City BART	Bacon St & San Bruno Ave
56-Rutland	5	6%	Visitacion Valley	Hahn St & Visitacion St
T-Third	512	54%	Castro	Third St & Evans Ave
PM PEAK HOUR				
Inbound				
9-San Bruno	429	57%	Downtown	Potrero Ave & 20 th St
19-Polk	223	59%	Fisherman's Wharf	Seventh St & Howard St
23-Monterey	100	39%	Bayview	Diamond & Bosworth Ave
24-Divisadero	144	38%	Pacific Heights	Castro St & 17 th St
28L-19 th Avenue Limited	150	39%	The Richmond	19 th Ave & Quintara St
29-Sunset	124	33%	The Presidio	Persia Ave & Mission St
44-O'Shaughnessey	187	37%	The Richmond	Silver Ave & Merrill St
48-Quintara-24 th St	180	57%	Potrero Hill	24 th St & Harrison St
54-Felton	59	31%	Hunters Point	Bacon St & San Bruno Ave
56-Rutland	12	13%	Visitacion Valley	San Bruno Ave & Arleta St
T-Third	333	35%	Sunnydale	4 th St & King St

Table 15 (continued)
Muni Ridership and Capacity Utilization at Maximum Load Points
Existing Conditions

Outbound				
9-San Bruno	274	36%	Visitacion Valley	Potrero Ave & 22 nd St
19-Polk	207	54%	Hunters Point	Eighth St & Market St
23-Monterey	98	39%	The Zoo	Diamond St & Bosworth St
24-Divisadero	215	56%	Bayview	Castro St & 19 th St
28L-19 th Avenue Limited	105	28%	Daly City BART	19 th Ave & Quintara St
29-Sunset	160	42%	Bayview	19 th Ave & Holloway Ave
44-O'Shaughnessey	334	66%	Hunters Point	Bosworth St & Diamond St
48-Quintara-24 th St	160	50%	Ocean Beach	24 th St & Folsom St
54-Felton	59	31%	Daly City BART	San Bruno Ave & Bacon St
56-Rutland	11	12%	Visitacion Valley	Hahn St & Visitacion St
T-Third	369	39%	Castro	Fourth St & King St

Notes:

1. Lines operating above Muni standard capacity utilization are highlighted in **bold**.
2. Route direction follows Muni convention; convention is generally inbound toward or clockwise around downtown with the following exceptions: 23-Monterey, 54-Felton, and T-Third lines inbound towards Bayview.

Source: SFMTA 2007 Trip Activity Reports, Fehr & Peers.

In addition to evaluating Muni operations at the maximum load point for individual routes, and consistent with standard practice in San Francisco, four screenlines for routes serving the downtown financial district were evaluated. This evaluation examined the overall utilization of Muni transit capacity into and out of downtown San Francisco from the northeast, northwest, southeast, and southwest. **Figure 18** presents the location of the downtown screenlines, while existing ridership and capacity utilization at each screenline location is shown in **Table 16**. Overall, each screenline currently operates within Muni's 85 percent utilization standard, with the southwest screenline the most crowded. The southwest screenline includes all subway lines except for the J-Church light rail, the F-Market historic streetcar, and the 6-Parnassus, 7-Haight, 71-Haight-Noriega, and 71L-Haight-Noriega Limited bus lines.

Table 16		
Muni Ridership and Capacity Utilization at Downtown Screenlines		
Existing Conditions – Weekday AM and PM Peak Hours		
Screenline/Peak Hour	Ridership	Capacity Utilization
AM Peak Hour		
Northeast	1,882	50%
Northwest	7,434	65%
Southeast	4,248	67%
Southwest	<u>6,627</u>	<u>76%</u>
Total All Screenlines	20,191	67%
PM Peak Hour		
Northeast	1,886	52%
Northwest	6,621	65%
Southeast	4,668	66%
Southwest	<u>7,434</u>	<u>77%</u>
Total All Screenlines	20,609	68%

Source: SFMTA, Planning Department, AECOM, 2009.

Two cordons at the perimeter of the study area were also examined to analyze potential impacts of projects on Muni service: the north cordon at Cesar Chavez Street, and the west cordon located west of U.S. 101. In addition, a third cordon within the study area, located east of Third Street was reviewed to assess the degree to which Project transit demand between the Project site and the T-Third Street light rail service would affect localized transit capacity. **Figure 19** presents the cordon locations. **Table 17** presents the weekday AM and PM peak hour inbound and outbound ridership and capacity utilization for the north and west cordons, as well as for each line within the cordons. **Table 18** presents the weekday AM and PM peak hour inbound and outbound ridership and capacity utilization for the internal cordon located east of Third Street.

Table 17		
Muni Ridership and Capacity Utilization at Study Area Cordons		
Existing Conditions		
Cordon/Route	Ridership Inbound/Outbound	Capacity Utilization Inbound/Outbound
AM PEAK HOUR		
North (at Cesar Chavez)		
T-Third	329 / 512	35% / 54%
9-San Bruno	415 / 218	55% / 29%
19-Polk	<u>115 / 24</u>	30% / 6%
<i>Subtotal</i>	859 / 754	41% / 36%
West (West of U.S. 101)		
23-Monterey	111 / 140	44% / 55%
24-Divisadero	250 / 86	66% / 23%
29-Sunset	177 / 63	46% / 17%
44-O'Shaughnessey	442 / 167	87% / 33%
48-Quintara-24 th St	268 / 155	84% / 49%
54-Felton	<u>100 / 111</u>	52% / 58%
<i>Subtotal</i>	1,348 / 722	68% / 36%
PM PEAK HOUR		
North (at Cesar Chavez)		
T-Third	330 / 278	35% / 29%
9-San Bruno	429 / 274	57% / 36%
19-Polk	<u>87 / 74</u>	23% / 19%
<i>Subtotal</i>	846 / 626	41% / 30%
West (West of U.S. 101)		
23-Monterey	100 / 98	39% / 39%
24-Divisadero	114 / 147	30% / 39%
29-Sunset	71 / 21	19% / 6%
44-O'Shaughnessey	187 / 334	37% / 66%
48-Quintara-24 th St	180 / 160	57% / 50%
54-Felton	<u>59 / 59</u>	31% / 31%
<i>Subtotal</i>	711 / 819	36% / 42%

Source: SFMTA 2007 Trip Activity Reports, Fehr & Peers.

Table 18 Muni Ridership and Capacity Utilization at East of Third Street Cordon Existing Conditions		
Cordon/Route	Ridership Inbound/Outbound	Capacity Utilization Inbound/Outbound
AM PEAK HOUR		
19-Polk	115 / 24	30% / 6%
23-Monterey	38 / 56	15% / 22%
29-Sunset	177 / 63	46% / 17%
44-O'Shaughnessey	256 / 65	50% / 13%
54-Felton	<u>100 / 111</u>	52% / 58%
<i>Subtotal</i>	<i>686 / 319</i>	<i>40% / 19%</i>
PM PEAK HOUR		
19-Polk	87 / 74	23% / 19%
23-Monterey	58 / 15	23% / 6%
29-Sunset	71 / 21	19% / 6%
44-O'Shaughnessey	114 / 84	22% / 17%
54-Felton	<u>59 / 59</u>	31% / 31%
<i>Subtotal</i>	<i>389 / 253</i>	<i>23% / 15%</i>

Source: SFMTA 2007 Trip Activity Reports, Fehr & Peers.

Regional Providers

As a means to determine the amount of available space for each regional transit provider, capacity utilization is also used. For all regional transit operators, the capacity is based on the number of seated passengers per vehicle. All of the regional transit operators except BART have a one-hour load factor standard of 100 percent, which would indicate that all seats are full. BART has a peak period load factor standard of 115 percent, which indicates that all seats are full, and an additional 15 percent of the seating capacity are standees (i.e., 1.15 passengers per seat).

Regional transit service was also evaluated at the screenline level. **Figure 20** presents the location of the regional transit screenlines. Screenlines were evaluated for the locations where different regional transit service enters San Francisco, including the North Bay (Golden Gate Transit and Ferries), East Bay (BART, AC Transit, Ferries), and South Bay (BART, Caltrain, SamTrans). The capacity utilization for each of the three regional screenlines is presented in **Table 19**. As shown, regional transit service between San Francisco and the East Bay is currently over its seated capacity; however, since BART can accommodate a substantial number of standees, this excess transit demand is accommodated during peak hours.

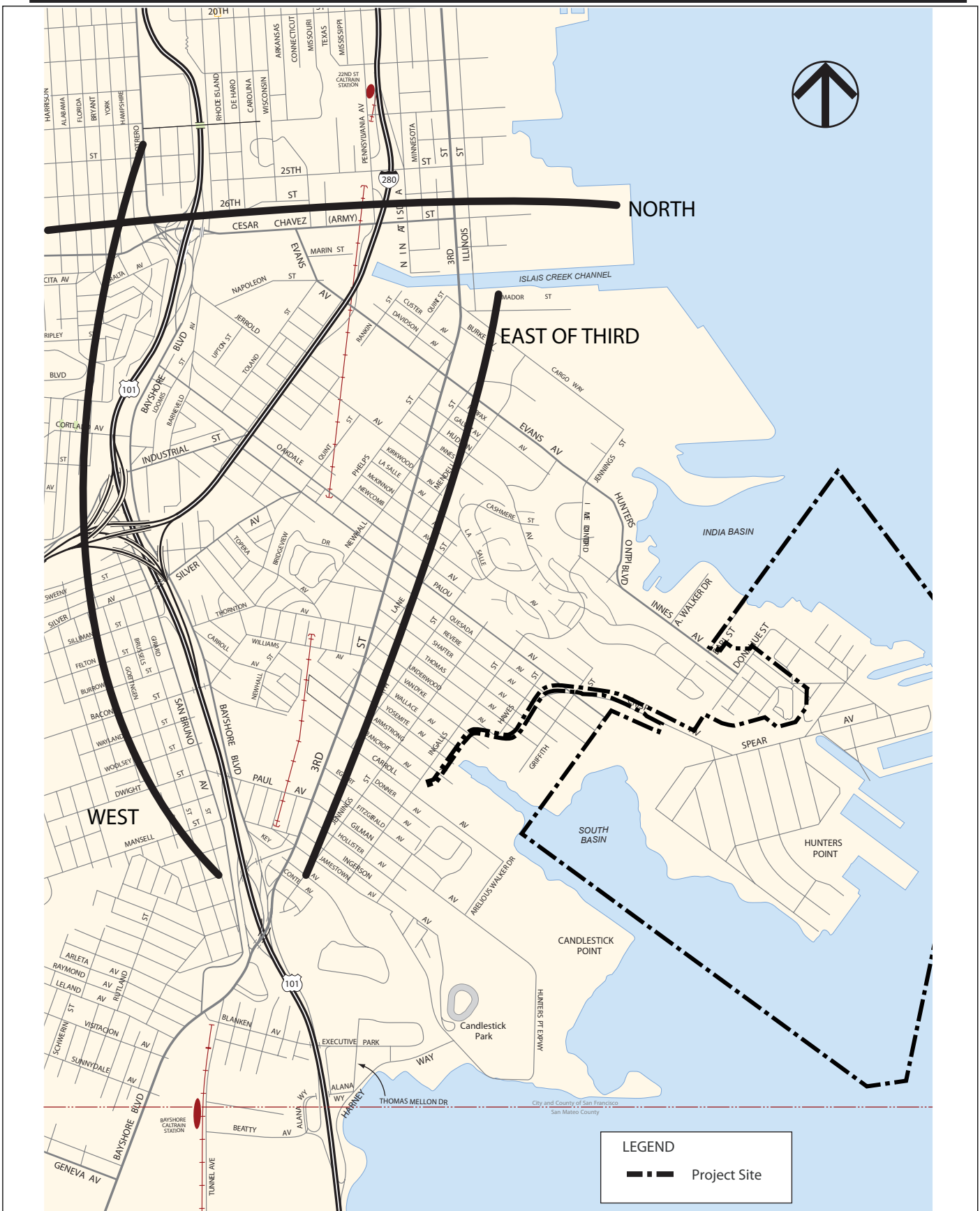
Table 19		
Transit Ridership and Capacity Utilization at Regional Screenlines		
Existing Conditions – Weekday AM and PM Peak Hours		
Screenline/Peak Hour	Ridership	Capacity Utilization
AM Peak Hour		
East Bay	20,401	108%
North Bay	2,459	56%
South Bay	<u>13,999</u>	<u>94%</u>
Total All Screenlines	36,859	96%
PM Peak Hour		
East Bay	20,204	102%
North Bay	2,303	59%
South Bay	<u>12,106</u>	<u>83%</u>
Total All Screenlines	34,613	90%

Source: SFMTA, AECOM, 2009.

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Transit Analysis Cordons and Screenlines

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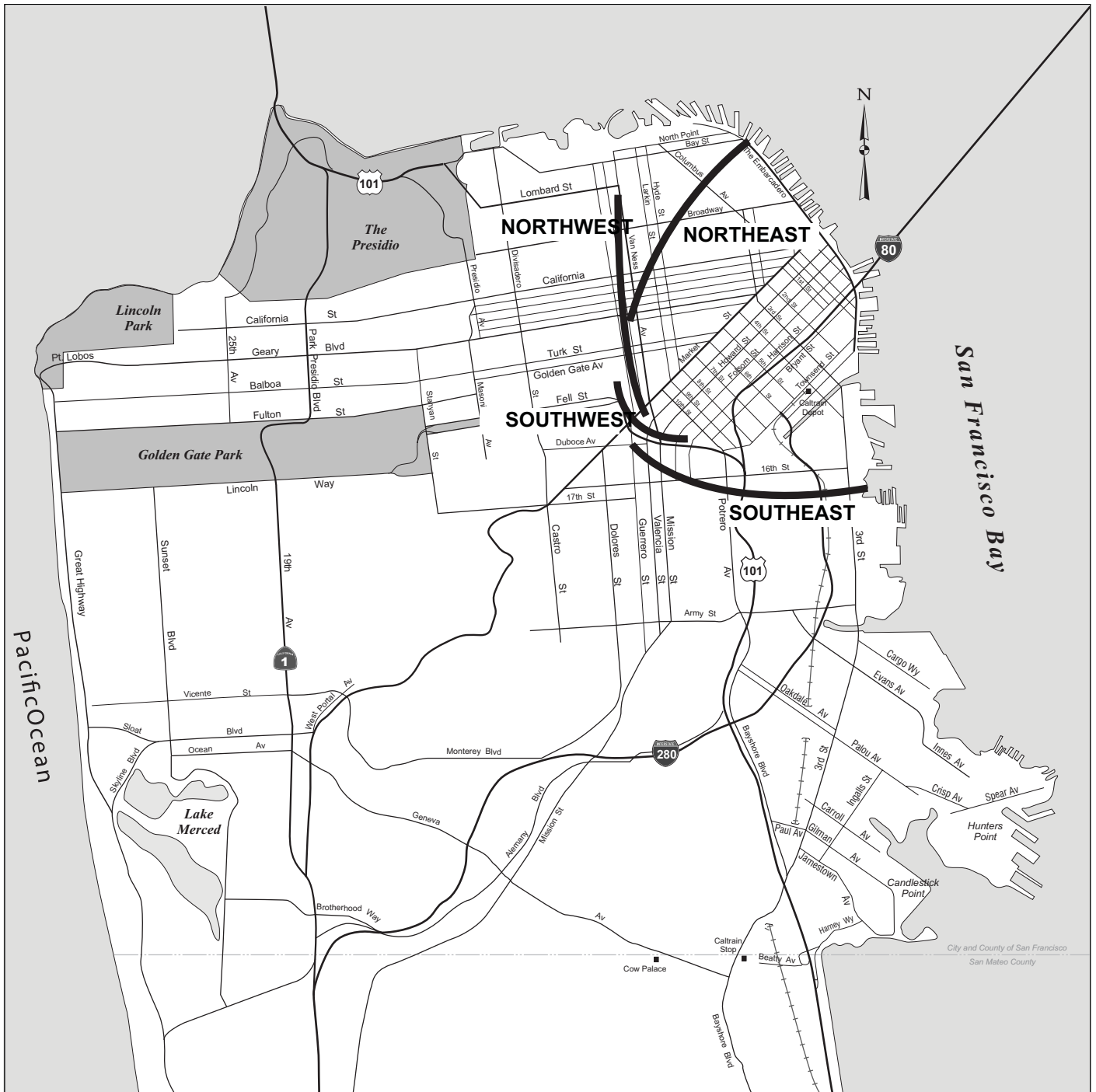


SOURCE: Fehr & Peers

Hunters Point Shipyard Supplemental EIS



CHS Consulting Group



SOURCE: SF Transportation Impact Analysis Guidelines





SOURCE: SF Transportation Impact Analysis Guidelines

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Project Increases to Transit Travel Time/Additional Muni Transit Vehicle Requirements

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Table A-2
Project Increases to Transit Travel Time (minutes:seconds) ¹
Alternatives – Weekday AM and PM Peak Hours

Route	Proposed Headway (min.)	Northbound/Eastbound					Southbound/Westbound				
		Alt 1	Alt 2	Alt 3	Alt 2A	Alt 4	Alt 1	Alt 2	Alt 3	Alt 2A	Alt 4
AM Peak Hour											
9-San Bruno	10	1:09	1:07	1:19	0:01	0:53	8:04	8:42	8:09	7:00	7:26
23-Monterey	15	0:41	0:41	0:38	0:26	0:35	3:51	3:51	3:51	4:18	3:50
24-Divisadero	6	4:56	9:50	4:46	5:14	12:16	4:21	2:07	4:41	5:01	0:20
28L-19 th Ave Ltd	5	4:23	5:28	4:17	4:29	3:44	10:07	10:04	9:47	12:47	8:32
29-Sunset	10	8:04	12:50	9:39	9:36	12:04	10:21	15:52	9:06	8:57	16:43
44-O'Shaughnessy	6	5:53	8:24	5:54	6:47	4:24	6:16	7:53	6:14	6:09	4:58
48-Quintara-24 th St	15	0:51	2:04	1:04	2:10	-1:00	2:38	2:38	2:48	2:34	1:41
54-Felton ²	20	0:56	3:23	1:39	1:55	-0:54	-0:17	-3:10	-3:00	-1:59	-3:05
T-Third	8	1:34	1:42	1:35	1:38	1:13	1:39	1:39	1:39	1:39	1:39
PM Peak Hour											
9-San Bruno	10	4:03	4:19	3:55	3:06	3:12	6:49	6:56	6:49	6:25	6:15
23-Monterey	15	0:56	0:58	0:58	0:53	0:54	1:57	2:01	1:57	1:28	1:44
24-Divisadero	6	8:25	8:13	8:36	9:06	-2:41	5:53	11:56	8:59	9:33	7:03
28L-19 th Ave Ltd	5	8:59	9:42	8:50	5:35	12:29	6:03	6:46	5:54	6:03	5:13
29-Sunset	10	15:00	17:07	14:53	16:19	15:55	21:07	22:19	21:02	21:02	20:22
44-O'Shaughnessy	6	6:05	12:30	6:56	5:40	4:01	7:18	10:04	8:00	9:03	5:52
48-Quintara-24 th St	15	8:03	9:02	8:40	6:57	-3:26	3:37	5:21	3:43	4:48	3:30
54-Felton ²	20	3:48	5:44	4:09	4:30	3:28	5:32	3:45	3:13	4:35	3:15
T-Third	8	2:57	3:35	2:50	3:08	2:17	2:33	2:45	2:32	2:38	1:58

Notes:

1. Routes where the Project would increase travel times such that additional vehicles would be required highlighted in **bold**.
2. Due to roadway improvements proposed by the Project and differences between the No Project and Project land use assumptions at the Hunters Point Shipyard, there would be less traffic congestion along 54-Felton route in study area with the Project, than under 2030 No Project conditions.

Source: Fehr & Peers, 2010.

Table A-3 Additional Muni Transit Vehicle Requirements Alternatives – Weekday AM and PM Peak Hours					
Route	Alt 1	Alt 2	Alt 3	Alt 2A	Alt 4
AM Peak Hour					
9-San Bruno	1	1	1	1	1
23-Monterey	0	0	0	0	0
24-Divisadero	2	2	2	2	1
28L-19 th Ave Ltd	1	1	1	1	0
29-Sunset	2	3	2	2	3
44-O'Shaughnessy	1	1	1	1	0
48-Quintara-24 th Street	0	0	0	0	0
54-Felton	0	0	0	0	0
T-Third	0	0	0	0	0
<i>Total</i>	7	8	7	7	5
PM Peak Hour					
9-San Bruno	1	1	1	1	1
23-Monterey	0	0	0	0	0
24-Divisadero	2	3	3	3	1
28L-19 th Ave Ltd	1	1	1	0	0
29-Sunset	4	4	4	4	4
44-O'Shaughnessy	3	4	3	3	2
48-Quintara-24 th Street	1	1	1	1	0
54-Felton	1	1	1	1	1
T-Third	1	1	1	1	1
<i>Total</i>	14	16	15	15	10
Note: Transit vehicle requirements for Project and Project Variants are in addition to those required for the 2030 No Project condition (Alternative 1, Table 83) <i>Italic</i> indicates figure is different than that which appears in Transportation Study, November, 2010. Source: Fehr & Peers, 2010.					