

APPENDIX D

INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX D-1

EXISTING TRAFFIC CONDITIONS

AM Existing Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 I-5 SB On-Ramp at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.507

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 24 Level Of Service: A

Street Name: I-5 SB On-Ramp First Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 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

Lanes: 0 0 0 0 0 0 0 0 1 1 1 2 0 3 0 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 733 933 353 712 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 0 733 933 353 712 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 0 733 933 353 712 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 0 733 933 353 712 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 0 0 733 933 353 712 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 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 0 0 733 933 353 712 0

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.05 1.00 1.00 1.06 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.32 1.68 2.00 3.00 0.00

Final Sat.: 0 0 0 0 0 0 0 0 2212 2688 3200 5100 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.33 0.35 0.11 0.14 0.00

Crit Moves: **** **

AM Existing Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Cabrillo Park Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.428
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 21 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both streets.

Volume Module: Table 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, FinalVolume, OvlAdjVol.

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

Capacity Analysis Module: Table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

AM Existing Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Circle Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.323

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 18 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and First Street with North, South, East, and West Bound movements.

Volume Module table with columns for various volume metrics (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, FinalVolume) and rows for Golden Circle Drive and First Street.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. and rows for Golden Circle Drive and First Street.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves and rows for Golden Circle Drive and First Street.

AM Existing Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Tustin Avenue at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.485
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Table with columns for Street Name (Tustin Avenue, First Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ovl, Include), and various traffic metrics like Min. Green, Y+R, Lanes.

Volume Module: Table showing traffic volume metrics such as 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, and OvlAdjVol.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat, OvlAdjV/S, and Crit Moves.

AM Existing Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Cabrillo Park Drive at Xerox Centre

Cycle (sec): 100 Critical Vol./Cap.(X): 0.297
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Table with columns for Street Name (Cabrillo Park Drive, Xerox Centre), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Permitted, Split Phase), Rights (Include), and various traffic volume and delay metrics.

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.

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

Capacity Analysis Module table showing Vol/Sat and Crit Moves for each approach.

AM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Cabrillo Park Drive at State Fund

Cycle (sec): 100 Critical Vol./Cap.(X): 0.277
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

AM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 I-5 SB Off-Ramp/Mabury Street at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.348
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 19 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 SB Off-Ramp/Mabury Street and Fourth Street with various approach and movement details.

Volume Module:

Table showing volume adjustments: 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, FinalVolume.

Saturation Flow Module:

Table showing saturation flow adjustments: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table showing capacity analysis: Vol/Sat, Crit Moves.

AM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 I-5 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.466
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 22 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 NB Ramps and Fourth Street with various lane configurations and control types.

Volume Module:

Table showing traffic volume data 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 showing saturation flow data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table showing capacity analysis data including Vol/Sat and Crit Moves.

AM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Cabrillo Park Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.563

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 27 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound for both Cabrillo Park Drive and Fourth Street.

Volume Module: Table showing traffic volume metrics such as 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 across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics such as Vol/Sat and Crit Moves for each approach.

AM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Golden Circle Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.341

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 18 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and Fourth Street with North, South, East, and West Bound movements.

Volume Module table 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, FinalVolume.




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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Intersection Level Of Service Report
Intersection 11: Park Center Drive at Fourth Street

Control Type:	Two-way stop	Delay (sec / veh):	13.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.145

Intersection Setup

Name	Park Center Drive		Fourth Street		Fourth Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Park Center Drive		Fourth Street		Fourth Street	
Base Volume Input [veh/h]	0	90	69	745	742	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	90	69	745	742	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	23	17	186	186	20
Total Analysis Volume [veh/h]	0	90	69	745	742	80
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.18	0.14	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	13.69	13.83	0.00	0.00	0.00
Movement LOS		B	B	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.64	0.50	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	16.10	12.57	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.69		1.17		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.27					
Intersection LOS	B					

AM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.596
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 29 Level Of Service: A

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume data 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.

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

Capacity Analysis Module: Table showing Vol/Sat and Crit Moves values.

AM Existing Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 SR-55 SB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.989
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 180 Level Of Service: E

Table with columns for Street Name (SR-55 SB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Permitted, Protected), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves.

AM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 SR-55 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.778

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 48 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include SR-55 NB Ramps and Fourth Street with sub-columns for North Bound, South Bound, East Bound, West Bound.

Volume Module:

Table with columns for various volume metrics: 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, FinalVolume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. values.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves values.

Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street

Control Type:	Two-way stop	Delay (sec / veh):	84.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	9	801	0	0	1754	62	2	0	15	24	0	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	801	0	0	1754	62	2	0	15	24	0	33
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	200	0	0	439	16	1	0	4	6	0	8
Total Analysis Volume [veh/h]	9	801	0	0	1754	62	2	0	15	24	0	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.00	0.00	0.02	0.00	0.04	0.00	0.06	0.12	0.00	0.06
d_M, Delay for Movement [s/veh]	29.67	0.00	0.00	0.00	0.00	0.00	84.49	0.00	22.69	25.35	43.07	14.60
Movement LOS	D	A			A	A	F		C	D	E	B
95th-Percentile Queue Length [veh]	0.18	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.35	0.66	0.66	0.66
95th-Percentile Queue Length [ft]	4.58	0.00	0.00	0.00	0.00	0.00	8.68	0.00	8.68	16.46	16.46	16.46
d_A, Approach Delay [s/veh]	0.33			0.00			29.96			19.13		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	0.69											
Intersection LOS	F											

PM Existing Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 I-5 SB On-Ramp at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.595

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 29 Level Of Service: A

Street Name: I-5 SB On-Ramp First Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 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

Lanes: 0 0 0 0 0 0 0 0 1 1 1 2 0 3 0 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 1314 905 265 773 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 1314 905 265 773 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 1314 905 265 773 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 1314 905 265 773 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 0 0 1314 905 265 773 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 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 0 0 1314 905 265 773 0

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.04 1.00 1.00 1.06 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.78 1.22 2.00 3.00 0.00

Final Sat.: 0 0 0 0 0 0 0 0 2942 1958 3200 5100 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.45 0.46 0.08 0.15 0.00

Crit Moves: **** **

PM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Cabrillo Park Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.572
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Cabrillo Park Drive and First Street with North, South, East, and West Bound movements.

Volume Module table 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, Final Volume, OvlAdjVol.

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

Capacity Analysis Module table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

PM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Circle Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.336

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 18 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and First Street with North, South, East, and West Bound movements.

Volume Module table 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, FinalVolume.

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

PM Existing Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Tustin Avenue at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.512
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Table with columns for Street Name (Tustin Avenue, First Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ovl, Include), and various traffic metrics like Min. Green, Y+R, Lanes.

Volume Module: Table showing traffic volume metrics such as 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, and OvlAdjVol.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat, OvlAdjV/S, and Crit Moves.

PM Existing Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Cabrillo Park Drive at Xerox Centre

Cycle (sec): 100 Critical Vol./Cap.(X): 0.311
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 20 Level Of Service: A

Table with columns for Street Name (Cabrillo Park Drive, Xerox Centre), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table 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.

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

Capacity Analysis Module: Table with columns for Vol/Sat and Crit Moves.

PM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Cabrillo Park Drive at State Fund

Cycle (sec): 100 Critical Vol./Cap.(X): 0.321
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 20 Level Of Service: A

Table with columns for Street Name (Cabrillo Park Drive, State Fund), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table showing traffic volume metrics: 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, FinalVolume.

Saturation Flow Module:

Table showing saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table showing capacity analysis metrics: Vol/Sat, Crit Moves.

PM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 I-5 SB Off-Ramp/Mabury Street at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.426
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 27 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 SB Off-Ramp/Mabury Street and Fourth Street with North, South, East, and West Bound movements.

Volume Module: Table showing traffic volume metrics like 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, FinalVolume.

Saturation Flow Module: Table showing Sat/Lane, Adjustment, Lanes, Final Sat. values for different approaches.

Capacity Analysis Module: Table showing Vol/Sat and Crit Moves values.

PM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 I-5 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.743
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 42 Level Of Service: C

Table with columns for Street Name (I-5 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ignore, Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves for each approach.

PM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Cabrillo Park Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.737

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 42 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both Cabrillo Park Drive and Fourth Street.

Volume Module: Table 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, FinalVolume. Rows include various traffic volume and adjustment factors.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. Rows include saturation flow and lane adjustment data.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves. Rows include capacity analysis and critical moves data.

PM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Golden Circle Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.455

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 22 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and Fourth Street with North, South, East, and West Bound approaches.

Volume Module: Table showing traffic volume metrics like 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, FinalVolume.




Saturation Flow Module: Table showing Sat/Lane, Adjustment, Lanes, Final Sat. values.

Capacity Analysis Module: Table showing Vol/Sat, Crit Moves values.

Intersection Level Of Service Report
Intersection 11: Park Center Drive at Fourth Street

Control Type:	Two-way stop	Delay (sec / veh):	23.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.369

Intersection Setup

Name	Park Center Drive		Fourth Street		Fourth Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Park Center Drive		Fourth Street		Fourth Street	
Base Volume Input [veh/h]	0	100	113	899	1146	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	100	113	899	1146	73
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	25	28	225	287	18
Total Analysis Volume [veh/h]	0	100	113	899	1146	73
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.27	0.37	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	18.05	23.46	0.00	0.00	0.00
Movement LOS		C	C	A	A	A
95th-Percentile Queue Length [veh]	0.00	1.06	1.64	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	26.45	41.04	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.05		2.62		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.91					
Intersection LOS	C					

PM Existing Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.776

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 47 Level Of Service: C

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table 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, Final Volume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

PM Existing Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 SR-55 SB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.791
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 50 Level Of Service: C

Table with columns for Street Name (SR-55 SB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Permitted, Protected), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves for each approach.

PM Existing Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 SR-55 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.800

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 52 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include SR-55 NB Ramps and Fourth Street with sub-columns for North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street

Control Type:	Two-way stop	Delay (sec / veh):	63.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.132

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	30	1390	0	0	920	7	45	0	97	9	0	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1390	0	0	920	7	45	0	97	9	0	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	348	0	0	230	2	11	0	24	2	0	3
Total Analysis Volume [veh/h]	30	1390	0	0	920	7	45	0	97	9	0	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.01	0.00	0.00	0.01	0.00	0.24	0.00	0.21	0.13	0.00	0.04
d_M, Delay for Movement [s/veh]	14.13	0.00	0.00	0.00	0.00	0.00	33.34	0.00	21.71	63.43	35.22	21.61
Movement LOS	B	A			A	A	D		C	F	E	C
95th-Percentile Queue Length [veh]	0.23	0.00	0.00	0.00	0.00	0.00	2.22	0.00	2.22	0.59	0.59	0.59
95th-Percentile Queue Length [ft]	5.68	0.00	0.00	0.00	0.00	0.00	55.61	0.00	55.61	14.83	14.83	14.83
d_A, Approach Delay [s/veh]	0.30			0.00			25.40			38.72		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	1.94											
Intersection LOS	F											

APPENDIX D-II

EXISTING PLUS PROJECT TRAFFIC CONDITIONS

AM Existing Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 I-5 SB On-Ramp at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.514

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 24 Level Of Service: A

Street Name: I-5 SB On-Ramp First Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 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

Lanes: 0 0 0 0 0 0 0 0 1 1 1 2 0 3 0 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 737 933 371 727 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 0 737 933 371 727 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 0 737 933 371 727 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 0 737 933 371 727 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 0 0 737 933 371 727 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 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 0 0 737 933 371 727 0

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.05 1.00 1.00 1.06 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.32 1.68 2.00 3.00 0.00

Final Sat.: 0 0 0 0 0 0 0 0 2218 2682 3200 5100 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.33 0.35 0.12 0.14 0.00

Crit Moves: **** **

AM Existing Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Cabrillo Park Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.448
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 22 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both streets.

Volume Module table 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, FinalVolume, OvlAdjVol.

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

Capacity Analysis Module table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

AM Existing Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Circle Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.324
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 18 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and First Street with North, South, East, and West Bound movements.

Volume Module table 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, Final Volume.

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

AM Existing Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Tustin Avenue at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.487
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Table with columns for Street Name (Tustin Avenue, First Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ovl, Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

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, FinalVolume, and OvlAdjVol across different movements.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for each movement.

Capacity Analysis Module table showing Vol/Sat, OvlAdjV/S, and Crit Moves for each movement.

AM Existing Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Cabrillo Park Drive at Xerox Centre

Cycle (sec): 100 Critical Vol./Cap.(X): 0.347
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 18 Level Of Service: A

Table with columns for Street Name (Cabrillo Park Drive, Xerox Centre), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table 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.

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

Capacity Analysis Module: Table with columns for Vol/Sat and Crit Moves.

AM Existing Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Cabrillo Park Drive at State Fund

Cycle (sec): 100 Critical Vol./Cap.(X): 0.292
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 17 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

AM Existing Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 I-5 SB Off-Ramp/Mabury Street at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.348
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 19 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 SB Off-Ramp/Mabury Street and Fourth Street with North, South, East, and West Bound movements.

Volume Module: Table showing traffic volume adjustments 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 showing saturation flow adjustments including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis including Vol/Sat and Crit Moves.

AM Existing Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 I-5 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.476
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 23 Level Of Service: A

Table with columns for Street Name (I-5 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table showing volume data 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 Final Volume.

Saturation Flow Module:

Table showing saturation flow data for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table showing capacity analysis data for Vol/Sat and Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Cabrillo Park Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.576
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 27 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both streets.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Golden Circle Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.349
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 19 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and Fourth Street with North, South, East, and West Bound approaches.

Volume Module table 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, FinalVolume.




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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Intersection Level Of Service Report
Intersection 11: Park Center Drive at Fourth Street

Control Type:	Two-way stop	Delay (sec / veh):	13.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.146

Intersection Setup

Name	Park Center Drive		Fourth Street		Fourth Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Park Center Drive		Fourth Street		Fourth Street	
Base Volume Input [veh/h]	0	90	69	780	752	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	90	69	780	752	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	23	17	195	188	20
Total Analysis Volume [veh/h]	0	90	69	780	752	80
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.18	0.15	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	13.76	13.94	0.00	0.00	0.00
Movement LOS		B	B	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.65	0.51	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	16.24	12.73	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.76		1.13		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.24					
Intersection LOS	B					

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.605
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 29 Level Of Service: B

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table 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 Final Volume.

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, and asterisks indicating critical moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 SR-55 SB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.996
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 180 Level Of Service: E

Table with columns for Street Name (SR-55 SB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Permitted, Protected), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 SR-55 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.785
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 49 Level Of Service: C

Table with columns for Street Name (SR-55 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected, Permitted), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves for each approach.

Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street

Control Type:	Two-way stop	Delay (sec / veh):	84.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	9	811	0	0	1757	62	2	0	15	24	0	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	811	0	0	1757	62	2	0	15	24	0	33
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	203	0	0	439	16	1	0	4	6	0	8
Total Analysis Volume [veh/h]	9	811	0	0	1757	62	2	0	15	24	0	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.00	0.00	0.02	0.00	0.04	0.00	0.06	0.12	0.00	0.06
d_M, Delay for Movement [s/veh]	29.76	0.00	0.00	0.00	0.00	0.00	84.95	0.00	22.75	25.64	43.31	14.72
Movement LOS	D	A			A	A	F		C	D	E	B
95th-Percentile Queue Length [veh]	0.18	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.35	0.67	0.67	0.67
95th-Percentile Queue Length [ft]	4.60	0.00	0.00	0.00	0.00	0.00	8.71	0.00	8.71	16.67	16.67	16.67
d_A, Approach Delay [s/veh]	0.33			0.00			30.07			19.32		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	0.69											
Intersection LOS	F											

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 I-5 SB On-Ramp at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.602

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 29 Level Of Service: B

Street Name: I-5 SB On-Ramp First Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 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

Lanes: 0 0 0 0 0 0 0 0 1 1 1 2 0 3 0 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 1330 905 277 783 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 1330 905 277 783 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 1330 905 277 783 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 1330 905 277 783 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 0 0 1330 905 277 783 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 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 0 0 1330 905 277 783 0

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.04 1.00 1.00 1.06 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.79 1.21 2.00 3.00 0.00

Final Sat.: 0 0 0 0 0 0 0 2956 1944 3200 5100 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.45 0.47 0.09 0.15 0.00

Crit Moves: **** **

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Cabrillo Park Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.590
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 28 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both streets.

Volume Module: Table 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, FinalVolume, OvlAdjVol.

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

Capacity Analysis Module: Table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Circle Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.339

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 18 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and First Street with North, South, East, and West Bound movements.

Volume Module table 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, FinalVolume.

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Tustin Avenue at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.513
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Table with columns for Street Name (Tustin Avenue, First Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ovl, Include, Ovl), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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, FinalVolume, and OvlAdjVol.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat, OvlAdjV/S, and Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Cabrillo Park Drive at Xerox Centre

Cycle (sec): 100 Critical Vol./Cap.(X): 0.336

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 22 Level Of Service: A

Table with columns for Street Name (Cabrillo Park Drive, Xerox Centre), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table 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.

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

Capacity Analysis Module table with columns for Vol/Sat and Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Cabrillo Park Drive at State Fund

Cycle (sec): 100 Critical Vol./Cap.(X): 0.333

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 21 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, Final Volume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 I-5 SB Off-Ramp/Mabury Street at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.431
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 27 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 SB Off-Ramp/Mabury Street and Fourth Street with various movement and lane configurations.

Volume Module: Table showing traffic volume adjustments 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 showing saturation flow adjustments including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis including Vol/Sat and Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 I-5 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.749

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 43 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 NB Ramps and Fourth Street with various approach and movement details.

Volume Module: Table showing traffic volume data 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, Final Volume.

Saturation Flow Module: Table showing saturation flow data including Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table showing capacity analysis data including Vol/Sat, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Cabrillo Park Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.747

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 43 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both Cabrillo Park Drive and Fourth Street.

Volume Module: Table 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, FinalVolume. Rows include various volume and adjustment factors.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. Rows include saturation flow and lane-related data.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves. Rows include capacity analysis metrics.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Golden Circle Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.463

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 22 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and Fourth Street with North, South, East, and West Bound movements.

Volume Module:

Table with columns for various volume and adjustment factors like 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, FinalVolume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. values.




Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves values.

Intersection Level Of Service Report
Intersection 11: Park Center Drive at Fourth Street

Control Type:	Two-way stop	Delay (sec / veh):	24.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.385

Intersection Setup

Name	Park Center Drive		Fourth Street		Fourth Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Park Center Drive		Fourth Street		Fourth Street	
Base Volume Input [veh/h]	0	100	113	922	1185	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	100	113	922	1185	73
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	25	28	231	296	18
Total Analysis Volume [veh/h]	0	100	113	922	1185	73
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.27	0.39	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	18.58	24.77	0.00	0.00	0.00
Movement LOS		C	C	A	A	A
95th-Percentile Queue Length [veh]	0.00	1.10	1.75	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	27.46	43.64	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.58		2.70		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.95					
Intersection LOS	C					

PM Existing Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.787

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 49 Level Of Service: C

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table 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 Final Volume.

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, and asterisks indicating critical moves.

PM Existing Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 SR-55 SB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.798

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 52 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include SR-55 SB Ramps and Fourth Street with sub-columns for North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

PM Existing Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 SR-55 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.807
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 53 Level Of Service: D

Table with columns for Street Name (SR-55 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected, Permitted), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module:

Table showing traffic volume metrics: 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 saturation flow metrics: Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table showing capacity analysis metrics: Vol/Sat and Crit Moves.

Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street

Control Type:	Two-way stop	Delay (sec / veh):	64.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.134

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	30	1397	0	0	932	7	45	0	97	9	0	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1397	0	0	932	7	45	0	97	9	0	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	349	0	0	233	2	11	0	24	2	0	3
Total Analysis Volume [veh/h]	30	1397	0	0	932	7	45	0	97	9	0	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.01	0.00	0.00	0.01	0.00	0.25	0.00	0.21	0.13	0.00	0.04
d_M, Delay for Movement [s/veh]	14.26	0.00	0.00	0.00	0.00	0.00	34.06	0.00	22.13	64.36	35.67	21.83
Movement LOS	B	A			A	A	D		C	F	E	C
95th-Percentile Queue Length [veh]	0.23	0.00	0.00	0.00	0.00	0.00	2.27	0.00	2.27	0.60	0.60	0.60
95th-Percentile Queue Length [ft]	5.76	0.00	0.00	0.00	0.00	0.00	56.82	0.00	56.82	15.04	15.04	15.04
d_A, Approach Delay [s/veh]	0.30			0.00			25.91			39.23		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	1.96											
Intersection LOS	F											

APPENDIX D-III

YEAR 2019 CUMULATIVE TRAFFIC CONDITIONS

AM Year 2019 Cumulative Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 I-5 SB On-Ramp at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.538

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 25 Level Of Service: A

Street Name: I-5 SB On-Ramp First Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 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

Lanes: 0 0 0 0 0 0 0 0 1 1 1 2 0 3 0 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 798 990 370 785 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 0 798 990 370 785 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 0 798 990 370 785 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 0 798 990 370 785 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 0 0 798 990 370 785 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 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 0 0 798 990 370 785 0

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.05 1.00 1.00 1.06 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.34 1.66 2.00 3.00 0.00

Final Sat.: 0 0 0 0 0 0 0 0 2242 2658 3200 5100 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.36 0.37 0.12 0.15 0.00

Crit Moves: **** **

AM Year 2019 Cumulative Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Cabrillo Park Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.471
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 22 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Cabrillo Park Drive and First Street with various approach and movement details.

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, FinalVolume, OvAdjVol.

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

Capacity Analysis Module table showing Vol/Sat, OvAdjV/S, Crit Moves.

AM Year 2019 Cumulative Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Circle Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.347
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 18 Level Of Service: A

Table with columns for Street Name (Golden Circle Drive, First Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table 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, Final Volume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

AM Year 2019 Cumulative Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Tustin Avenue at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.529
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 25 Level Of Service: A

Table with columns for Street Name (Tustin Avenue, First Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ovl, Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

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, FinalVolume, and OvlAdjVol across different approaches.

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

Capacity Analysis Module table showing Vol/Sat, OvlAdjV/S, and Crit Moves for each approach.

AM Year 2019 Cumulative Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Cabrillo Park Drive at Xerox Centre

Cycle (sec): 100 Critical Vol./Cap.(X): 0.308

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 18 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module table 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, FinalVolume.

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

AM Year 2019 Cumulative Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Cabrillo Park Drive at State Fund

Cycle (sec): 100 Critical Vol./Cap.(X): 0.287
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

AM Year 2019 Cumulative Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 I-5 SB Off-Ramp/Mabury Street at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.377
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 19 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 SB Off-Ramp/Mabury Street and Fourth Street with North, South, East, and West Bound movements.

Volume Module: Table showing traffic volume metrics such as 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 saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves.

AM Year 2019 Cumulative Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 I-5 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.509
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 24 Level Of Service: A

Table with columns for Street Name (I-5 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 saturation flow metrics such as Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis metrics such as Vol/Sat and Crit Moves.

AM Year 2019 Cumulative Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Cabrillo Park Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.610

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 30 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both Cabrillo Park Drive and Fourth Street.

Volume Module: Table 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, Final Volume. Rows include various traffic volume metrics.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. Rows include saturation flow and lane metrics.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves. Rows include capacity analysis metrics.

AM Year 2019 Cumulative Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Golden Circle Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.362
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 19 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and Fourth Street with North, South, East, and West Bound approaches.

Volume Module: Table showing traffic volume metrics like 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, FinalVolume.




Saturation Flow Module: Table showing Sat/Lane, Adjustment, Lanes, Final Sat. values for different approaches.

Capacity Analysis Module: Table showing Vol/Sat, Crit Moves values.

Intersection Level Of Service Report
Intersection 11: Park Center Drive at Fourth Street

Control Type:	Two-way stop	Delay (sec / veh):	14.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.162

Intersection Setup

Name	Park Center Drive		Fourth Street		Fourth Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Park Center Drive		Fourth Street		Fourth Street	
Base Volume Input [veh/h]	0	93	71	845	816	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	93	71	845	816	82
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	23	18	211	204	21
Total Analysis Volume [veh/h]	0	93	71	845	816	82
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.20	0.16	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	14.38	14.80	0.00	0.00	0.00
Movement LOS		B	B	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.72	0.57	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	17.92	14.32	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.38		1.15		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.25					
Intersection LOS	B					

AM Year 2019 Cumulative Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.650
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 33 Level Of Service: B

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table 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 Final Volume.

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, and asterisks indicating critical moves.

AM Year 2019 Cumulative Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 SR-55 SB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.040
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (SR-55 SB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Permitted, Protected), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves for each approach.

AM Year 2019 Cumulative Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 SR-55 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.822
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 57 Level Of Service: D

Table with columns for Street Name (SR-55 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected, Permitted), Rights (Include), and various traffic metrics like Min. Green, Y+R, Lanes.

Volume Module: Table showing traffic volume metrics such as 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 across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves for each approach.

Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street

Control Type:	Two-way stop	Delay (sec / veh):	94.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.048

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	9	848	0	0	1816	64	2	0	15	25	0	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	848	0	0	1816	64	2	0	15	25	0	34
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	212	0	0	454	16	1	0	4	6	0	9
Total Analysis Volume [veh/h]	9	848	0	0	1816	64	2	0	15	25	0	34
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.00	0.00	0.02	0.00	0.05	0.00	0.07	0.13	0.00	0.07
d_M, Delay for Movement [s/veh]	31.69	0.00	0.00	0.00	0.00	0.00	94.17	0.00	23.90	27.29	46.76	15.37
Movement LOS	D	A			A	A	F		C	D	E	C
95th-Percentile Queue Length [veh]	0.20	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.38	0.74	0.74	0.74
95th-Percentile Queue Length [ft]	4.95	0.00	0.00	0.00	0.00	0.00	9.42	0.00	9.42	18.52	18.52	18.52
d_A, Approach Delay [s/veh]	0.33			0.00			32.17			20.42		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	0.72											
Intersection LOS	F											

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 I-5 SB On-Ramp at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.632

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 31 Level Of Service: B

Street Name: I-5 SB On-Ramp First Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 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

Lanes: 0 0 0 0 0 0 0 0 1 1 1 2 0 3 0 0

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Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 1427 951 277 832 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 1427 951 277 832 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 1427 951 277 832 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 1427 951 277 832 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 0 0 1427 951 277 832 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 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 0 0 1427 951 277 832 0

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Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.03 1.00 1.00 1.06 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.80 1.20 2.00 3.00 0.00

Final Sat.: 0 0 0 0 0 0 0 0 2980 1920 3200 5100 0

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.48 0.50 0.09 0.16 0.00

Crit Moves: **** **

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Cabrillo Park Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.628

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 31 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both Cabrillo Park Drive and First Street.

Volume Module: Table 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, Final Volume, OvlAdjVol.

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

Capacity Analysis Module: Table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Circle Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.383

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 19 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and First Street with North, South, East, and West Bound movements.

Volume Module table 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, FinalVolume.

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Tustin Avenue at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.538

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 25 Level Of Service: A

Table with columns for Street Name (Tustin Avenue, First Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ovl, Include), and various traffic metrics like Min. Green, Y+R, Lanes.

Volume Module: Table showing traffic volume metrics such as 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, and OvlAdjVol.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat, OvlAdjV/S, and Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Cabrillo Park Drive at Xerox Centre

Cycle (sec): 100 Critical Vol./Cap.(X): 0.328

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 21 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Cabrillo Park Drive at State Fund

Cycle (sec): 100 Critical Vol./Cap.(X): 0.346
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 21 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module:

Table 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, FinalVolume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 I-5 SB Off-Ramp/Mabury Street at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.469

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 31 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 SB Off-Ramp/Mabury Street and Fourth Street with various movement and lane configurations.

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, Final Volume for various movements.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves for various movements.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 I-5 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.795

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 51 Level Of Service: C

Table with columns for Street Name (I-5 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ignore, Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module table showing traffic volume adjustments 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 showing Sat/Lane, Adjustment, Lanes, and Final Sat values for different approaches.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for different approaches.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Cabrillo Park Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.783
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 49 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Cabrillo Park Drive and Fourth Street with North, South, East, and West Bound movements.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Golden Circle Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.478

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 23 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and Fourth Street with North, South, East, and West Bound approaches.

Volume Module: Table showing traffic volume data 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 showing Sat/Lane, Adjustment, Lanes, and Final Sat values for different movements.

Capacity Analysis Module: Table showing Vol/Sat and Crit Moves for various movements.

Intersection Level Of Service Report
Intersection 11: Park Center Drive at Fourth Street

Control Type:	Two-way stop	Delay (sec / veh):	27.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.426

Intersection Setup

Name	Park Center Drive		Fourth Street		Fourth Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Park Center Drive		Fourth Street		Fourth Street	
Base Volume Input [veh/h]	0	103	116	989	1249	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	103	116	989	1249	75
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	26	29	247	312	19
Total Analysis Volume [veh/h]	0	103	116	989	1249	75
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.30	0.43	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	19.71	27.71	0.00	0.00	0.00
Movement LOS		C	D	A	A	A
95th-Percentile Queue Length [veh]	0.00	1.22	2.02	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	30.48	50.49	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	19.71		2.91		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.07					
Intersection LOS	D					

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.820
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 57 Level Of Service: D

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

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 various movements.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 SR-55 SB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.835

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 60 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include SR-55 SB Ramps and Fourth Street with sub-columns for North Bound, South Bound, East Bound, West Bound.

Volume Module: Table showing traffic volume metrics like 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, FinalVolume.

Saturation Flow Module: Table showing Sat/Lane, Adjustment, Lanes, Final Sat. values.

Capacity Analysis Module: Table showing Vol/Sat, Crit Moves values.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 SR-55 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.842
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 62 Level Of Service: D

Table with columns for Street Name (SR-55 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected, Permitted), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume adjustments 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 showing Sat/Lane, Adjustment, Lanes, and Final Sat for different approaches.

Capacity Analysis Module: Table showing Vol/Sat and Crit Moves for different approaches.

Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street

Control Type:	Two-way stop	Delay (sec / veh):	71.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.149

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	31	1448	0	0	971	7	46	0	100	9	0	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	1448	0	0	971	7	46	0	100	9	0	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	362	0	0	243	2	12	0	25	2	0	3
Total Analysis Volume [veh/h]	31	1448	0	0	971	7	46	0	100	9	0	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.01	0.00	0.00	0.01	0.00	0.27	0.00	0.22	0.15	0.00	0.04
d_M, Delay for Movement [s/veh]	14.73	0.00	0.00	0.00	0.00	0.00	37.31	0.00	24.23	71.78	38.72	23.57
Movement LOS	B	A			A	A	E		C	F	E	C
95th-Percentile Queue Length [veh]	0.25	0.00	0.00	0.00	0.00	0.00	2.56	0.00	2.56	0.67	0.67	0.67
95th-Percentile Queue Length [ft]	6.25	0.00	0.00	0.00	0.00	0.00	64.00	0.00	64.00	16.67	16.67	16.67
d_A, Approach Delay [s/veh]	0.31			0.00			28.35			43.29		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	2.11											
Intersection LOS	F											

APPENDIX D-IV

**YEAR 2019 CUMULATIVE PLUS PROJECT
TRAFFIC CONDITIONS**

AM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 I-5 SB On-Ramp at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.545

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 26 Level Of Service: A

Street Name: I-5 SB On-Ramp First Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 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

Lanes: 0 0 0 0 0 0 0 0 1 1 1 2 0 3 0 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 802 990 388 800 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 0 802 990 388 800 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 0 802 990 388 800 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 0 802 990 388 800 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 0 0 802 990 388 800 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 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 0 0 802 990 388 800 0

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.05 1.00 1.00 1.06 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.34 1.66 2.00 3.00 0.00

Final Sat.: 0 0 0 0 0 0 0 0 2248 2652 3200 5100 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.36 0.37 0.12 0.16 0.00

Crit Moves: **** **

AM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Cabrillo Park Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.489
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 23 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both streets.

Volume Module: Table 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, FinalVolume, OvlAdjVol.

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

Capacity Analysis Module: Table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

AM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Circle Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.347

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 18 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and First Street with various approach and movement details.

Volume Module: Table 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, Final Volume. Rows include Golden Circle Drive and First Street.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Golden Circle Drive and First Street.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves. Rows include Golden Circle Drive and First Street.

AM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Tustin Avenue at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.531
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Table with columns for Street Name (Tustin Avenue, First Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ovl, Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume adjustments 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, FinalVolume, and OvlAdjVol.

Saturation Flow Module: Table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module: Table showing Vol/Sat, OvlAdjV/S, and Crit Moves for different movements.

AM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Cabrillo Park Drive at Xerox Centre

Cycle (sec): 100 Critical Vol./Cap.(X): 0.358

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 19 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

AM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Cabrillo Park Drive at State Fund

Cycle (sec): 100 Critical Vol./Cap.(X): 0.302

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 17 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

AM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 I-5 SB Off-Ramp/Mabury Street at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.377
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 19 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 SB Off-Ramp/Mabury Street and Fourth Street with various approach and movement details.

Volume Module: Table showing traffic volume metrics such as 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 saturation flow metrics such as Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis metrics such as Vol/Sat and Crit Moves.

AM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 I-5 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.519
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 24 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 NB Ramps and Fourth Street with various approach and movement details.

Volume Module:

Table with columns for various volume metrics (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, FinalVolume) across different approaches.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. across different approaches.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves across different approaches.

AM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Cabrillo Park Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.623
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 30 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both Cabrillo Park Drive and Fourth Street.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

AM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Golden Circle Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.369

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 19 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and Fourth Street with North, South, East, and West Bound approaches.

Volume Module table 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, FinalVolume.




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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Intersection Level Of Service Report
Intersection 11: Park Center Drive at Fourth Street

Control Type:	Two-way stop	Delay (sec / veh):	14.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.164

Intersection Setup

Name	Park Center Drive		Fourth Street		Fourth Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Park Center Drive		Fourth Street		Fourth Street	
Base Volume Input [veh/h]	0	93	71	880	826	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	93	71	880	826	82
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	23	18	220	207	21
Total Analysis Volume [veh/h]	0	93	71	880	826	82
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.20	0.16	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	14.46	14.93	0.00	0.00	0.00
Movement LOS		B	B	A	A	A
95th-Percentile Queue Length [veh]	0.00	0.72	0.58	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	18.08	14.51	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.46		1.11		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.23					
Intersection LOS	B					

AM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.659

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 33 Level Of Service: B

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table 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 Final Volume.

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, and asterisks indicating critical moves.

AM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 SR-55 SB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.047
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (SR-55 SB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Permitted, Protected), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module:

Table showing traffic volume metrics 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 across different approaches.

Saturation Flow Module:

Table showing saturation flow metrics including Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module:

Table showing capacity analysis metrics including Vol/Sat and Crit Moves for each approach.

AM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 SR-55 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.828
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 59 Level Of Service: D

Table with columns for Street Name (SR-55 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected, Permitted), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module table showing traffic volume data 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 Final Volume across different approaches and movements.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different approaches and movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for different approaches and movements.

Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street

Control Type:	Two-way stop	Delay (sec / veh):	94.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.048

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	9	858	0	0	1819	64	2	0	15	25	0	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	858	0	0	1819	64	2	0	15	25	0	34
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	215	0	0	455	16	1	0	4	6	0	9
Total Analysis Volume [veh/h]	9	858	0	0	1819	64	2	0	15	25	0	34
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.00	0.00	0.02	0.00	0.05	0.00	0.07	0.14	0.00	0.07
d_M, Delay for Movement [s/veh]	31.79	0.00	0.00	0.00	0.00	0.00	94.69	0.00	23.96	27.62	47.03	15.51
Movement LOS	D	A			A	A	F		C	D	E	C
95th-Percentile Queue Length [veh]	0.20	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.38	0.75	0.75	0.75
95th-Percentile Queue Length [ft]	4.97	0.00	0.00	0.00	0.00	0.00	9.45	0.00	9.45	18.77	18.77	18.77
d_A, Approach Delay [s/veh]	0.33			0.00			32.28			20.64		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	0.73											
Intersection LOS	F											

PM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 I-5 SB On-Ramp at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.639

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 32 Level Of Service: B

Street Name: I-5 SB On-Ramp First Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 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

Lanes: 0 0 0 0 0 0 0 0 1 1 1 2 0 3 0 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 1443 951 289 842 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 1443 951 289 842 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 1443 951 289 842 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 1443 951 289 842 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 0 0 1443 951 289 842 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 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 0 0 1443 951 289 842 0

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.03 1.00 1.00 1.06 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.81 1.19 2.00 3.00 0.00

Final Sat.: 0 0 0 0 0 0 0 0 2993 1907 3200 5100 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.48 0.50 0.09 0.17 0.00

Crit Moves: **** **

PM Year 2019 Cumulative Plus Project Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Cabrillo Park Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.646
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 32 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both streets.

Volume Module table 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, Final Volume, OvlAdjVol.

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

Capacity Analysis Module table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

PM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Circle Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.384

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 20 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and First Street with North, South, East, and West Bound movements.

Volume Module table 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, FinalVolume.

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

PM Year 2019 Cumulative Plus Project Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Tustin Avenue at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.541

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 26 Level Of Service: A

Table with columns for Street Name (Tustin Avenue, First Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ovl, Include), and various traffic metrics like Min. Green, Y+R, Lanes.

Volume Module: Table showing traffic volume metrics such as 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, and OvlAdjVol.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat, OvlAdjV/S, and Crit Moves.

PM Year 2019 Cumulative Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Cabrillo Park Drive at Xerox Centre

Cycle (sec): 100 Critical Vol./Cap.(X): 0.353

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 23 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Cabrillo Park Drive and Xerox Centre with various traffic parameters.

Volume Module table 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, FinalVolume.

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

PM Year 2019 Cumulative Plus Project Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Cabrillo Park Drive at State Fund

Cycle (sec): 100 Critical Vol./Cap.(X): 0.358

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 22 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 I-5 SB Off-Ramp/Mabury Street at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.470
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 31 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 SB Off-Ramp/Mabury Street and Fourth Street with various approach and movement details.

Volume Module: Table showing traffic volume adjustments 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 showing saturation flow adjustments including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis including Vol/Sat and Crit Moves.

PM Year 2019 Cumulative Plus Project Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 I-5 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.801

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 52 Level Of Service: D

Table with columns for Street Name (I-5 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ignore, Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves for each approach.

PM Year 2019 Cumulative Plus Project Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Cabrillo Park Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.793

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 51 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both Cabrillo Park Drive and Fourth Street.

Volume Module: Table 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, FinalVolume. Rows include data for North Bound, South Bound, East Bound, West Bound.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. Rows include data for North Bound, South Bound, East Bound, West Bound.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves. Rows include data for North Bound, South Bound, East Bound, West Bound.

PM Year 2019 Cumulative Plus Project Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Golden Circle Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.486

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 23 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and Fourth Street with various approach and movement details.

Volume Module: Table 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, FinalVolume.




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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

Intersection Level Of Service Report
Intersection 11: Park Center Drive at Fourth Street

Control Type:	Two-way stop	Delay (sec / veh):	29.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.445

Intersection Setup

Name	Park Center Drive		Fourth Street		Fourth Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Park Center Drive		Fourth Street		Fourth Street	
Base Volume Input [veh/h]	0	103	116	1012	1288	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	103	116	1012	1288	75
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	26	29	253	322	19
Total Analysis Volume [veh/h]	0	103	116	1012	1288	75
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.31	0.45	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	20.34	29.48	0.00	0.00	0.00
Movement LOS		C	D	A	A	A
95th-Percentile Queue Length [veh]	0.00	1.27	2.15	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	31.68	53.83	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	20.34		3.03		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.13					
Intersection LOS	D					

PM Year 2019 Cumulative Plus Project Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.831

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 59 Level Of Service: D

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table 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 Final Volume.

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, and asterisks indicating critical moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 SR-55 SB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.842
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 62 Level Of Service: D

Table with columns for Street Name (SR-55 SB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Permitted, Protected), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves for each approach.

PM Year 2019 Cumulative Plus Project Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 SR-55 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.848

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 64 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include SR-55 NB Ramps and Fourth Street with various traffic parameters.

Volume Module table showing traffic volume adjustments: 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, FinalVolume.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, Final Sat. values for different approaches.

Capacity Analysis Module table showing Vol/Sat, Crit Moves for different movements.

Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street

Control Type:	Two-way stop	Delay (sec / veh):	72.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.151

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	31	1455	0	0	983	7	46	0	100	9	0	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	1455	0	0	983	7	46	0	100	9	0	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	364	0	0	246	2	12	0	25	2	0	3
Total Analysis Volume [veh/h]	31	1455	0	0	983	7	46	0	100	9	0	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.01	0.00	0.00	0.01	0.00	0.27	0.00	0.22	0.15	0.00	0.04
d_M, Delay for Movement [s/veh]	14.87	0.00	0.00	0.00	0.00	0.00	38.18	0.00	24.77	72.88	39.24	23.83
Movement LOS	B	A			A	A	E		C	F	E	C
95th-Percentile Queue Length [veh]	0.25	0.00	0.00	0.00	0.00	0.00	2.62	0.00	2.62	0.68	0.68	0.68
95th-Percentile Queue Length [ft]	6.34	0.00	0.00	0.00	0.00	0.00	65.46	0.00	65.46	16.90	16.90	16.90
d_A, Approach Delay [s/veh]	0.31			0.00			29.00			43.90		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	2.14											
Intersection LOS	F											

APPENDIX D-V

BUILDOUT CUMULATIVE TRAFFIC CONDITIONS

AM Year 2040 Buildout Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 I-5 SB On-Ramp at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.600

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 29 Level Of Service: A

Street Name: I-5 SB On-Ramp First Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 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

Lanes: 0 0 0 0 0 0 0 0 1 1 1 2 0 3 0 0

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Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 1027 1040 382 1043 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 1027 1040 382 1043 0

Added Vol: 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

Initial Fut: 0 0 0 0 0 0 0 0 1027 1040 382 1043 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 1027 1040 382 1043 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 0 0 1027 1040 382 1043 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 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 0 0 1027 1040 382 1043 0

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Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.04 1.00 1.00 1.06 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.49 1.51 2.00 3.00 0.00

Final Sat.: 0 0 0 0 0 0 0 0 2485 2415 3200 5100 0

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.41 0.43 0.12 0.20 0.00

Crit Moves: **** **

AM Year 2040 Buildout Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Cabrillo Park Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.674
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 35 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Cabrillo Park Drive and First Street with North, South, East, and West Bound movements.

Volume Module: Table showing traffic volume metrics like 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, FinalVolume, and OvAdjVol.

Saturation Flow Module: Table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module: Table showing Vol/Sat, OvAdjV/S, and Crit Moves for various movements.

AM Year 2040 Buildout Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Circle Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.446

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 22 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and First Street with North, South, East, and West Bound approaches.

Volume Module table 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, Final Volume.

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

AM Year 2040 Buildout Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Tustin Avenue at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.666
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 34 Level Of Service: B

Table with columns for Street Name (Tustin Avenue, First Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ovl, Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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, and OvlAdjVol.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat, OvlAdjV/S, and Crit Moves.

AM Year 2040 Buildout Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Cabrillo Park Drive at Xerox Centre

Cycle (sec): 100 Critical Vol./Cap.(X): 0.395

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 20 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound movements.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

AM Year 2040 Buildout Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Cabrillo Park Drive at State Fund

Cycle (sec): 100 Critical Vol./Cap.(X): 0.309

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 18 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Cabrillo Park Drive and State Fund with North, South, East, and West Bound movements.

Volume Module: Table showing traffic volume metrics like 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, FinalVolume.

Saturation Flow Module: Table showing Sat/Lane, Adjustment, Lanes, Final Sat. values for different approaches.

Capacity Analysis Module: Table showing Vol/Sat, Crit Moves values.

AM Year 2040 Buildout Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 I-5 SB Off-Ramp/Mabury Street at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.433
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 21 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 SB Off-Ramp/Mabury Street and Fourth Street with various movement and lane configurations.

Volume Module: Table showing traffic volume adjustments 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 showing saturation flow adjustments including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis including Vol/Sat and Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 I-5 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.693
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 36 Level Of Service: B

Table with columns for Street Name (I-5 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume data 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 showing saturation flow data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis data including Vol/Sat and Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Cabrillo Park Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.800
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 52 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Cabrillo Park Drive and Fourth Street with North, South, East, and West Bound movements.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Golden Circle Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.506

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 24 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and Fourth Street with North, South, East, and West Bound movements.

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, FinalVolume for various movements.




Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves for various movements.

Intersection Level Of Service Report
Intersection 11: Park Center Drive at Fourth Street

Control Type:	Two-way stop	Delay (sec / veh):	22.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.382

Intersection Setup

Name	Park Center Drive		Fourth Street		Fourth Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Park Center Drive		Fourth Street		Fourth Street	
Base Volume Input [veh/h]	0	146	126	1310	1011	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	146	126	1310	1011	143
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	37	32	328	253	36
Total Analysis Volume [veh/h]	0	146	126	1310	1011	143
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.37	0.38	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	19.43	22.53	0.00	0.00	0.00
Movement LOS		C	C	A	A	A
95th-Percentile Queue Length [veh]	0.00	1.68	1.74	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	41.91	43.45	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	19.43		1.98		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.07					
Intersection LOS	C					

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.867
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 71 Level Of Service: D

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table 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 Final Volume.

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

Capacity Analysis Module table with columns for Vol/Sat and Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 SR-55 SB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.306

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include SR-55 SB Ramps and Fourth Street with sub-columns for North Bound, South Bound, East Bound, and West Bound.

Volume Module: Table showing traffic volume metrics such as 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 saturation flow metrics such as Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis metrics such as Vol/Sat and Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 SR-55 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.967
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 156 Level Of Service: E

Table with columns for Street Name (SR-55 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected, Permitted), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module table showing traffic volume metrics such as 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 across different approaches.

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

Capacity Analysis Module table showing Vol/Sat and Crit Moves for each approach.

Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street

Control Type:	Two-way stop	Delay (sec / veh):	353.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.798

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	22	1108	0	0	2004	80	21	0	83	26	0	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	1108	0	0	2004	80	21	0	83	26	0	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	277	0	0	501	20	5	0	21	7	0	9
Total Analysis Volume [veh/h]	22	1108	0	0	2004	80	21	0	83	26	0	36
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.19	0.01	0.00	0.00	0.02	0.00	0.80	0.00	0.43	0.39	0.00	0.09
d_M, Delay for Movement [s/veh]	44.27	0.00	0.00	0.00	0.00	0.00	353.44	0.00	235.14	81.24	101.23	36.56
Movement LOS	E	A			A	A	F		F	F	F	E
95th-Percentile Queue Length [veh]	0.68	0.00	0.00	0.00	0.00	0.00	7.55	0.00	7.55	2.16	2.16	2.16
95th-Percentile Queue Length [ft]	17.05	0.00	0.00	0.00	0.00	0.00	188.78	0.00	188.78	54.12	54.12	54.12
d_A, Approach Delay [s/veh]	0.86			0.00			259.03			55.30		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	9.27											
Intersection LOS	F											

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 I-5 SB On-Ramp at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.745

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 43 Level Of Service: C

Street Name: I-5 SB On-Ramp First Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 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

Lanes: 0 0 0 0 0 0 0 0 1 1 1 2 0 3 0 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 1967 999 247 1176 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 1967 999 247 1176 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 1967 999 247 1176 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 1967 999 247 1176 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 0 0 1967 999 247 1176 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 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 0 0 1967 999 247 1176 0

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.03 1.00 1.00 1.06 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.99 1.01 2.00 3.00 0.00

Final Sat.: 0 0 0 0 0 0 0 0 3283 1617 3200 5100 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.60 0.62 0.08 0.23 0.00

Crit Moves: **** **

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Cabrillo Park Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.967
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 156 Level Of Service: E

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Cabrillo Park Drive and First Street with North, South, East, and West Bound movements.

Volume Module table 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, FinalVolume, OvlAdjVol.

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

Capacity Analysis Module table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Circle Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.496

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 23 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and First Street with North, South, East, and West Bound movements.

Volume Module table 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, FinalVolume.

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Tustin Avenue at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.697
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: B

Table with columns for Street Name (Tustin Avenue, First Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ovl, Include), and various traffic metrics like Min. Green, Y+R, Lanes.

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, FinalVolume, and OvlAdjVol across different approaches.

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

Capacity Analysis Module table showing Vol/Sat, OvlAdjV/S, and Crit Moves for each approach.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Cabrillo Park Drive at Xerox Centre

Cycle (sec): 100 Critical Vol./Cap.(X): 0.511

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 41 Level Of Service: A

Street Name: Cabrillo Park Drive Xerox Centre

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Split Phase Split Phase

Rights: Include Include Include Include

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

Lanes: 1 0 2 0 0 0 0 1 1 0 1 0 0 0 0 0

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Volume Module:

Base Vol: 13 1256 0 0 712 18 146 0 140 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: 13 1256 0 0 712 18 146 0 140 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: 13 1256 0 0 712 18 146 0 140 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: 13 1256 0 0 712 18 146 0 140 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 13 1256 0 0 712 18 146 0 140 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: 13 1256 0 0 712 18 146 0 140 0 0 0

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Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.03 1.00 1.00 1.06 1.00 1.00 1.06 1.00

Lanes: 1.00 2.00 0.00 0.00 1.95 0.05 1.00 0.00 1.00 0.00 0.00 0.00

Final Sat.: 1600 3400 0 0 3221 79 1600 0 1600 0 0 0

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Capacity Analysis Module:

Vol/Sat: 0.01 0.37 0.00 0.00 0.22 0.23 0.09 0.00 0.09 0.00 0.00 0.00

Crit Moves: **** ****

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Cabrillo Park Drive at State Fund

Cycle (sec): 100 Critical Vol./Cap.(X): 0.488

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 35 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 I-5 SB Off-Ramp/Mabury Street at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.636
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 57 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 SB Off-Ramp/Mabury Street and Fourth Street with various approach and movement details.

Volume Module: Table showing traffic volume adjustments 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 FinalVolume.

Saturation Flow Module: Table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different approaches.

Capacity Analysis Module: Table showing Vol/Sat and Crit Moves for different approaches.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 I-5 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.099
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (I-5 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ignore, Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves for each approach.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Cabrillo Park Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.101

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both Cabrillo Park Drive and Fourth Street.

Volume Module: Table 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, FinalVolume. Rows include various volume and adjustment factors.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. Rows include saturation flow and adjustment factors.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves. Rows include volume per saturation and critical moves.

PM Year 2040 Buildout Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Golden Circle Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.805

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 53 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and Fourth Street with North, South, East, and West Bound movements.

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, FinalVolume for various movements.




Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves for various movements.

Intersection Level Of Service Report
Intersection 11: Park Center Drive at Fourth Street

Control Type:	Two-way stop	Delay (sec / veh):	1,131.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	3.250

Intersection Setup

Name	Park Center Drive		Fourth Street		Fourth Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Park Center Drive		Fourth Street		Fourth Street	
Base Volume Input [veh/h]	0	233	242	1766	2223	216
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	233	242	1766	2223	216
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	58	61	442	556	54
Total Analysis Volume [veh/h]	0	233	242	1766	2223	216
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	1.58	3.25	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	344.02	1131.54	0.00	0.00	0.00
Movement LOS		F	F	A	A	A
95th-Percentile Queue Length [veh]	0.00	16.09	24.63	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	402.21	615.70	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	344.02		136.37		0.00	
Approach LOS	F		F		A	
d_I, Intersection Delay [s/veh]	75.64					
Intersection LOS	F					

PM Year 2040 Buildout Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.243

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table with columns for various traffic volume metrics (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, FinalVolume) across different approaches.

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

Capacity Analysis Module table with columns for Vol/Sat and Crit Moves across different approaches.

PM Year 2040 Buildout Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 SR-55 SB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.225
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (SR-55 SB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Permitted, Protected), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves for each approach.

PM Year 2040 Buildout Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 SR-55 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.082
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (SR-55 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume data 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 showing saturation flow data including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis data including Vol/Sat and Crit Moves.

Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street

Control Type:	Two-way stop	Delay (sec / veh):	2,147.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.517

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	66	1806	0	0	1351	47	97	0	279	9	0	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	1806	0	0	1351	47	97	0	279	9	0	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	452	0	0	338	12	24	0	70	2	0	3
Total Analysis Volume [veh/h]	66	1806	0	0	1351	47	97	0	279	9	0	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.26	0.02	0.00	0.00	0.01	0.00	1.29	0.00	0.85	2.52	0.00	0.05
d_M, Delay for Movement [s/veh]	24.46	0.00	0.00	0.00	0.00	0.00	600.34	0.00	563.58	2147.28	1206.31	1155.49
Movement LOS	C	A			A	A	F		F	F	F	F
95th-Percentile Queue Length [veh]	1.03	0.00	0.00	0.00	0.00	0.00	29.75	0.00	29.75	3.83	3.83	3.83
95th-Percentile Queue Length [ft]	25.72	0.00	0.00	0.00	0.00	0.00	743.68	0.00	743.68	95.82	95.82	95.82
d_A, Approach Delay [s/veh]	0.86				0.00		573.07			1561.22		
Approach LOS	A				A		F			F		
d_I, Intersection Delay [s/veh]	68.55											
Intersection LOS	F											

APPENDIX D-VI

**BUILDOUT CUMULATIVE PLUS PROJECT
TRAFFIC CONDITIONS**

AM Year 2040 Buildout Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 I-5 SB On-Ramp at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.606

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 29 Level Of Service: B

Street Name: I-5 SB On-Ramp First Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 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

Lanes: 0 0 0 0 0 0 0 0 1 1 1 2 0 3 0 0

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Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 1031 1040 400 1058 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 1031 1040 400 1058 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 1031 1040 400 1058 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 1031 1040 400 1058 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 0 0 1031 1040 400 1058 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 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 0 0 1031 1040 400 1058 0

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Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.04 1.00 1.00 1.06 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.49 1.51 2.00 3.00 0.00

Final Sat.: 0 0 0 0 0 0 0 0 2490 2410 3200 5100 0

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.41 0.43 0.13 0.21 0.00

Crit Moves: **** **

AM Year 2040 Buildout Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Cabrillo Park Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.684

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 36 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Cabrillo Park Drive and First Street with North, South, East, and West Bound movements.

Volume Module table 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, Final Volume, OvAdjVol.

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

Capacity Analysis Module table with columns for Vol/Sat, OvAdjV/S, Crit Moves.

AM Year 2040 Buildout Plus Project Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Circle Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.447
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 22 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and First Street with North, South, East, and West Bound movements.

Volume Module table 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, FinalVolume.

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

AM Year 2040 Buildout Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Tustin Avenue at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.668
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: B

Table with columns for Street Name (Tustin Avenue, First Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ovl, Include), and various traffic metrics like Min. Green, Y+R, Lanes.

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, FinalVolume, and OvlAdjVol across different approaches.

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

Capacity Analysis Module table showing Vol/Sat, OvlAdjV/S, and Crit Moves for each approach.

AM Year 2040 Buildout Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Cabrillo Park Drive at Xerox Centre

Cycle (sec): 100 Critical Vol./Cap.(X): 0.444

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 21 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

AM Year 2040 Buildout Plus Project Traffic Conditions
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Cabrillo Park Drive at State Fund

Cycle (sec): 100 Critical Vol./Cap.(X): 0.317

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 18 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

AM Year 2040 Buildout Plus Project Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 I-5 SB Off-Ramp/Mabury Street at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.433
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 21 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 SB Off-Ramp/Mabury Street and Fourth Street with various movement and lane configurations.

Volume Module: Table showing traffic volume adjustments 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 showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different approaches.

Capacity Analysis Module: Table showing Vol/Sat and Crit Moves for different approaches.

AM Year 2040 Buildout Plus Project Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 I-5 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.703
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 37 Level Of Service: C

Table with columns for Street Name (I-5 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ignore, Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves for each approach.

AM Year 2040 Buildout Plus Project Traffic Conditions
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Cabrillo Park Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.813
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 55 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both streets.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Golden Circle Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.514
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 24 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and Fourth Street with North, South, East, and West Bound approaches.

Volume Module:

Table 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, FinalVolume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.


Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves.

Intersection Level Of Service Report
Intersection 11: Park Center Drive at Fourth Street

Control Type:	Two-way stop	Delay (sec / veh):	22.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.387

Intersection Setup

Name	Park Center Drive		Fourth Street		Fourth Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Park Center Drive		Fourth Street		Fourth Street	
Base Volume Input [veh/h]	0	146	126	1345	1021	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	146	126	1345	1021	143
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	37	32	336	255	36
Total Analysis Volume [veh/h]	0	146	126	1345	1021	143
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.37	0.39	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	19.60	22.84	0.00	0.00	0.00
Movement LOS		C	C	A	A	A
95th-Percentile Queue Length [veh]	0.00	1.69	1.77	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	42.36	44.15	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	19.60		1.96		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.06					
Intersection LOS	C					

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.876
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 75 Level Of Service: D

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table 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 Final Volume.

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

Capacity Analysis Module table with columns for Vol/Sat and Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 SR-55 SB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.313
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (SR-55 SB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Permitted, Protected), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves for each approach.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 SR-55 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.973
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 169 Level Of Service: E

Table with columns for Street Name (SR-55 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected, Permitted), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module:

Table showing traffic volume metrics: 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 showing saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table showing capacity analysis metrics: Vol/Sat, Crit Moves.

**Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street**

Control Type:	Two-way stop	Delay (sec / veh):	356.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.803

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	22	1118	0	0	2007	80	21	0	83	26	0	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	1118	0	0	2007	80	21	0	83	26	0	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	280	0	0	502	20	5	0	21	7	0	9
Total Analysis Volume [veh/h]	22	1118	0	0	2007	80	21	0	83	26	0	36
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.19	0.01	0.00	0.00	0.02	0.00	0.80	0.00	0.43	0.39	0.00	0.09
d_M, Delay for Movement [s/veh]	44.44	0.00	0.00	0.00	0.00	0.00	356.86	0.00	237.73	83.02	102.62	37.52
Movement LOS	E	A			A	A	F		F	F	F	E
95th-Percentile Queue Length [veh]	0.68	0.00	0.00	0.00	0.00	0.00	7.58	0.00	7.58	2.21	2.21	2.21
95th-Percentile Queue Length [ft]	17.12	0.00	0.00	0.00	0.00	0.00	189.57	0.00	189.57	55.15	55.15	55.15
d_A, Approach Delay [s/veh]	0.86			0.00			261.78			56.60		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	9.35											
Intersection LOS	F											

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 I-5 SB On-Ramp at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.752

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 44 Level Of Service: C

Street Name: I-5 SB On-Ramp First Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 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

Lanes: 0 0 0 0 0 0 0 0 1 1 1 2 0 3 0 0

Volume Module:

Base Vol: 0 0 0 0 0 0 0 0 1983 999 259 1186 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 1983 999 259 1186 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 1983 999 259 1186 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 1983 999 259 1186 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 0 0 1983 999 259 1186 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 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 0 0 1983 999 259 1186 0

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.03 1.00 1.00 1.06 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.99 1.01 2.00 3.00 0.00

Final Sat.: 0 0 0 0 0 0 0 0 3292 1608 3200 5100 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.60 0.62 0.08 0.23 0.00

Crit Moves: **** **

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Cabrillo Park Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.984

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 180 Level Of Service: E

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Cabrillo Park Drive and First Street with various traffic parameters.

Volume Module table 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, Final Volume, OvlAdjVol.

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

Capacity Analysis Module table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

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ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Circle Drive at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.499

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 24 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and First Street with North, South, East, and West Bound approaches.

Volume Module table 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, FinalVolume.

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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

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ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Tustin Avenue at First Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.700
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: B

Table with columns for Street Name (Tustin Avenue, First Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Ovl, Include), and various traffic metrics like Min. Green, Y+R, Lanes.

Volume Module: Table showing traffic volume adjustments 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, Final Volume, and OvlAdjVol.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat, OvlAdjV/S, and Crit Moves.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Cabrillo Park Drive at Xerox Centre

Cycle (sec): 100 Critical Vol./Cap.(X): 0.536

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 48 Level Of Service: A

Table with columns for Street Name (Cabrillo Park Drive, Xerox Centre), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Permitted, Split Phase), Rights (Include), and various traffic volume and delay metrics.

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.

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

Capacity Analysis Module table showing Vol/Sat and Crit Moves for each approach.

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ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Cabrillo Park Drive at State Fund

Cycle (sec): 100 Critical Vol./Cap.(X): 0.500

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 39 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

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ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 I-5 SB Off-Ramp/Mabury Street at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.642
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 59 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include I-5 SB Off-Ramp/Mabury Street and Fourth Street with various approach and movement details.

Volume Module: Table showing traffic volume adjustments 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 showing saturation flow adjustments including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis including Vol/Sat and Crit Moves.

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ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 I-5 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.105
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (I-5 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table 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.

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

Capacity Analysis Module: Table with columns for Vol/Sat and Crit Moves.

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ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Cabrillo Park Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.109

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include North Bound, South Bound, East Bound, West Bound for both streets.

Volume Module: Table 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, FinalVolume.

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

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves.

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ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Golden Circle Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.813

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 55 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Golden Circle Drive and Fourth Street with North, South, East, and West Bound approaches.

Volume Module table 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, FinalVolume.




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

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Intersection Level Of Service Report
Intersection 11: Park Center Drive at Fourth Street

Control Type:	Two-way stop	Delay (sec / veh):	1,205.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	3.405

Intersection Setup

Name	Park Center Drive		Fourth Street		Fourth Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Park Center Drive		Fourth Street		Fourth Street	
Base Volume Input [veh/h]	0	233	242	1789	2262	216
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	233	242	1789	2262	216
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	58	61	447	566	54
Total Analysis Volume [veh/h]	0	233	242	1789	2262	216
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	1.63	3.41	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	366.34	1205.44	0.00	0.00	0.00
Movement LOS		F	F	A	A	A
95th-Percentile Queue Length [veh]	0.00	16.50	25.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	412.60	624.92	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	366.34		143.63		0.00	
Approach LOS	F		F		A	
d_I, Intersection Delay [s/veh]	79.52					
Intersection LOS	F					

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.254

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table 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 Final Volume.

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

Capacity Analysis Module: Table with columns for Vol/Sat and Crit Moves.

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ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 SR-55 SB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.230
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (SR-55 SB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Permitted, Protected), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module: Table showing traffic volume metrics such as 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 across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics like Vol/Sat and Crit Moves for each approach.

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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 SR-55 NB Ramps at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 1.090

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx

Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (SR-55 NB Ramps, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected, Permitted), Rights (Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module:

Table showing volume metrics: 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 showing saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table showing capacity analysis metrics: Vol/Sat, Crit Moves.

Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street

Control Type:	Two-way stop	Delay (sec / veh):	2,335.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.710

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	66	1813	0	0	1363	47	97	0	279	9	0	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	1813	0	0	1363	47	97	0	279	9	0	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	453	0	0	341	12	24	0	70	2	0	3
Total Analysis Volume [veh/h]	66	1813	0	0	1363	47	97	0	279	9	0	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.27	0.02	0.00	0.00	0.01	0.00	1.32	0.00	0.86	2.71	0.00	0.05
d_M, Delay for Movement [s/veh]	24.82	0.00	0.00	0.00	0.00	0.00	618.31	0.00	580.56	2335.13	1318.25	1265.98
Movement LOS	C	A			A	A	F		F	F	F	F
95th-Percentile Queue Length [veh]	1.05	0.00	0.00	0.00	0.00	0.00	30.07	0.00	30.07	3.88	3.88	3.88
95th-Percentile Queue Length [ft]	26.16	0.00	0.00	0.00	0.00	0.00	751.80	0.00	751.80	97.03	97.03	97.03
d_A, Approach Delay [s/veh]	0.87				0.00		590.30		1703.36			
Approach LOS	A				A		F		F			
d_I, Intersection Delay [s/veh]	70.81											
Intersection LOS	F											

APPENDIX D-VII

**BUILDOUT CUMULATIVE PLUS PROJECT WITH
MITIGATION TRAFFIC CONDITIONS**

AM Year 2040 Buildout Plus Project Traffic Conditions - Mitigation
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 Park Center Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.463

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 22 Level Of Service: A

Street Name: Park Center Drive Fourth Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Permitted

Rights: Include Include Include Include

Min. Green: 0 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

Lanes: 0 0 0 0 0 0 0 0 1 1 0 3 0 0 0 0 0 2 1 0

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Volume Module:

Base Vol: 0 0 0 0 0 0 146 126 1345 0 0 1021 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 0 0 0 146 126 1345 0 0 1021 143

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 0 146 126 1345 0 0 1021 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: 1.00 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 0 146 126 1345 0 0 1021 143

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 146 126 1345 0 0 1021 143

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 146 126 1345 0 0 1021 143

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Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.05 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 1.00 1.00 3.00 0.00 0.00 2.63 0.37

Final Sat.: 0 0 0 0 0 1600 1600 5100 0 0 4410 590

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.09 0.08 0.26 0.00 0.00 0.23 0.24

Crit Moves: **** **

AM Year 2040 Buildout Plus Project Traffic Conditions - Mitigation
2-16-3755 The Madison, Santa Ana

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.782
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: C

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Ovl, Include), and various traffic metrics like Min. Green, Y+R, and Lanes.

Volume Module table showing traffic volume data 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, Final Volume, and OvlAdjVol across different approaches.

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

Capacity Analysis Module table showing Vol/Sat, OvlAdjV/S, and Crit Moves for each approach.

Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street

Control Type:	Two-way stop	Delay (sec / veh):	45.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.201

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	22	1118	0	0	2007	80	21	0	83	26	0	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	26	0	-21	0	0	-26	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	1118	0	0	2033	80	0	0	83	0	0	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	280	0	0	508	20	0	0	21	0	0	9
Total Analysis Volume [veh/h]	22	1118	0	0	2033	80	0	0	83	0	0	36
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.44	0.00	0.00	0.09
d_M, Delay for Movement [s/veh]	45.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.83	0.00	0.00	14.77
Movement LOS	E	A			A	A			E			B
95th-Percentile Queue Length [veh]	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02	0.00	0.00	0.29
95th-Percentile Queue Length [ft]	17.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.48	0.00	0.00	7.28
d_A, Approach Delay [s/veh]	0.89			0.00			37.83			14.77		
Approach LOS	A			A			E			B		
d_I, Intersection Delay [s/veh]	1.39											
Intersection LOS	E											

PM Year 2040 Buildout Plus Project Traffic Conditions - Mitigation
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 Park Center Drive at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.863

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 70 Level Of Service: D

Street Name: Park Center Drive Fourth Street

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Permitted

Rights: Include Include Include Include

Min. Green: 0 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

Lanes: 0 0 0 0 0 0 0 0 0 0 0 0 0

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Volume Module:

Base Vol: 0 0 0 0 0 0 233 242 1789 0 0 2262 216

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 0 233 242 1789 0 0 2262 216

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 0 233 242 1789 0 0 2262 216

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 0 233 242 1789 0 0 2262 216

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 0 0 0 233 242 1789 0 0 2262 216

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 0 0 0 0 0 233 242 1789 0 0 2262 216

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Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

Adjustment: 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.06 1.00 1.00 1.05 1.00

Lanes: 0.00 0.00 0.00 0.00 0.00 1.00 1.00 3.00 0.00 0.00 2.74 0.26

Final Sat.: 0 0 0 0 0 1600 1600 5100 0 0 4582 418

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.15 0.15 0.35 0.00 0.00 0.49 0.52

Crit Moves: **** *

PM Year 2040 Buildout Plus Project Traffic Conditions - Mitigation
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Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Tustin Avenue at Fourth Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.916
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 97 Level Of Service: E

Table with columns for Street Name (Tustin Avenue, Fourth Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table 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, Final Volume, and OvlAdjVol.

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

Capacity Analysis Module table with columns for Vol/Sat, OvlAdjV/S, and Crit Moves.

**Intersection Level Of Service Report
Intersection 15: Tustin Avenue at Sixth Street**

Control Type:	Two-way stop	Delay (sec / veh):	58.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.864

Intersection Setup

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Tustin Avenue			Tustin Avenue			Sixth Street			Sixth Street		
Base Volume Input [veh/h]	66	1813	0	0	1363	47	97	0	279	9	0	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	9	0	-97	0	0	-9	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	1813	0	0	1372	47	0	0	279	0	0	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	453	0	0	343	12	0	0	70	0	0	3
Total Analysis Volume [veh/h]	66	1813	0	0	1372	47	0	0	279	0	0	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	2	2

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.27	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.86	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	25.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.23	0.00	0.00	20.90
Movement LOS	D	A			A	A			F			C
95th-Percentile Queue Length [veh]	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.85	0.00	0.00	0.17
95th-Percentile Queue Length [ft]	26.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	196.31	0.00	0.00	4.28
d_A, Approach Delay [s/veh]	0.88		0.00		58.23		20.90					
Approach LOS	A		A		F		C					
d_I, Intersection Delay [s/veh]	5.06											
Intersection LOS	F											