APPENDIX 1.1: APPROVED TRAFFIC STUDY SCOPING AGREEMENT

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City of San Bernardino Public Works / Traffic Engineering Department
Traffic Scope Approval Form

To be completed by applicant consultant and approved by Public Works prior to start of study

Project Name: Project: S. Arrowhead Warehouses
Address: Project: 119 S. Arrowhead Av.
Description: 230,455 square feet of industrial use within 3 buildings
Developer's Name: 119 Arrowhead LLC
Address: Urban Crossroads, Inc. - Charlene So
Telephone No: (949) 861-0177 Email address: cso@urbanxroads.com

Trip Generation Rates from ITE Latest Edition

Warehousing (ITE 150), Manufacturing (ITE 140)

	Land Use (1): Industrial Park (ITE 130)	Land Use (2):
Development Sq Ft	230,455 SF	
ITE Land Use Code	150, 140, 130	
Daily Trips	894 (PCE)	
AM Peak Hour Trips		
Inbound	65	
Outbound	22	
Total	87 (PCE)	
PM Peak Hour Trips		
Inbound	29	
Outbound	65	
Total	94 (PCE)	

(Use Additional Sheet(s), if necessary)

Pass-by Trips (%), if applicable: 0.0 %

	Land Use (1):	Land Use (2):
ITE Land Use Code		
Daily Trips		
AM Peak Hour Trips		
Inbound		
Outbound		
Total		
PM Peak Hour Trips:		
Inbound		
Outbound		
Total		

Project Opening Year: 2023 **Build-out Year:** 2040

Study Intersections:

1. Arrowhead Av. & Rialto Av.
2. Arrowhead Av. & Driveway 1
3. Arrowhead Av. & Driveway 2
4. Mountain View Av./Dwy 3 & Rialto Av.
5. Driveway 4 & Rialto Av.
6. Sierra Wy. & Rialto Av.
7. Sierra Wy. & Driveway 5
8. Sierra Wy. & Driveway 6
9.
10.

See Exhibit 2

(Use Additional Sheet(s) and Maps to show project Boundaries & Attach memo for project Description)

City of San Bernardino Public Works / Traffic Engineering Department

Traffic Scope Approval Form

To be completed by applicant consultant and approved by Public Works prior to start of study

Study Roadway Segments: 1 Not Applicable 2 _____
3 _____ 4 _____
5 _____ 6 _____

Proposed Development Use: ☐ Residential ☐ Commercial ☐ Mixed Use ☒ Other

Software Methodology: ☒ Synchro ☐ HCS

Additional issues to be considered:
☐ Traffic calming measures ☒ Queuing Analysis
☐ Bike/Ped Accommodations ☐ Merge Analysis ☐ Gap Analysis
☐ Actuation/Coordination ☐ Safety Analysis ☐ Sight Distance Analysis

Is the project screened from VMT assessment? ☐ Yes ☒ No

VMT Screening Justification: See attached for VMT memo

Ambient Growth Rate: 3.0 %

Trip Distribution: East Varies % West Varies % North Varies % South Varies %

Consultant Preparer's Name: Charlene So, Urban Crossroads, Inc.

Address: 1133 Camelback St. #8329, Newport Beach, CA 92658

Telephone No. 949-861-0177 PE / TE License #: TR2414

Email Address: cso@urbanxroads.com

Signature: Charlene So Date: August 30, 2022

Approved By (Public Works Department):

Signature: _____ Date: _____

Name: _____ Title: _____

Analysis Scenarios:

1. Existing
2. Existing plus Ambient Growth
3. Existing plus Ambient Growth plus Project
4. Existing plus Ambient plus Cumulative
5. Existing plus Ambient plus Cumulative plus Project
6. Horizon Year (2040) Without Project
7. Horizon Year (2040) With Project

Attached:
Exhibit 1: Preliminary Site Plan
Exhibit 2: Study Area Analysis Locations
Exhibit 3: Project (Cars) Trip Distribution
Exhibit 4: Project (Trucks) Trip Distribution
Table 1: Project Trip Generation

Table 1

Trip Generation Rates

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicle Trip Generation Rates									
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars (AM=88.2%, PM=83.3%, Daily=64.9%)			0.116	0.034	0.150	0.042	0.108	0.150	1.110
2-Axle Trucks (AM=1.97%, PM=2.79%, Daily=5.86%)			0.002	0.001	0.003	0.003	0.002	0.005	0.100
3-Axle Trucks (AM=2.44%, PM=3.46%, Daily=7.27%)			0.002	0.002	0.004	0.003	0.003	0.006	0.124
4+-Axle Trucks (AM=7.39%, PM=10.45%, Daily=21.97%)			0.007	0.006	0.013	0.010	0.009	0.019	0.376
Manufacturing[3]	TSF	140	0.517	0.163	0.680	0.229	0.511	0.740	4.750
Passenger Cars (AM=95.6%, PM=95.9%, Daily=90.5%)			0.500	0.150	0.650	0.217	0.493	0.710	4.300
2-Axle Trucks (AM=0.74%, PM=0.69%, Daily=1.59%)			0.003	0.002	0.005	0.002	0.003	0.005	0.075
3-Axle Trucks (AM=0.91%, PM=0.85%, Daily=1.97%)			0.003	0.003	0.006	0.003	0.004	0.006	0.093
4+-Axle Trucks (AM=3.73%, PM=2.56%, Daily=5.94%)			0.011	0.008	0.019	0.008	0.011	0.019	0.282
Industrial Park[3]	TSF	130	0.275	0.065	0.340	0.075	0.265	0.340	3.370
Passenger Cars (AM=88.2%, PM=88.2%, Daily=83.09%)			0.257	0.043	0.300	0.060	0.240	0.300	2.800
2-Axle Trucks (AM=1.96%, PM=1.96%, Daily=2.82%)			0.003	0.004	0.007	0.003	0.004	0.007	0.095
3-Axle Trucks (AM=2.44%, PM=2.44%, Daily=3.50%)			0.004	0.005	0.008	0.003	0.005	0.008	0.118
4+-Axle Trucks (AM=7.36%, PM=7.36%, Daily=10.59%)			0.011	0.014	0.025	0.010	0.016	0.025	0.357

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Passenger Car Equivalent (PCE) Trip Generation Rates[4]									
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.116	0.034	0.150	0.042	0.108	0.150	1.110
2-Axle Trucks (PCE = 2.0)			0.004	0.003	0.007	0.006	0.004	0.010	0.200
3-Axle Trucks (PCE = 2.5)			0.005	0.005	0.010	0.008	0.008	0.016	0.311
4+-Axle Trucks (PCE = 3.0)			0.021	0.017	0.038	0.030	0.026	0.056	1.127
Manufacturing[3]	TSF	140	0.517	0.163	0.680	0.229	0.511	0.740	4.750
Passenger Cars			0.500	0.150	0.650	0.217	0.493	0.710	4.300
2-Axle Trucks (PCE = 2.0)			0.006	0.004	0.010	0.004	0.006	0.010	0.150
3-Axle Trucks (PCE = 2.5)			0.008	0.008	0.016	0.006	0.009	0.016	0.233
4+-Axle Trucks (PCE = 3.0)			0.033	0.023	0.056	0.023	0.033	0.056	0.845
Industrial Park[3]	TSF	130	0.275	0.065	0.340	0.075	0.265	0.340	3.370
Passenger Cars			0.257	0.043	0.300	0.060	0.240	0.300	2.800
2-Axle Trucks (PCE = 2.0)			0.006	0.007	0.013	0.005	0.008	0.013	0.190
3-Axle Trucks (PCE = 2.5)			0.009	0.011	0.021	0.008	0.013	0.021	0.295
4+-Axle Trucks (PCE = 3.0)			0.034	0.041	0.075	0.029	0.047	0.075	1.070

[1] Trip Generation & Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

[2] TSF = thousand square feet

[3] Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.

Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

[4] PCE factors: 2-axle = 2.0; 3-axle = 2.5; 4+-axle = 3.0.

Table 2

Trip Generation Summary (Actual Vehicles)

Land Use	Quantity Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicles:								
Warehousing (50%)	115.228 TSF							
Passenger Cars:		13	4	17	5	12	17	128
2-axle Trucks:		0	0	0	0	0	0	12
3-axle Trucks:		0	0	0	0	0	0	14
4+-axle Trucks:		1	1	2	1	1	2	44
Total Truck Trips (Actual Vehicles):		1	1	2	1	1	2	70
Total Warehousing Trips (Actual Vehicles):		**14**	**5**	**19**	**6**	**13**	**19**	**198**
Manufacturing (25%)	57.614 TSF							
Passenger Cars:		29	9	38	13	28	41	248
2-axle Trucks:		0	0	0	0	0	0	4
3-axle Trucks:		0	0	0	0	0	0	6
4+-axle Trucks:		1	0	1	0	1	1	16
Total Truck Trips (Actual Vehicles):		1	0	1	0	1	1	26
Total Manufacturing Trips (Actual Vehicles):		**30**	**9**	**39**	**13**	**29**	**42**	**274**
Business Park (25%)	57.614 TSF							
Passenger Cars:		15	2	17	3	14	17	162
2-axle Trucks:		0	0	0	0	0	0	6
3-axle Trucks:		0	0	0	0	0	0	8
4+-axle Trucks:		1	1	2	1	1	2	22
Total Truck Trips (Actual Vehicles):		1	1	2	1	1	2	36
Total Business Park Trips (Actual Vehicles):		**16**	**3**	**19**	**4**	**15**	**19**	**198**
Total Passenger Car Trips:		57	15	72	21	54	75	538
Total Truck Trips (Actual Vehicles):		3	2	5	2	3	5	132
Total Trips (Actual Vehicles)[2]		**60**	**17**	**77**	**23**	**57**	**80**	**670**

[1] TSF = thousand square feet

[2] Total Trips = Passenger Cars + Truck Trips.

Table 3

Trip Generation Summary (PCE)

Land Use	Quantity	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Passenger Car Equivalent (PCE):									
Warehousing (50%)	115.228	TSF							
Passenger Cars:			13	4	17	5	12	17	128
2-axle Trucks:			0	0	0	1	0	1	24
3-axle Trucks:			1	1	2	1	1	2	36
4+-axle Trucks:			2	2	4	3	3	6	130
Total Truck Trips (PCE):			3	3	6	5	4	9	190
Total Warehousing Trips (PCE):			**16**	**7**	**23**	**10**	**16**	**26**	**318**
Manufacturing (25%)	57.614	TSF							
Passenger Cars:			29	9	38	13	28	41	248
2-axle Trucks:			0	0	0	0	0	0	10
3-axle Trucks:			0	0	0	0	1	1	14
4+-axle Trucks:			2	1	3	1	2	3	50
Total Truck Trips (PCE):			2	1	3	1	3	4	74
Total Manufacturing Trips (PCE):			**31**	**10**	**41**	**14**	**31**	**45**	**322**
Business Park (25%)	57.614	TSF							
Passenger Cars:			15	2	17	3	14	17	162
2-axle Trucks:			0	0	0	0	0	0	12
3-axle Trucks:			1	1	2	0	1	1	18
4+-axle Trucks:			2	2	4	2	3	5	62
Total Truck Trips (PCE):			3	3	6	2	4	6	92
Total Business Park Trips (PCE):			**18**	**5**	**23**	**5**	**18**	**23**	**254**
Total Passenger Car Trips:			57	15	72	21	54	75	538
Total Truck Trips (PCE):			8	7	15	8	11	19	356
Total Trips (PCE)[2]			**65**	**22**	**87**	**29**	**65**	**94**	**894**

[1] TSF = thousand square feet

[2] Total Trips = Passenger Cars + Truck Trips.

EXHIBIT 1: PRELIMINARY SITE PLAN

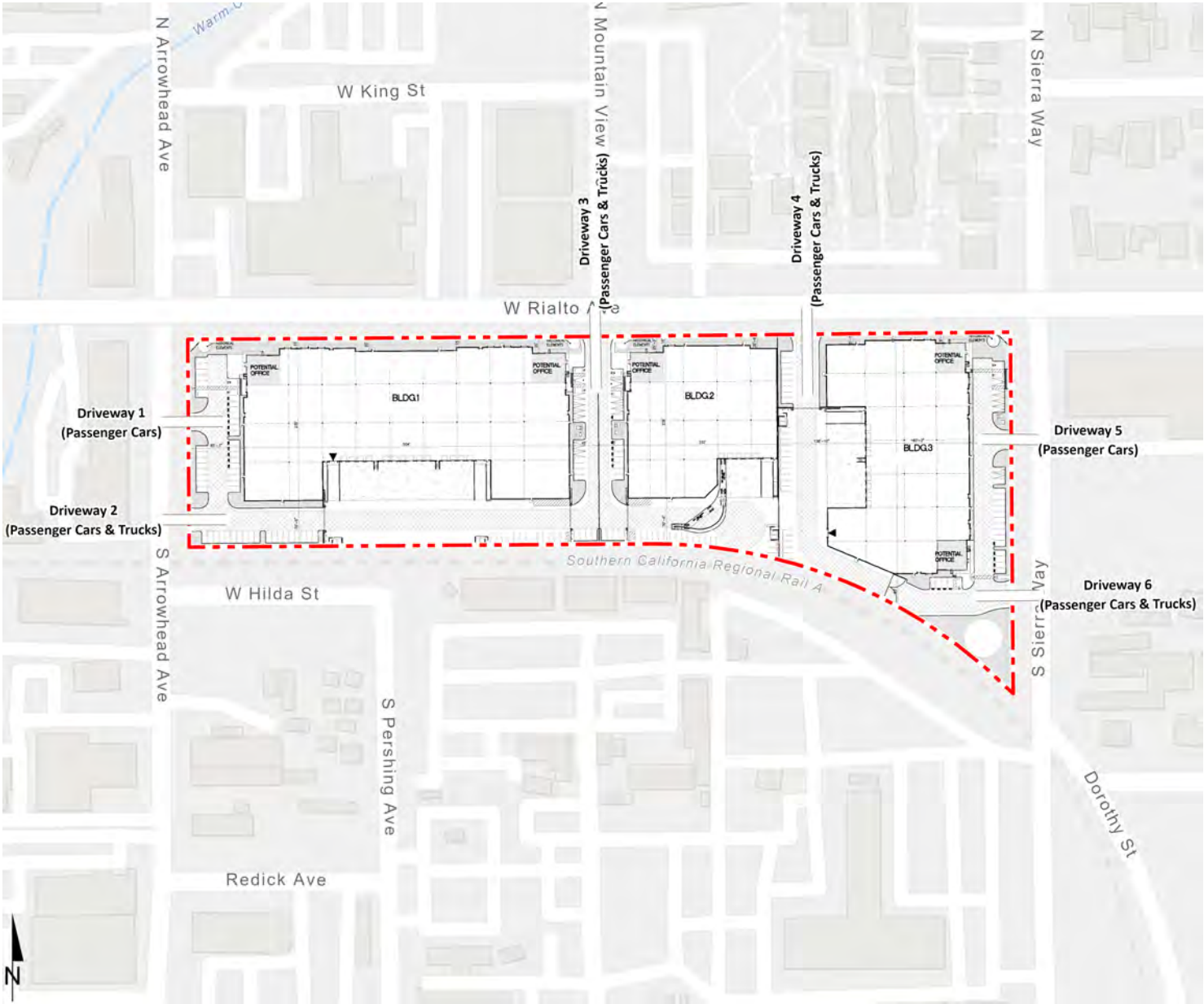


EXHIBIT 2: STUDY AREA ANALYSIS LOCATIONS

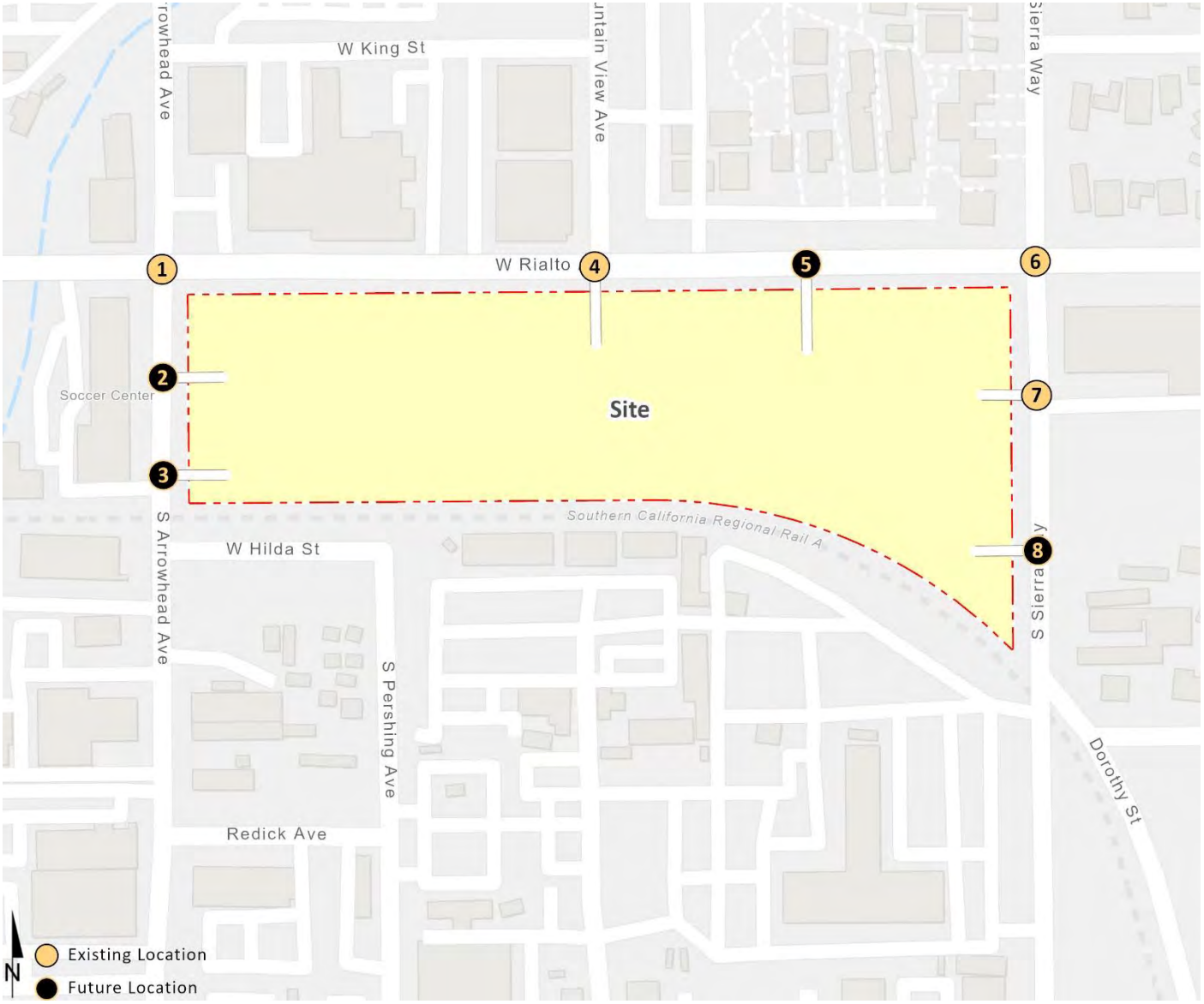


EXHIBIT 3: PROJECT (PASSENGER CAR) OUTBOUND TRIP DISTRIBUTION

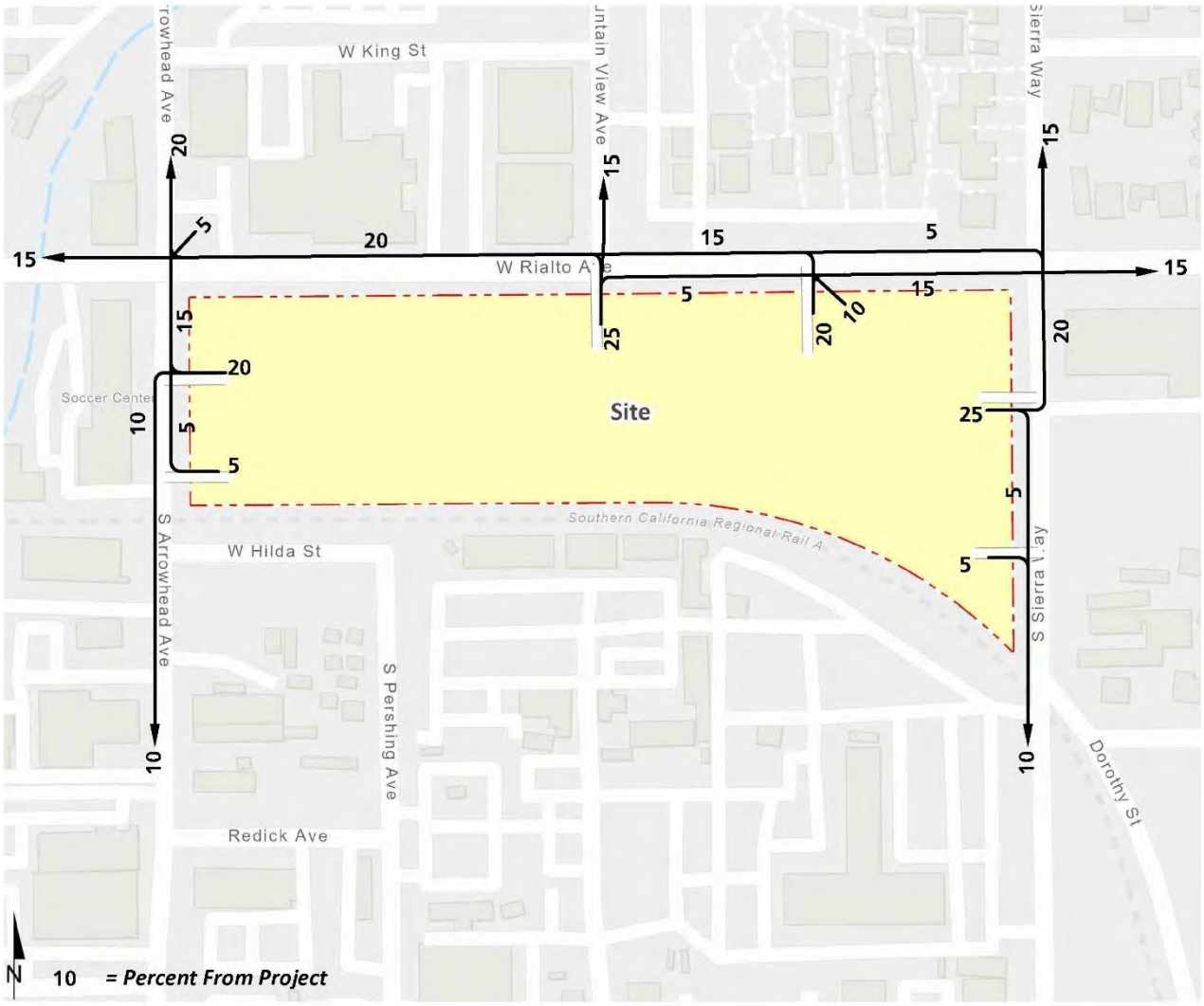


EXHIBIT 4: PROJECT (PASSENGER CAR) INBOUND TRIP DISTRIBUTION

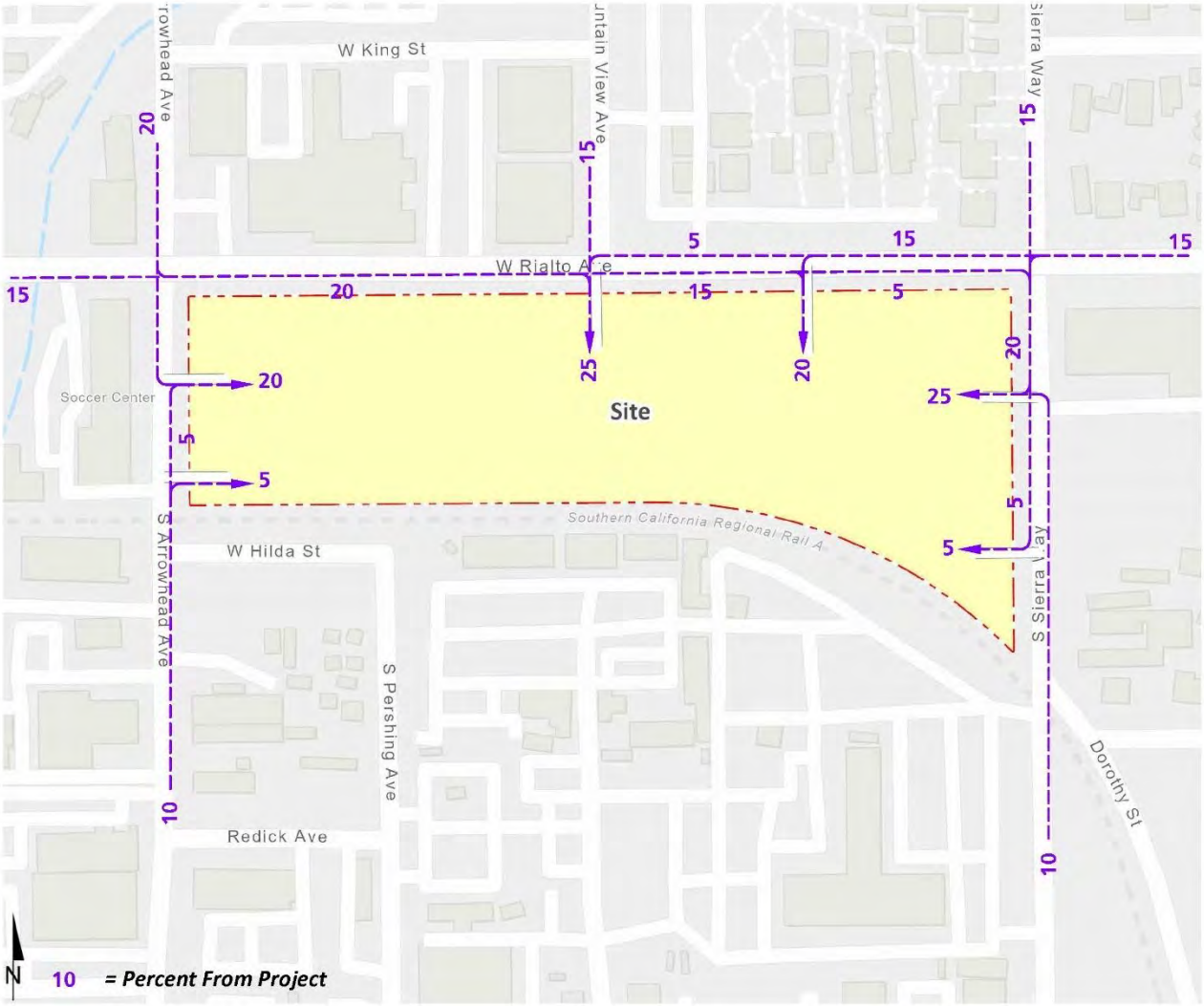


EXHIBIT 5: PROJECT (TRUCK) OUTBOUND TRIP DISTRIBUTION

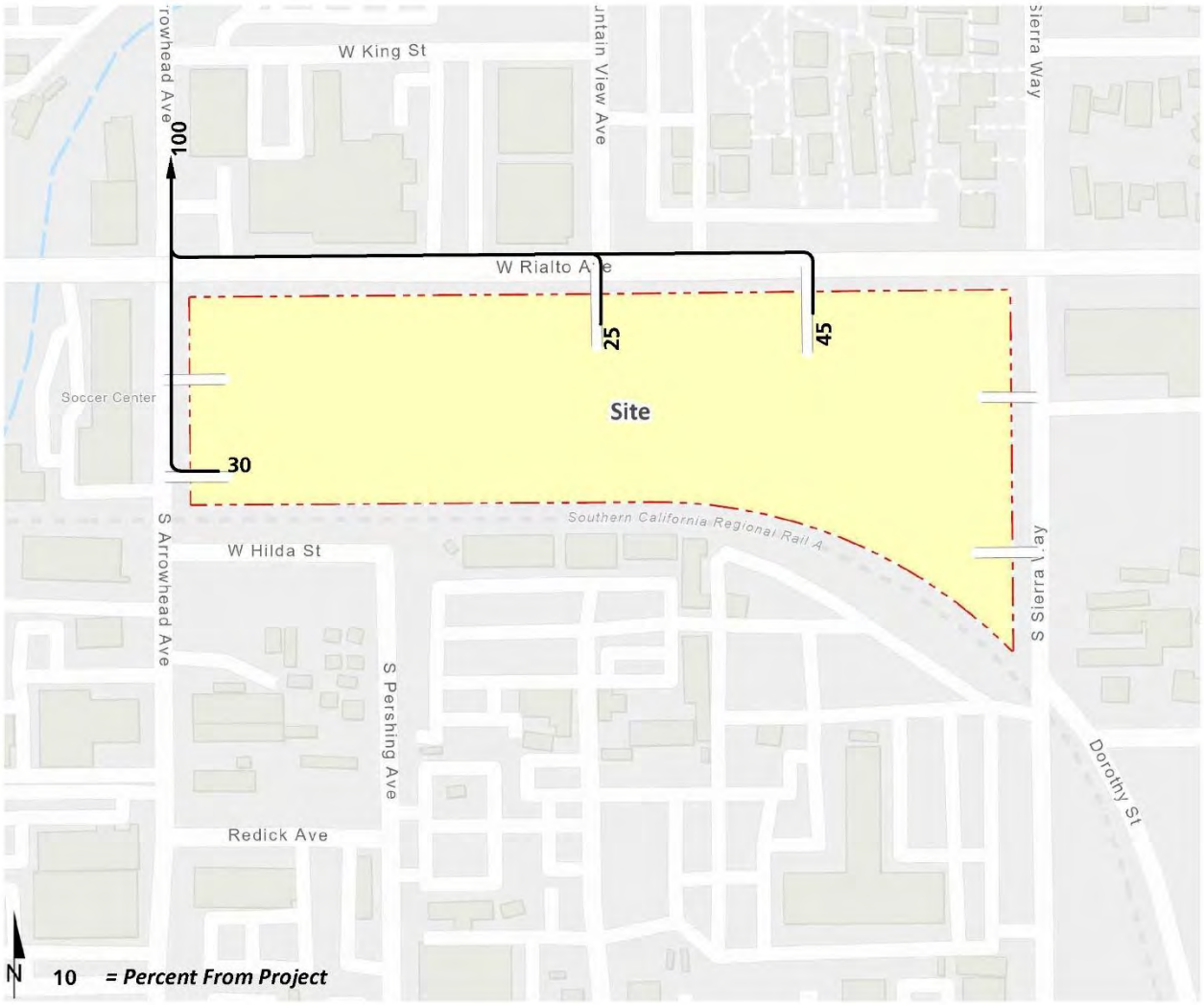
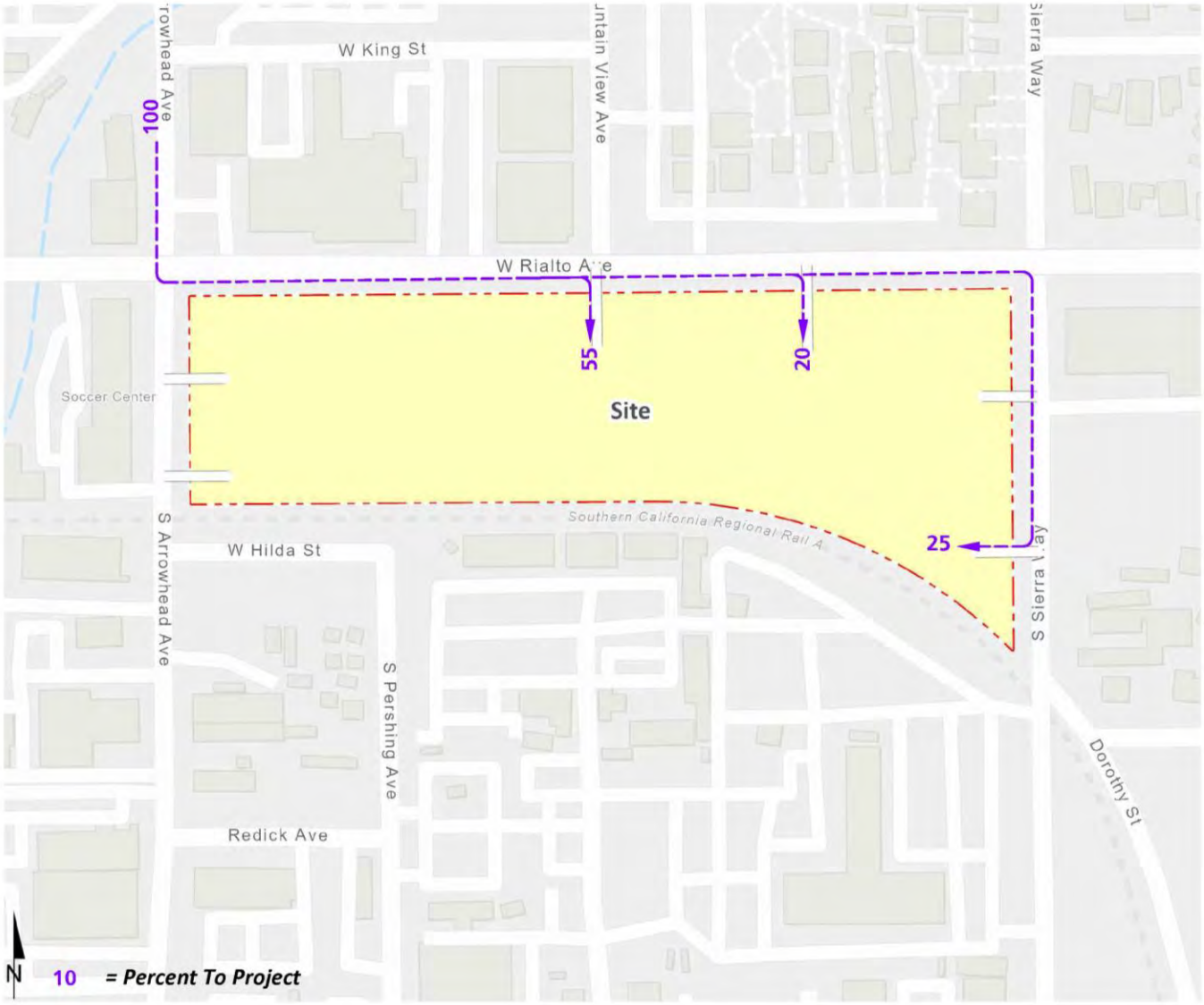


EXHIBIT 6: PROJECT (TRUCK) INBOUND TRIP DISTRIBUTION



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APPENDIX 1.2: SITE ADJACENT QUEUES

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Intersection: 1: Arrowhead Av. & Rialto Av.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	80	146	128	85	87	106	71	106	80	134	125	80
Average Queue (ft)	29	69	53	38	42	56	29	47	30	54	56	34
95th Queue (ft)	63	116	99	75	77	97	61	86	62	102	97	69
Link Distance (ft)		642	642		633	633		141	141		628	628
Upstream Blk Time (%)								0	0			
Queuing Penalty (veh)								0	0			
Storage Bay Dist (ft)	60			100			120			100		
Storage Blk Time (%)	1	7		0	0			0		1	0	
Queuing Penalty (veh)	2	3		0	0			0		1	0	

Intersection: 2: Arrowhead Av. & Driveway 1

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	31	23
Average Queue (ft)	4	3
95th Queue (ft)	21	18
Link Distance (ft)	309	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

Intersection: 3: Driveway 2/Mountain View Av. & Rialto Av.

Movement	EB	WB	NB	SB	SB
Directions Served	L	L	LTR	LT	R
Maximum Queue (ft)	25	15	31	42	32
Average Queue (ft)	7	1	6	13	12
95th Queue (ft)	25	7	25	38	36
Link Distance (ft)			266	643	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100	100			200
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 4: Driveway 3 & Rialto Av.

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	24	31
Average Queue (ft)	2	6
95th Queue (ft)	14	26
Link Distance (ft)		255
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 5: Sierra Wy. & Rialto Av.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	84	118	128	58	140	111	58	63	48	95	106	86
Average Queue (ft)	33	57	66	18	71	41	16	34	19	40	50	40
95th Queue (ft)	67	99	107	46	115	80	45	66	45	79	84	75
Link Distance (ft)		283	283		965	965		134	134		648	648
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	170			90			100			100		
Storage Blk Time (%)				0	2					1	0	
Queuing Penalty (veh)				0	1					1	0	

Intersection: 6: Sierra Wy. & Driveway 4/Private Dwy.

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	L	L	T
Maximum Queue (ft)	30	31	23	15	11
Average Queue (ft)	3	3	1	1	0
95th Queue (ft)	18	17	12	7	7
Link Distance (ft)	254	284			134
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			50	50	
Storage Blk Time (%)			0		0
Queuing Penalty (veh)			0		0

Intersection: 7: Sierra Wy. & Driveway 5

Movement	EB
Directions Served	R
Maximum Queue (ft)	15
Average Queue (ft)	1
95th Queue (ft)	7
Link Distance (ft)	288
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 9

Intersection: 1: Arrowhead Av. & Rialto Av.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	84	140	115	96	109	147	104	134	112	106	129	92
Average Queue (ft)	31	72	45	46	55	71	53	73	55	42	57	35
95th Queue (ft)	69	120	85	80	98	117	94	118	96	86	100	70
Link Distance (ft)		642	642		633	633		141	141		628	628
Upstream Blk Time (%)								0	0			
Queuing Penalty (veh)								0	0			
Storage Bay Dist (ft)	60			100			120			100		
Storage Blk Time (%)	1	8		0	1		0	1		1	1	
Queuing Penalty (veh)	2	5		1	1		0	1		1	1	

Intersection: 2: Arrowhead Av. & Driveway 1

Movement	WB	NB	SB
Directions Served	LR	T	L
Maximum Queue (ft)	31	7	23
Average Queue (ft)	14	0	1
95th Queue (ft)	40	5	10
Link Distance (ft)	309	678	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			50
Storage Blk Time (%)			0
Queuing Penalty (veh)			0

Intersection: 3: Driveway 2/Mountain View Av. & Rialto Av.

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	T	T	TR	LTR	LT	R
Maximum Queue (ft)	36	5	21	8	43	36	32
Average Queue (ft)	8	0	1	0	17	5	16
95th Queue (ft)	29	3	10	5	45	23	42
Link Distance (ft)		633	227	227	266	643	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	100						200
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 4: Driveway 3 & Rialto Av.

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	8	31
Average Queue (ft)	0	11
95th Queue (ft)	5	35
Link Distance (ft)		255
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Sierra Wy. & Rialto Av.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	111	89	107	31	128	88	62	78	69	54	90	80
Average Queue (ft)	53	47	53	6	74	39	23	38	26	22	43	40
95th Queue (ft)	95	82	92	24	109	74	52	69	59	50	77	72
Link Distance (ft)		283	283		965	965		134	134		648	648
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	170			90			100			100		
Storage Blk Time (%)					2			0			0	
Queuing Penalty (veh)					0			0			0	

Intersection: 6: Sierra Wy. & Driveway 4/Private Dwy.

Movement	EB	WB	NB
Directions Served	LTR	LTR	L
Maximum Queue (ft)	30	23	15
Average Queue (ft)	11	2	0
95th Queue (ft)	35	12	7
Link Distance (ft)	254	284	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			50
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Sierra Wy. & Driveway 5

Movement	EB
Directions Served	R
Maximum Queue (ft)	30
Average Queue (ft)	3
95th Queue (ft)	18
Link Distance (ft)	288
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 12

APPENDIX 3.1: TRAFFIC COUNTS – FEBRUARY 2022

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A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, February 24, 2022
JOB #: SC3303

CITY: San Bernardino
LOCATION: CLASS1 Arrowhead south of Rialto

AM	NORTHBOUND														PM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3	12:00	0	29	10	0	3	0	0	0	0	0	0	0	0	42
0:15	0	3	2	0	0	0	0	0	0	0	0	0	0	5	12:15	0	32	11	0	0	0	0	0	1	0	0	0	0	44
0:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4	12:30	0	24	9	0	1	1	0	0	0	0	0	0	0	35
0:45	0	6	2	0	0	0	0	0	0	0	0	0	0	8	12:45	0	27	13	0	4	0	0	0	0	0	0	0	0	44
1:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4	13:00	0	23	14	0	3	0	0	0	0	0	0	0	0	40
1:15	0	0	1	0	1	0	0	0	0	0	0	0	0	2	13:15	0	25	12	0	2	2	0	0	0	0	0	0	0	41
1:30	0	4	2	0	0	0	0	0	0	0	0	0	0	6	13:30	0	27	15	0	1	0	0	0	0	0	0	0	0	43
1:45	0	1	0	0	1	0	0	0	0	0	0	0	0	2	13:45	0	30	11	0	0	0	0	1	0	0	0	0	0	42
2:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	14:00	0	31	12	0	2	0	0	0	0	0	0	0	0	45
2:15	0	2	1	0	0	0	0	0	0	0	0	0	0	3	14:15	1	32	13	0	2	0	0	0	0	0	0	0	0	48
2:30	0	0	2	0	0	0	0	0	0	0	0	0	0	2	14:30	0	36	14	0	1	0	0	0	0	0	0	0	0	51
2:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1	14:45	0	38	9	0	0	1	0	0	0	0	0	0	0	48
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	15:00	0	34	8	0	2	0	0	0	0	0	0	0	0	44
3:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1	15:15	0	39	12	0	3	0	0	0	1	0	0	0	0	55
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:30	0	36	14	0	1	1	0	0	0	0	0	0	0	52
3:45	0	7	2	0	0	0	0	0	0	0	0	0	0	9	15:45	0	35	14	0	0	0	0	0	0	0	0	0	0	49
4:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2	16:00	0	39	12	0	2	0	0	0	0	0	0	0	0	53
4:15	0	0	1	0	0	0	0	0	0	0	0	0	0	1	16:15	1	50	11	0	1	0	0	0	0	0	0	0	0	63
4:30	0	4	1	0	0	0	0	0	0	0	0	0	0	5	16:30	0	63	18	0	2	0	0	0	0	0	0	0	0	83
4:45	0	3	3	0	0	0	0	0	0	0	0	0	0	6	16:45	0	69	19	0	0	0	0	0	0	0	0	0	0	88
5:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	17:00	0	60	9	0	1	0	0	0	0	0	0	0	0	70
5:15	0	8	0	0	0	0	0	0	0	0	0	0	0	8	17:15	0	51	8	0	3	0	0	0	0	0	0	0	0	62
5:30	0	5	1	0	0	0	0	0	0	0	0	0	0	6	17:30	0	70	14	0	2	0	0	0	0	0	0	0	0	86
5:45	0	4	3	0	0	1	0	0	0	0	0	0	0	8	17:45	0	57	12	0	1	0	0	0	0	0	0	0	0	70
6:00	0	12	5	0	1	0	0	0	0	0	0	0	0	18	18:00	1	44	9	0	1	0	0	0	0	0	0	0	0	55
6:15	0	11	7	1	2	0	0	0	0	0	0	0	0	21	18:15	0	40	10	0	1	0	0	0	0	0	0	0	0	51
6:30	0	9	6	0	3	1	0	0	0	0	0	0	0	19	18:30	0	19	13	0	1	0	0	0	0	0	0	0	0	33
6:45	0	13	12	0	0	0	0	0	0	0	0	0	0	25	18:45	0	26	10	0	1	0	0	0	0	0	0	0	0	37
7:00	0	23	11	1	3	0	0	0	0	0	0	0	0	38	19:00	0	19	5	0	0	0	0	0	0	0	0	0	0	24
7:15	0	26	10	0	4	2	0	0	0	0	0	0	0	42	19:15	0	10	5	0	0	0	0	0	0	0	0	0	0	15
7:30	0	47	11	0	5	0	0	0	0	0	0	0	0	63	19:30	0	8	5	0	0	0	0	0	1	0	0	0	0	14
7:45	0	40	16	0	1	2	0	0	0	0	0	0	0	59	19:45	0	22	5	0	0	0	0	0	0	0	0	0	0	27
8:00	0	33	10	0	3	0	0	1	0	0	0	0	0	47	20:00	0	17	7	0	0	0	0	0	0	0	0	0	0	24
8:15	0	27	11	0	1	0	0	0	1	0	0	0	0	40	20:15	0	10	5	0	0	0	0	0	0	0	0	0	0	15
8:30	0	38	10	0	2	1	0	0	0	0	0	0	0	51	20:30	0	18	2	0	0	0	0	0	0	0	0	0	0	20
8:45	0	29	12	0	0	0	0	0	0	0	0	0	0	41	20:45	0	8	2	0	0	0	0	0	1	0	0	0	0	11
9:00	0	14	15	0	3	2	0	0	0	0	0	0	0	34	21:00	0	5	2	0	0	0	0	0	0	0	0	0	0	7
9:15	0	27	15	0	0	0	0	0	0	0	0	0	0	42	21:15	0	12	2	0	0	1	0	0	0	0	0	0	0	15
9:30	1	35	15	0	2	0	0	0	0	0	0	0	0	53	21:30	0	7	4	0	0	0	0	0	0	0	0	0	0	11
9:45	0	27	7	0	6	0	0	0	1	0	0	0	0	41	21:45	0	8	3	0	0	0	0	0	0	0	0	0	0	11
10:00	0	27	12	0	7	0	0	0	0	0	0	0	0	46	22:00	0	3	2	0	0	0	0	0	0	0	0	0	0	5
10:15	0	31	5	0	2	1	0	0	0	0	0	0	0	39	22:15	0	5	2	0	0	0	0	0	0	0	0	0	0	7
10:30	1	30	9	0	3	0	0	0	0	0	0	0	0	43	22:30	0	6	4	0	0	0	0	0	0	0	0	0	0	10
10:45	0	28	10	0	4	0	0	0	0	0	0	0	0	42	22:45	0	10	1	0	0	0	0	0	0	0	0	0	0	11
11:00	0	29	7	1	3	0	0	0	0	0	0	0	0	40	23:00	0	6	4	0	0	0	0	0	0	0	0	0	0	10
11:15	0	23	6	0	5	0	0	0	0	0	0	0	0	34	23:15	0	5	2	0	0	0	0	0	0	0	0	0	0	7
11:30	1	25	8	0	1	0	0	0	0	0	0	0	0	35	23:30	0	8	0	0	0	0	0	0	0	0	0	0	0	8
11:45	0	28	9	0	2	0	0	0	0	0	0	0	0	39	23:45	0	6	0	0	0	0	0	0	0	0	0	0	0	6
TOTAL	3	695	264	3	65	10	0	1	2	0	0	0	0	1,043	TOTAL	3	1,279	398	0	41	6	0	1	4	0	0	0	0	1,732

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	211

PM PEAK HOUR	4:45 PM
PM PEAK VOLUME	306

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	6	1,974	662	3	106	16	0	2	6	0	0	0	0	2,775
% OF TOTAL	0.2%	71.1%	23.9%	0.1%	3.8%	0.6%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	9	4,335	1,288	5	213	29	0	3	11	0	0	0	0	5,893
% OF TOTAL	0.3%	156.2%	46.4%	0.2%	7.7%	1.0%	0.0%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, February 24, 2022
JOB #: SC3303

CITY: San Bernardino
LOCATION: CLASS1 Arrowhead south of Rialto

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
0:15	0	2	3	0	0	0	0	0	0	0	0	0	0	5
0:30	0	5	0	0	0	1	0	0	0	0	0	0	0	6
0:45	0	1	1	0	1	0	0	0	1	0	0	0	0	4
1:00	0	3	3	0	0	0	0	0	0	0	0	0	0	6
1:15	0	3	1	0	0	0	0	0	0	0	0	0	0	4
1:30	0	1	2	0	0	0	0	0	0	0	0	0	0	3
1:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:15	0	4	2	0	0	0	0	0	0	0	0	0	0	6
2:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:45	0	4	1	0	0	0	0	0	0	0	0	0	0	5
3:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
3:15	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:30	0	3	3	0	0	0	0	0	0	0	0	0	0	6
3:45	0	8	0	0	0	0	0	0	0	0	0	0	0	8
4:00	0	6	0	0	0	1	0	0	0	0	0	0	0	7
4:15	0	5	4	0	0	0	0	0	0	0	0	0	0	9
4:30	0	9	3	0	0	0	0	0	0	0	0	0	0	12
4:45	0	13	4	0	0	0	0	0	0	0	0	0	0	17
5:00	0	9	2	0	0	0	0	0	0	0	0	0	0	11
5:15	0	12	4	0	0	0	0	0	0	0	0	0	0	16
5:30	0	17	8	0	0	0	0	0	0	0	0	0	0	25
5:45	0	34	8	0	0	1	0	0	0	0	0	0	0	43
6:00	0	22	8	0	0	0	0	0	0	0	0	0	0	30
6:15	0	20	5	0	0	0	0	0	0	0	0	0	0	25
6:30	0	18	4	0	0	0	0	0	0	0	0	0	0	22
6:45	0	42	14	0	2	0	0	0	0	0	0	0	0	58
7:00	0	29	4	0	1	0	0	0	0	0	0	0	0	34
7:15	0	30	11	0	2	1	0	0	0	0	0	0	0	44
7:30	0	52	14	0	1	2	0	0	0	0	0	0	0	69
7:45	0	78	10	0	5	0	0	0	0	0	0	0	0	93
8:00	0	57	11	0	4	1	0	0	0	0	0	0	0	73
8:15	0	43	3	0	2	0	0	0	1	0	0	0	0	49
8:30	0	34	5	0	4	0	0	0	0	0	0	0	0	43
8:45	0	35	13	1	2	1	0	0	0	0	0	0	0	52
9:00	0	43	17	0	5	0	0	1	0	0	0	0	0	66
9:15	0	49	12	0	4	0	0	0	0	0	0	0	0	65
9:30	0	35	13	0	1	0	0	0	0	0	0	0	0	49
9:45	0	36	6	0	3	1	0	0	1	0	0	0	0	47
10:00	1	46	6	0	3	0	0	0	0	0	0	0	0	56
10:15	0	50	14	0	2	0	0	0	0	0	0	0	0	66
10:30	0	47	10	0	2	0	0	0	0	0	0	0	0	59
10:45	0	43	8	0	3	0	0	0	0	0	0	0	0	54
11:00	0	41	12	0	1	0	0	0	0	0	0	0	0	54
11:15	0	42	11	0	2	0	0	0	0	0	0	0	0	55
11:30	0	39	9	0	4	1	0	0	0	0	0	0	0	53
11:45	0	37	8	0	3	0	0	0	0	0	0	0	0	48
TOTAL	1	1,120	279	1	57	10	0	1	3	0	0	0	0	1,472

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	284

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	39	10	0	1	0	0	0	0	0	0	0	0	50
12:15	0	35	13	0	2	0	0	0	0	0	0	0	0	50
12:30	0	31	15	1	5	0	0	0	0	0	0	0	0	52
12:45	0	38	14	0	3	0	0	0	1	0	0	0	0	56
13:00	1	34	11	0	1	0	0	0	0	0	0	0	0	47
13:15	0	29	13	0	2	0	0	0	0	0	0	0	0	44
13:30	0	31	9	0	2	0	0	0	0	0	0	0	0	42
13:45	0	33	10	0	1	0	0	0	0	0	0	0	0	44
14:00	0	35	9	0	3	1	0	0	0	0	0	0	0	48
14:15	0	39	11	0	4	0	0	0	0	0	0	0	0	54
14:30	0	33	8	0	1	0	0	0	0	0	0	0	0	42
14:45	0	36	7	0	2	0	0	0	0	0	0	0	0	45
15:00	0	37	7	0	0	0	0	0	0	0	0	0	0	44
15:15	1	41	10	0	2	0	0	0	0	0	0	0	0	54
15:30	0	36	9	0	1	0	0	0	0	0	0	0	0	46
15:45	0	39	10	0	3	0	0	0	1	0	0	0	0	53
16:00	0	39	11	0	1	0	0	0	0	0	0	0	0	51
16:15	0	44	13	0	2	0	0	0	0	0	0	0	0	59
16:30	0	59	17	0	1	0	0	0	0	0	0	0	0	77
16:45	0	65	22	0	2	0	0	0	0	0	0	0	0	89
17:00	0	60	20	0	3	1	0	0	0	0	0	0	0	84
17:15	0	58	16	0	2	0	0	0	0	0	0	0	0	76
17:30	0	48	12	0	1	0	0	0	0	0	0	0	0	61
17:45	0	39	10	0	1	0	0	0	0	0	0	0	0	50
18:00	0	39	8	0	1	0	0	0	0	0	0	0	0	48
18:15	0	34	6	0	1	0	0	0	0	0	0	0	0	41
18:30	0	21	3	0	0	0	0	0	0	0	0	0	0	24
18:45	0	21	4	0	0	0	0	0	0	0	0	0	0	25
19:00	0	18	2	0	1	0	0	0	0	0	0	0	0	21
19:15	0	19	4	0	0	0	0	0	0	0	0	0	0	23
19:30	0	13	6	0	0	0	0	0	0	0	0	0	0	19
19:45	0	5	1	0	0	0	0	0	0	0	0	0	0	6
20:00	0	10	4	0	0	0	0	0	0	0	0	0	0	14
20:15	0	7	0	0	0	0	0	0	0	0	0	0	0	7
20:30	0	7	3	0	0	0	0	0	0	0	0	0	0	10
20:45	0	6	1	0	0	0	0	0	0	0	0	0	0	7
21:00	0	7	2	0	0	0	0	0	0	0	0	0	0	9
21:15	0	12	3	0	1	0	0	0	0	0	0	0	0	16
21:30	0	9	1	0	0	0	0	0	0	0	0	0	0	10
21:45	0	6	2	0	0	0	0	0	0	0	0	0	0	8
22:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
22:15	0	4	1	0	0	0	0	0	0	0	0	0	0	5
22:30	0	4	2	0	0	0	0	0	0	0	0	0	0	6
22:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
23:00	0	2	2	0	0	1	0	0	0	0	0	0	0	5
23:15	0	7	3	0	0	0	0	0	0	0	0	0	0	10
23:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
23:45	0	1	2	0	0	0	0	0	0	0	0	0	0	3
TOTAL	2	1,241	347	1	50	3	0	0	2	0	0	0	0	1,646

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	326

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	3	2,361	626	2	107	13	0	1	5	0	0	0	0	3,118
% OF TOTAL	0.1%	75.7%	20.1%	0.1%	3.4%	0.4%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, February 24, 2022
JOB #: SC3303

CITY: San Bernardino
LOCATION: CLASS2 Rialto west of Sierra

AM	EASTBOUND														PM	EASTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5	12:00	0	50	16	0	0	0	0	1	0	0	0	0	0	67
0:15	0	8	4	0	0	0	0	0	0	0	0	0	0	12	12:15	1	60	10	0	6	1	0	0	0	0	0	0	0	78
0:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4	12:30	1	58	24	0	2	0	0	0	0	0	0	0	0	85
0:45	0	5	2	0	0	0	0	0	0	0	0	0	0	7	12:45	0	89	20	1	5	0	0	0	0	0	0	0	0	115
1:00	0	4	3	0	0	1	0	0	0	0	0	0	0	8	13:00	0	60	25	0	0	0	0	0	0	0	0	0	0	85
1:15	0	7	2	0	0	1	0	0	0	0	0	0	0	10	13:15	1	73	20	0	3	0	0	1	0	0	0	0	0	98
1:30	0	8	1	0	0	1	0	0	0	0	0	0	0	10	13:30	0	69	16	0	5	0	0	0	0	0	0	0	0	90
1:45	0	0	1	0	1	0	0	0	0	0	0	0	0	2	13:45	0	58	19	1	1	1	0	0	0	0	0	0	0	80
2:00	0	6	0	0	1	0	0	0	0	0	0	0	0	7	14:00	1	43	14	0	1	0	0	0	0	0	0	0	0	59
2:15	0	3	1	0	0	0	0	1	1	0	0	0	0	6	14:15	0	86	19	1	0	6	0	0	1	0	0	0	0	113
2:30	0	3	1	0	0	0	0	0	0	0	0	0	0	4	14:30	0	78	16	0	2	1	0	0	0	0	0	0	0	97
2:45	0	6	0	0	0	0	0	0	0	0	0	0	0	6	14:45	0	104	21	2	1	4	0	0	1	0	0	0	0	133
3:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5	15:00	0	98	15	0	1	4	1	0	0	0	0	0	0	119
3:15	0	6	1	0	0	0	0	0	0	0	0	0	0	7	15:15	0	79	22	0	4	3	1	1	1	0	0	0	0	111
3:30	0	9	4	0	0	0	0	0	0	0	0	0	0	13	15:30	1	94	9	1	4	1	0	0	0	0	0	0	0	110
3:45	0	13	3	0	0	0	0	0	0	0	0	0	0	16	15:45	1	91	11	0	0	2	0	1	0	0	0	0	0	106
4:00	0	6	2	0	0	1	0	1	0	0	0	0	0	10	16:00	0	90	9	0	5	4	0	0	0	0	0	0	0	108
4:15	0	9	4	0	0	1	0	0	0	0	0	0	0	14	16:15	0	73	12	0	1	1	0	0	0	0	0	0	0	87
4:30	0	10	5	0	0	0	0	0	0	0	0	0	0	15	16:30	0	84	12	1	2	2	0	0	0	0	0	0	0	101
4:45	0	21	6	0	0	0	0	0	0	0	0	0	0	27	16:45	0	80	12	1	0	0	0	0	0	0	0	0	0	93
5:00	0	10	5	1	0	0	0	0	0	0	0	0	0	16	17:00	0	95	16	0	2	0	0	0	1	0	0	0	0	114
5:15	0	15	7	0	0	1	0	0	0	0	0	0	0	23	17:15	0	77	24	0	2	2	0	0	0	0	0	0	0	105
5:30	0	28	17	0	1	0	0	0	0	0	0	0	0	46	17:30	0	85	12	1	1	2	0	0	0	0	0	0	0	101
5:45	0	15	14	1	0	1	0	0	0	0	0	0	0	31	17:45	0	61	18	0	1	1	0	0	2	0	0	0	0	83
6:00	0	12	8	0	0	0	0	0	1	0	0	0	0	21	18:00	0	54	7	0	2	0	0	1	0	0	0	0	0	64
6:15	0	33	11	1	0	1	0	0	1	0	0	0	0	47	18:15	0	43	11	1	1	0	0	0	0	0	0	0	0	56
6:30	0	39	14	0	7	0	0	0	0	0	0	0	0	60	18:30	0	45	19	0	0	0	0	0	0	0	0	0	0	64
6:45	0	57	24	3	2	0	0	0	1	0	0	0	0	87	18:45	0	51	12	0	1	0	0	0	0	0	0	0	0	64
7:00	0	42	11	0	2	2	0	1	0	0	0	0	0	58	19:00	0	38	19	0	0	0	0	0	0	0	0	0	0	57
7:15	0	68	18	0	0	0	0	0	1	0	0	0	0	87	19:15	0	37	15	0	0	0	0	0	0	0	0	0	0	52
7:30	0	102	15	1	3	0	0	0	0	0	0	0	0	121	19:30	0	16	13	0	0	0	0	0	1	0	0	0	0	30
7:45	0	122	7	1	2	0	0	0	0	0	0	0	0	132	19:45	0	20	11	1	1	0	0	0	0	0	0	0	0	33
8:00	0	114	6	0	8	0	0	0	1	0	0	0	0	129	20:00	0	15	16	0	0	1	0	0	0	0	0	0	0	32
8:15	0	92	11	0	3	1	0	1	0	0	0	0	0	108	20:15	0	22	10	0	0	0	0	0	0	0	0	0	0	32
8:30	0	74	8	0	2	0	0	0	0	0	0	0	0	84	20:30	0	20	6	1	2	0	0	0	0	0	0	0	0	29
8:45	0	68	12	1	2	0	0	0	0	0	0	0	0	83	20:45	0	11	6	0	0	1	0	0	0	0	0	0	0	18
9:00	0	28	15	0	2	0	0	0	0	0	0	0	0	45	21:00	0	6	6	0	0	0	0	0	0	0	0	0	0	12
9:15	0	36	14	0	2	0	0	0	0	0	0	0	0	52	21:15	0	12	5	1	1	0	0	0	0	0	0	0	0	19
9:30	0	25	14	0	3	0	0	0	0	0	0	0	0	42	21:30	0	16	10	0	1	0	0	0	0	0	0	0	0	27
9:45	0	43	14	1	5	0	0	0	0	0	0	0	0	63	21:45	0	13	6	0	0	0	0	0	0	0	0	0	0	19
10:00	0	42	9	1	5	1	0	0	0	0	0	0	0	58	22:00	0	16	6	0	1	0	0	0	0	0	0	0	0	23
10:15	0	43	12	0	1	0	0	0	0	0	0	0	0	56	22:15	0	15	7	0	0	0	0	0	0	0	0	0	0	22
10:30	0	41	23	1	2	0	0	0	1	0	0	0	0	68	22:30	0	7	3	0	0	0	0	0	0	0	0	0	0	10
10:45	0	45	11	1	2	1	0	0	0	0	0	0	0	60	22:45	0	9	3	0	0	0	0	0	0	0	0	0	0	12
11:00	1	38	16	0	2	0	0	1	0	0	0	0	0	58	23:00	0	6	3	0	0	0	0	0	0	0	0	0	0	9
11:15	0	50	9	1	3	1	0	0	2	0	0	0	0	66	23:15	0	9	2	0	0	1	0	0	0	0	0	0	0	12
11:30	0	66	14	0	3	1	1	0	0	0	0	0	0	85	23:30	0	7	2	0	0	0	0	0	0	0	0	0	0	9
11:45	0	64	16	1	2	2	0	1	0	0	0	0	0	86	23:45	0	7	1	0	0	1	0	0	0	0	0	0	0	9
TOTAL	1	1,548	397	15	66	17	1	6	9	0	0	0	0	2,060	TOTAL	6	2,330	591	13	59	39	2	5	7	0	0	0	0	3,052

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	490

PM PEAK HOUR	2:45 PM
PM PEAK VOLUME	473

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	7	3,878	988	28	125	56	3	11	16	0	0	0	0	5,112
% OF TOTAL	0.1%	75.9%	19.3%	0.5%	2.4%	1.1%	0.1%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	12	7,637	2,110	53	274	108	5	22	33	0	0	0	0	10,254
% OF TOTAL	0.2%	149.4%	41.3%	1.0%	5.4%	2.1%	0.1%	0.4%	0.6%	0.0%	0.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, February 24, 2022
JOB #: SC3303

CITY: San Bernardino
LOCATION: CLASS2 Rialto west of Sierra

AM	WESTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	6	5	0	1	0	0	0	0	0	0	0	0	12
0:15	0	4	2	0	0	0	0	0	0	0	0	0	0	6
0:30	0	9	2	0	0	0	0	0	1	0	0	0	0	12
0:45	0	4	2	0	0	0	0	0	0	0	0	0	0	6
1:00	0	1	4	0	0	0	0	0	0	0	0	0	0	5
1:15	0	2	3	0	0	0	0	1	0	0	0	0	0	6
1:30	0	3	1	0	0	0	0	0	0	0	0	0	0	4
1:45	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:00	0	4	2	0	1	0	0	0	0	0	0	0	0	7
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:45	0	4	1	0	0	0	0	1	0	0	0	0	0	6
3:00	0	0	0	0	0	0	0	0	1	0	0	0	0	1
3:15	0	3	2	0	0	1	0	0	0	0	0	0	0	6
3:30	0	3	3	0	1	1	0	0	1	0	0	0	0	9
3:45	0	5	3	0	0	0	0	0	0	0	0	0	0	8
4:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
4:15	0	11	3	0	0	0	0	0	0	0	0	0	0	14
4:30	0	12	5	0	0	0	0	0	0	0	0	0	0	17
4:45	0	13	5	0	0	0	0	0	0	0	0	0	0	18
5:00	0	18	8	0	0	0	0	0	0	0	0	0	0	26
5:15	0	17	6	0	1	2	0	0	0	0	0	0	0	26
5:30	0	23	9	2	0	2	0	0	0	0	0	0	0	36
5:45	0	19	4	0	1	2	0	1	0	0	0	0	0	27
6:00	0	13	4	0	1	0	0	0	0	0	0	0	0	18
6:15	0	31	5	0	2	1	0	0	0	0	0	0	0	39
6:30	0	17	5	1	2	0	0	0	1	0	0	0	0	26
6:45	0	31	10	0	1	0	0	0	0	0	0	0	0	42
7:00	0	27	5	0	1	2	0	0	0	0	0	0	0	35
7:15	0	47	15	0	2	1	0	0	0	0	0	0	0	65
7:30	0	68	17	0	3	1	0	0	0	0	0	0	0	89
7:45	0	94	10	1	4	1	0	0	1	0	0	0	0	111
8:00	0	97	10	0	1	2	0	0	0	0	0	0	0	110
8:15	0	60	16	0	4	1	0	0	0	0	0	0	0	81
8:30	0	61	10	1	4	3	0	0	0	0	0	0	0	79
8:45	0	56	14	1	4	0	0	0	0	0	0	0	0	75
9:00	0	52	18	0	5	0	0	0	0	0	0	0	0	75
9:15	0	42	16	0	6	1	0	0	0	0	0	0	0	65
9:30	0	37	26	0	2	0	0	1	0	0	0	0	0	66
9:45	0	39	16	1	3	1	0	0	1	0	0	0	0	61
10:00	0	37	21	0	2	0	0	0	0	0	0	0	0	60
10:15	0	52	21	0	3	3	0	0	0	0	0	0	0	79
10:30	0	39	15	0	2	0	0	1	0	0	0	0	0	57
10:45	0	52	8	0	4	0	0	0	1	0	0	0	0	65
11:00	0	53	14	1	5	4	0	1	0	0	0	0	0	78
11:15	0	39	18	0	5	1	0	0	0	0	0	0	0	63
11:30	0	54	23	0	3	1	0	0	1	0	0	0	0	82
11:45	0	56	23	1	1	0	0	0	0	0	0	0	0	81
TOTAL	0	1,324	413	9	75	31	0	6	8	0	0	0	0	1,866

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	391

PM	WESTBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	62	23	0	3	0	0	0	0	0	0	0	0	88
12:15	0	76	23	0	4	0	0	0	0	0	0	0	0	103
12:30	0	61	26	0	0	0	0	0	0	0	0	0	0	87
12:45	1	68	9	0	3	2	0	0	0	0	0	0	0	83
13:00	0	83	27	1	5	0	0	0	0	0	0	0	0	116
13:15	0	61	26	0	2	0	2	0	0	0	0	0	0	91
13:30	0	76	28	0	1	1	0	0	0	0	0	0	0	106
13:45	1	72	26	1	7	3	0	0	0	0	0	0	0	110
14:00	0	67	24	1	5	0	0	0	1	0	0	0	0	98
14:15	0	59	24	0	0	0	0	0	0	0	0	0	0	83
14:30	0	71	34	0	7	0	0	2	0	0	0	0	0	114
14:45	0	65	13	2	4	0	0	1	0	0	0	0	0	85
15:00	0	102	22	0	1	0	0	0	1	0	0	0	0	126
15:15	0	88	24	1	1	1	0	0	0	0	0	0	0	115
15:30	1	112	18	0	4	1	0	1	1	0	0	0	0	138
15:45	0	121	23	1	1	0	0	0	0	0	0	0	0	146
16:00	0	103	17	0	1	0	0	0	0	0	0	0	0	121
16:15	1	66	25	0	2	2	0	0	0	0	0	0	0	96
16:30	0	103	19	0	4	1	0	0	0	0	0	0	0	127
16:45	0	81	22	1	1	1	0	0	0	0	0	0	0	106
17:00	0	119	22	0	2	1	0	0	0	0	0	0	0	144
17:15	0	95	21	2	0	0	0	0	0	0	0	0	0	118
17:30	0	93	20	0	3	0	0	0	0	0	0	0	0	116
17:45	0	65	17	0	3	1	0	0	1	0	0	0	0	87
18:00	0	45	13	1	1	0	0	0	0	0	0	0	0	60
18:15	0	48	15	0	0	0	0	0	1	0	0	0	0	64
18:30	0	34	10	0	0	0	0	1	2	0	0	0	0	47
18:45	0	29	7	1	2	3	0	0	0	0	0	0	0	42
19:00	0	50	16	0	0	0	0	0	0	0	0	0	0	66
19:15	0	23	13	0	0	0	0	0	0	0	0	0	0	36
19:30	0	19	12	0	1	0	0	0	0	0	0	0	0	32
19:45	0	35	8	0	0	0	0	0	0	0	0	0	0	43
20:00	0	14	8	1	0	1	0	0	0	0	0	0	0	24
20:15	0	17	11	0	0	0	0	0	1	0	0	0	0	29
20:30	0	16	10	0	1	0	0	0	0	0	0	0	0	27
20:45	0	21	6	1	0	0	0	0	0	0	0	0	0	28
21:00	0	14	6	0	0	0	0	0	0	0	0	0	0	20
21:15	0	13	8	0	0	0	0	0	0	0	0	0	0	21
21:30	0	8	4	0	1	0	0	0	1	0	0	0	0	14
21:45	0	3	2	1	0	0	0	0	0	0	0	0	0	6
22:00	0	17	6	0	1	0	0	0	0	0	0	0	0	24
22:15	1	20	3	0	0	1	0	0	0	0	0	0	0	25
22:30	0	9	4	1	1	0	0	0	0	0	0	0	0	15
22:45	0	8	2	0	0	1	0	0	0	0	0	0	0	11
23:00	0	11	3	0	1	0	0	0	0	0	0	0	0	15
23:15	0	4	3	0	0	0	0	0	0	0	0	0	0	7
23:30	0	7	2	0	1	0	0	0	0	0	0	0	0	10
23:45	0	1	4	0	0	1	0	0	0	0	0	0	0	6
TOTAL	5	2,435	709	16	74	21	2	5	9	0	0	0	0	3,276

PM PEAK HOUR	3:00 PM
PM PEAK VOLUME	525

TOTAL: AM+PM	5	3,759	1,122	25	149	52	2	11	17	0	0	0	0	5,142
% OF TOTAL	0.1%	73.1%	21.8%	0.5%	2.9%	1.0%	0.0%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
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CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

INTERSECTION TURNING MOVEMENT COUNTS

T42321

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Thu, Feb 24, 22	LOCATION:	San Bernardino	PROJECT #:	SC3303	
	NORTH & SOUTH:	Arrowhead	LOCATION #:	1	
	EAST & WEST:	Rialto	CONTROL:	SIGNAL	

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

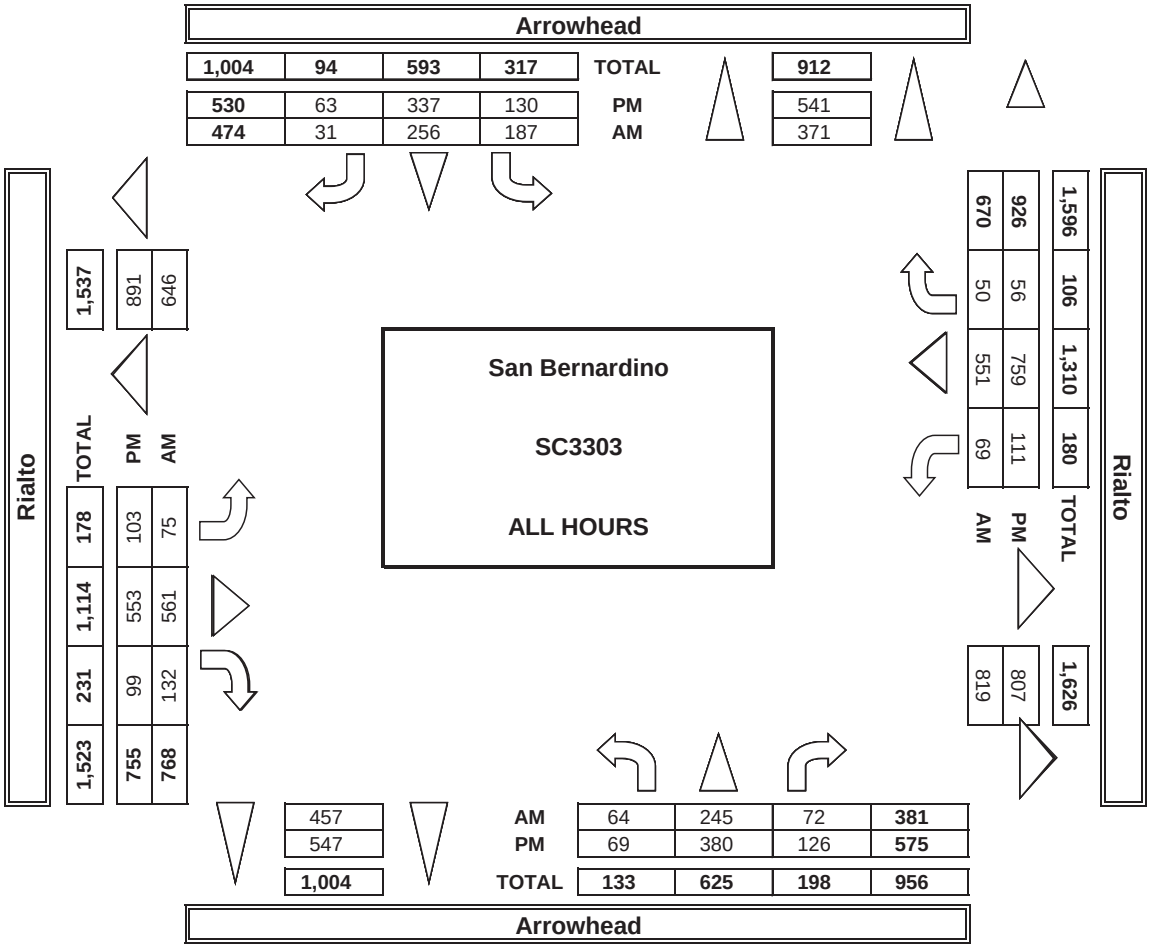
☑ Add U-Turns to Left Turns

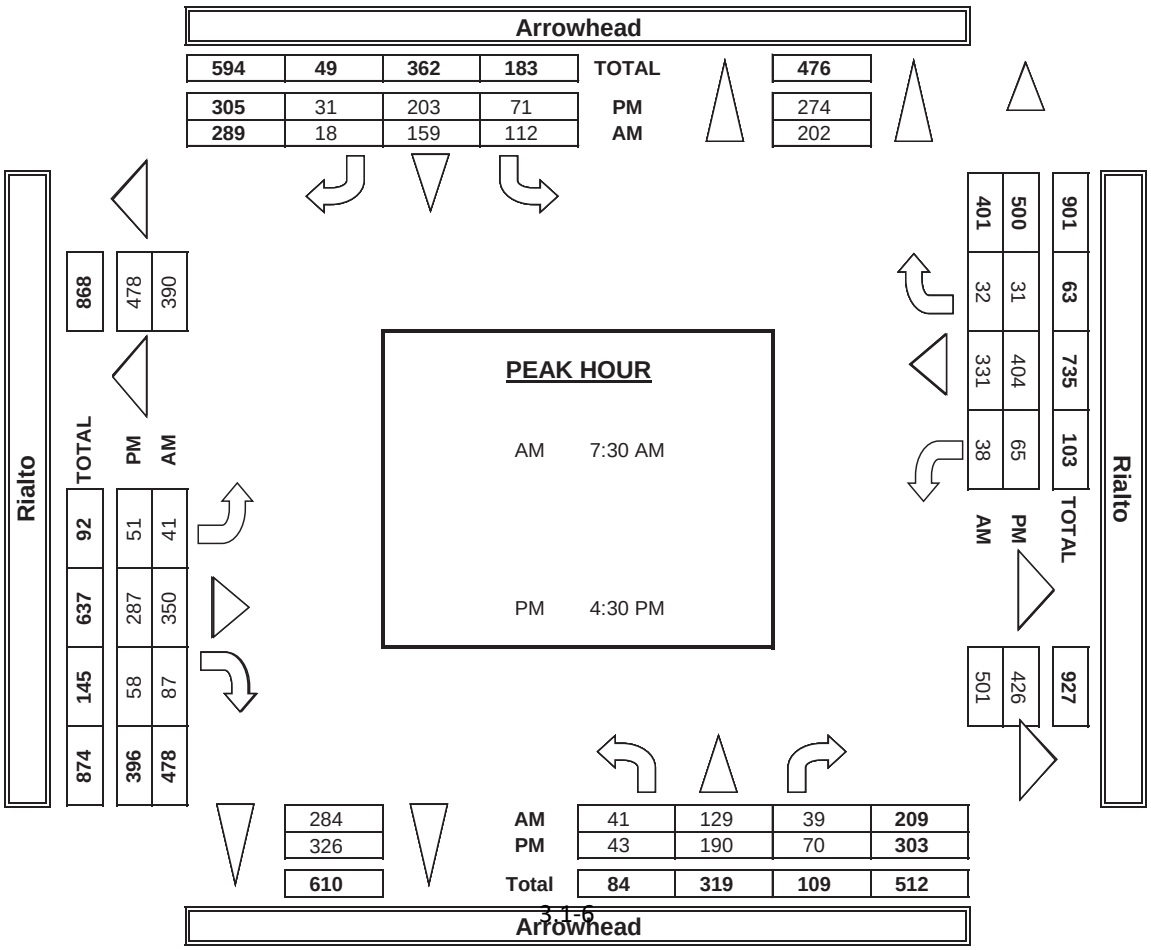
		NORTHBOUND (Arrowhead)			SOUTHBOUND (Arrowhead)			EASTBOUND (Rialto)			WESTBOUND (Rialto)				U-TURNS					RTOR			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL	NRR 0	SRR 0	ERR 0	WRR 0
AM	7:00 AM	4	30	4	25	22	2	8	34	8	4	34	0	175	0	0	0	0	0	1	0	0	0
	7:15 AM	7	29	6	18	27	5	7	70	12	5	60	6	252	0	0	0	0	0	0	2	0	3
	7:30 AM	15	38	10	20	40	5	11	90	22	7	77	5	340	0	0	0	0	0	7	3	5	0
	7:45 AM	8	42	9	35	45	6	12	99	31	17	85	9	398	0	0	0	0	0	4	3	10	1
	8:00 AM	9	30	8	32	43	2	10	95	21	9	93	13	365	0	0	0	0	0	1	1	1	5
	8:15 AM	9	19	12	25	31	5	8	66	13	5	76	5	274	0	0	0	0	0	5	2	0	1
	8:30 AM	6	31	14	16	21	3	8	58	12	10	61	6	246	0	1	0	0	1	9	0	1	1
	8:45 AM	6	26	9	16	27	3	11	49	13	12	65	6	243	0	0	0	0	0	4	2	5	2
	VOLUMES	64	245	72	187	256	31	75	561	132	69	551	50	2,293	0	1	0	0	1	31	13	22	13
	APPROACH %	17%	64%	19%	39%	54%	7%	10%	73%	17%	10%	82%	7%										
	APP/DEPART	381	/	371	474	/	457	768	/	819	670	/	646	0									
	BEGIN PEAK HR		7:30 AM																				
	VOLUMES	41	129	39	112	159	18	41	350	87	38	331	32	1,377						17	9	16	7
	APPROACH %	20%	62%	19%	39%	55%	6%	9%	73%	18%	9%	83%	8%										
	PEAK HR FACTOR		0.829			0.840			0.842			0.872		0.865									
	APP/DEPART	209	/	202	289	/	284	478	/	501	401	/	390	0									
PM	4:00 PM	5	41	7	15	31	6	12	87	11	9	99	5	328	0	0	0	0	0	0	2	1	0
	4:15 PM	7	45	11	18	35	7	14	58	13	11	86	5	310	0	0	0	0	0	2	2	0	1
	4:30 PM	12	50	21	22	46	7	10	69	17	14	104	7	379	0	1	0	0	1	4	2	2	1
	4:45 PM	13	52	23	16	57	9	13	57	16	16	87	7	366	0	0	0	0	0	4	3	2	0
	5:00 PM	11	45	14	14	54	9	15	90	12	18	117	8	407	0	0	0	0	0	2	2	1	2
	5:15 PM	7	43	12	19	46	6	13	71	13	17	96	9	352	0	1	0	0	1	1	1	1	1
	5:30 PM	8	54	24	14	38	10	12	60	9	14	97	9	349	0	0	0	0	0	5	2	0	2
	5:45 PM	6	50	14	12	30	9	14	61	8	12	73	6	295	0	0	0	0	0	3	3	0	1
	VOLUMES	69	380	126	130	337	63	103	553	99	111	759	56	2,786	0	2	0	0	2	21	17	7	8
	APPROACH %	12%	66%	22%	25%	64%	12%	14%	73%	13%	12%	82%	6%										
	APP/DEPART	575	/	541	530	/	547	755	/	807	926	/	891	0									
	BEGIN PEAK HR		4:30 PM																				
	VOLUMES	43	190	70	71	203	31	51	287	58	65	404	31	1,504						0	0	0	0
	APPROACH %	14%	63%	23%	23%	67%	10%	13%	72%	15%	13%	81%	6%										
	PEAK HR FACTOR		0.861			0.930			0.846			0.874		0.924									
	APP/DEPART	303	/	274	305	/	326	396	/	426	500	/	478	0									

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	1	1	0	2	0	0	1	0	1	0	1	0	0	1
	7:45 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	8:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	8:15 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	8:30 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	8:45 AM	1	0	0	1	2	1	0	0	0	1	0	0	0	1	1
	TOTAL	1	1	3	3	8	1	0	3	1	5	0	1	0	2	3
PM	4:00 PM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
	4:15 PM	1	0	2	0	3	1	0	1	0	2	0	0	1	0	1
	4:30 PM	0	0	1	2	3	0	0	0	2	2	0	0	1	0	1
	4:45 PM	0	0	2	2	4	0	0	2	2	4	0	0	0	0	0
	5:00 PM	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
	5:15 PM	1	0	0	1	2	0	0	0	1	1	1	0	0	0	1
	5:30 PM	0	1	0	2	3	0	1	0	1	2	0	0	0	1	1
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	3	2	6	8	19	2	1	4	6	13	1	1	2	2	6

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Arrowhead	LOCATION #:	1
THURSDAY	EAST & WEST:	Rialto	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

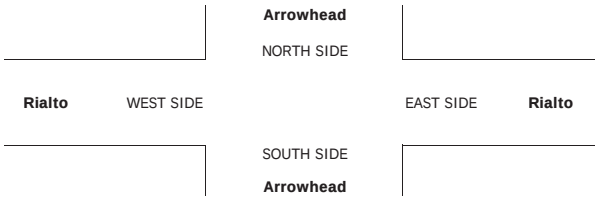
		NORTHBOUND (Arrowhead)			SOUTHBOUND (Arrowhead)			EASTBOUND (Rialto)			WESTBOUND (Rialto)			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	3	17	3	25	18	2	6	28	8	4	29	0	143
	7:15 AM	5	19	6	17	21	5	5	69	12	5	54	6	224
	7:30 AM	14	32	9	20	40	4	10	83	15	6	69	5	307
	7:45 AM	5	41	8	34	42	5	12	91	29	14	80	8	369
	8:00 AM	9	27	6	31	39	2	9	88	18	7	85	13	334
	8:15 AM	7	18	11	24	28	4	6	58	12	4	72	3	247
	8:30 AM	4	27	13	15	20	2	6	54	12	5	55	6	219
	8:45 AM	5	22	9	15	21	3	11	45	12	9	60	6	218
	VOLUMES	52	203	65	181	229	27	65	516	118	54	504	47	2,061
	APPROACH %	16%	63%	20%	41%	52%	6%	9%	74%	17%	9%	83%	8%	
	APP/DEPART	320	/	316	437	/	401	699	/	761	605	/	583	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	35	118	34	109	149	15	37	320	74	31	306	29	1,257
	APPROACH %	19%	63%	18%	40%	55%	5%	9%	74%	17%	8%	84%	8%	
	PEAK HR FACTOR		0.850			0.843			0.816			0.871		0.852
	APP/DEPART	187	/	184	273	/	254	431	/	463	366	/	356	0
PM	4:00 PM	3	35	7	14	29	6	11	78	9	9	96	5	302
	4:15 PM	6	37	10	17	32	5	13	55	10	8	84	4	281
	4:30 PM	9	45	20	22	43	7	8	60	15	12	99	7	347
	4:45 PM	11	48	23	16	55	6	11	57	14	15	84	7	347
	5:00 PM	10	37	14	12	51	8	14	84	12	17	116	7	382
	5:15 PM	6	40	11	18	42	5	12	66	10	17	92	9	328
	5:30 PM	7	47	23	14	34	10	11	56	8	11	95	8	324
	5:45 PM	6	46	13	11	28	9	14	56	7	11	68	5	274
	VOLUMES	58	335	121	124	314	56	94	512	85	100	734	52	2,585
	APPROACH %	11%	65%	24%	25%	64%	11%	14%	74%	12%	11%	83%	6%	
	APP/DEPART	514	/	483	494	/	499	691	/	755	886	/	848	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	36	170	68	66	191	26	45	267	51	61	391	30	1,404
	APPROACH %	13%	62%	25%	23%	67%	9%	12%	74%	14%	13%	81%	6%	
	PEAK HR FACTOR		0.835			0.925			0.825			0.861		0.919
	APP/DEPART	274	/	247	285	/	303	363	/	401	482	/	453	0

U-TURNS

	NB	SB	EB	WB	TTL
AM	0	1	0	0	1
PM	0	2	0	0	2

RTOR

	NRR 0	SRR 0	ERR 0	WRR 0
AM	28	12	19	13
PM	20	16	7	7
AM PEAK HR	15	8	14	7
PM PEAK HR	11	7	6	4



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Arrowhead	LOCATION #:	1
THURSDAY	EAST & WEST:	Rialto	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Arrowhead			SOUTHBOUND Arrowhead			EASTBOUND Rialto			WESTBOUND Rialto				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
	LANES:	1	2	0	1	2	0	1	2	0	1	2	0							0	0	0	0
AM	7:00 AM	1	11	0	0	4	0	0	2	0	0	2	0	20	0	0	0	0	0	0	0	0	0
AM	7:15 AM	1	8	0	1	5	0	1	0	0	0	3	0	19	0	0	0	0	0	0	0	0	0
AM	7:30 AM	0	6	1	0	0	1	0	4	4	1	4	0	21	0	0	0	0	0	0	1	2	0
AM	7:45 AM	1	1	1	1	2	0	0	4	1	1	2	1	15	0	0	0	0	0	1	0	0	0
AM	8:00 AM	0	1	2	1	4	0	0	5	2	1	4	0	20	0	0	0	0	0	1	0	0	0
AM	8:15 AM	0	1	1	1	3	0	1	6	0	1	1	2	17	0	0	0	0	0	0	0	0	0
AM	8:30 AM	1	4	1	1	1	0	1	2	0	2	2	0	15	0	0	0	0	0	1	0	0	0
AM	8:45 AM	1	4	0	1	3	0	0	1	1	2	3	0	16	0	0	0	0	0	0	0	1	0
AM	VOLUMES	5	36	6	6	22	1	3	24	8	8	21	3	143	0	0	0	0	0	3	1	3	0
AM	APPROACH %	11%	77%	13%	21%	76%	3%	9%	69%	23%	25%	66%	9%										
AM	APP/DEPART	47	/	42	29	/	38	35	/	36	32	/	27	0									
AM	BEGIN PEAK HR		7:30 AM																				
AM	VOLUMES	1	9	5	3	9	1	1	19	7	4	11	3	73						2	1	2	0
AM	APPROACH %	7%	60%	33%	23%	69%	8%	4%	70%	26%	22%	61%	17%										
AM	PEAK HR FACTOR		0.536			0.650			0.844			0.900		0.869									
AM	APP/DEPART	15	/	13	13	/	20	27	/	27	18	/	13	0									
PM	4:00 PM	1	5	0	1	2	0	0	5	2	0	3	0	19	0	0	0	0	0	0	0	0	0
PM	4:15 PM	0	7	1	1	1	1	1	1	1	1	0	1	16	0	0	0	0	0	0	0	0	0
PM	4:30 PM	2	5	0	0	3	0	0	5	2	2	4	0	23	0	0	0	0	0	0	0	0	0
PM	4:45 PM	1	4	0	0	1	1	1	0	1	0	1	0	10	0	0	0	0	0	0	0	0	0
PM	5:00 PM	0	6	0	2	2	1	0	4	0	1	1	1	18	0	0	0	0	0	0	1	0	0
PM	5:15 PM	1	3	1	1	3	0	1	3	2	0	1	0	16	0	0	0	0	0	0	0	0	0
PM	5:30 PM	1	5	1	0	4	0	1	1	1	2	2	1	19	0	0	0	0	0	1	0	0	1
PM	5:45 PM	0	4	0	1	2	0	0	1	1	1	4	0	14	0	0	0	0	0	0	0	0	0
PM	VOLUMES	6	39	3	6	18	3	4	20	10	7	16	3	135	0	0	0	0	0	1	1	0	1
PM	APPROACH %	13%	81%	6%	22%	67%	11%	12%	59%	29%	27%	62%	12%										
PM	APP/DEPART	48	/	46	27	/	35	34	/	29	26	/	25	0									
PM	BEGIN PEAK HR		4:30 PM																				
PM	VOLUMES	4	18	1	3	9	2	2	12	5	3	7	1	67						0	1	0	0
PM	APPROACH %	17%	78%	4%	21%	64%	14%	11%	63%	26%	27%	64%	9%										
PM	PEAK HR FACTOR		0.821			0.700			0.679			0.458		0.728									
PM	APP/DEPART	23	/	21	14	/	17	19	/	16	11	/	13	0									

Arrowhead

NORTH SIDE

Rialto WEST SIDE

EAST SIDE **Rialto**

SOUTH SIDE

Arrowhead

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Arrowhead	LOCATION #:	1
THURSDAY	EAST & WEST:	Rialto	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
		Arrowhead			Arrowhead			Rialto			Rialto			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
AM	7:00 AM	0	0	0	0	0	0	0	2	0	0	2	0	4
AM	7:15 AM	0	2	0	0	1	0	0	0	0	0	1	0	4
AM	7:30 AM	0	0	0	0	0	0	0	0	2	0	2	0	4
AM	7:45 AM	2	0	0	0	1	0	0	0	1	0	1	0	5
AM	8:00 AM	0	2	0	0	0	0	0	0	0	1	1	0	4
AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
AM	8:30 AM	1	0	0	0	0	0	0	1	0	0	3	0	5
AM	8:45 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
AM	VOLUMES	3	4	0	0	4	0	0	3	3	1	11	0	29
AM	APPROACH %	43%	57%	0%	0%	100%	0%	0%	50%	50%	8%	92%	0%	
AM	APP/DEPART	7	/	4	4	/	8	6	/	3	12	/	14	0
AM	BEGIN PEAK HR		7:30 AM											
AM	VOLUMES	2	2	0	0	1	0	0	0	3	1	5	0	14
AM	APPROACH %	50%	50%	0%	0%	100%	0%	0%	0%	100%	17%	83%	0%	
AM	PEAK HR FACTOR		0.500			0.250			0.375			0.750		0.700
AM	APP/DEPART	4	/	2	1	/	5	3	/	0	6	/	7	0
PM	4:00 PM	0	1	0	0	0	0	0	3	0	0	0	0	4
PM	4:15 PM	1	0	0	0	1	0	0	0	1	1	1	0	5
PM	4:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
PM	4:45 PM	0	0	0	0	0	1	0	0	0	0	1	0	2
PM	5:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
PM	5:15 PM	0	0	0	0	1	0	0	2	0	0	0	0	3
PM	5:30 PM	0	2	0	0	0	0	0	2	0	0	0	0	4
PM	5:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
PM	VOLUMES	1	4	0	0	3	1	0	10	1	1	3	0	24
PM	APPROACH %	20%	80%	0%	0%	75%	25%	0%	91%	9%	25%	75%	0%	
PM	APP/DEPART	5	/	4	4	/	5	11	/	10	4	/	5	0
PM	BEGIN PEAK HR		4:30 PM											
PM	VOLUMES	0	1	0	0	2	1	0	4	0	0	1	0	9
PM	APPROACH %	0%	100%	0%	0%	67%	33%	0%	100%	0%	0%	100%	0%	
PM	PEAK HR FACTOR		0.250			0.750			0.500			0.250		0.750
PM	APP/DEPART	1	/	1	3	/	2	4	/	4	1	/	2	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES:	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Arrowhead

NORTH SIDE

Rialto WEST SIDE

EAST SIDE **Rialto**

SOUTH SIDE

Arrowhead

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Arrowhead	LOCATION #:	1
THURSDAY	EAST & WEST:	Rialto	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Arrowhead			SOUTHBOUND Arrowhead			EASTBOUND Rialto			WESTBOUND Rialto			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
AM	7:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
AM	7:15 AM	1	0	0	0	0	0	0	1	0	0	1	0	3
AM	7:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
AM	7:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
AM	8:00 AM	0	0	0	0	0	0	0	1	1	0	1	0	3
AM	8:15 AM	1	0	0	0	0	0	0	0	1	0	0	0	2
AM	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
AM	VOLUMES	3	0	0	0	1	0	0	5	2	0	3	0	14
AM	APPROACH %	100%	0%	0%	0%	100%	0%	0%	71%	29%	0%	100%	0%	
AM	APP/DEPART	3	/	0	1	/	3	7	/	5	3	/	6	0
AM	BEGIN PEAK HR		7:30 AM											
AM	VOLUMES	2	0	0	0	0	0	0	2	2	0	2	0	8
AM	APPROACH %	100%	0%	0%	0%	0%	0%	0%	50%	50%	0%	100%	0%	
AM	PEAK HR FACTOR		0.500			0.000			0.500			0.500		0.667
AM	APP/DEPART	2	/	0	0	/	2	4	/	2	2	/	4	0
PM	4:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
PM	4:15 PM	0	0	0	0	1	0	0	2	0	0	0	0	3
PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	1	0	0	0	1	0	0	0	1	0	0	0	3
PM	5:00 PM	1	0	0	0	0	0	0	1	0	0	0	0	2
PM	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:45 PM	0	0	1	0	0	0	0	2	0	0	0	1	4
PM	VOLUMES	3	0	1	0	2	0	0	5	1	0	0	1	13
PM	APPROACH %	75%	0%	25%	0%	100%	0%	0%	83%	17%	0%	0%	100%	
PM	APP/DEPART	4	/	1	2	/	3	6	/	6	1	/	3	0
PM	BEGIN PEAK HR		4:30 PM											
PM	VOLUMES	2	0	0	0	1	0	0	1	1	0	0	0	5
PM	APPROACH %	100%	0%	0%	0%	100%	0%	0%	50%	50%	0%	0%	0%	
PM	PEAK HR FACTOR		0.500			0.250			0.500			0.000		0.417
PM	APP/DEPART	2	/	0	1	/	2	2	/	1	0	/	2	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
						0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
AM PEAK HR VOLUMES						0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PM PEAK HR VOLUMES						0	0	0	0

Arrowhead

NORTH SIDE

Rialto WEST SIDE

EAST SIDE **Rialto**

SOUTH SIDE

Arrowhead

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Arrowhead	LOCATION #:	1
THURSDAY	EAST & WEST:	Rialto	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

		NORTHBOUND Arrowhead			SOUTHBOUND Arrowhead			EASTBOUND Rialto			WESTBOUND Rialto			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
AM	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
AM	BEGIN PEAK HR		7:30 AM											
AM	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
AM	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
AM	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	BEGIN PEAK HR		4:30 PM											
PM	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
PM	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Arrowhead

NORTH SIDE

Rialto WEST SIDE

EAST SIDE **Rialto**

SOUTH SIDE

Arrowhead

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Arrowhead	LOCATION #:	1
THURSDAY	EAST & WEST:	Rialto	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Arrowhead			SOUTHBOUND Arrowhead			EASTBOUND Rialto			WESTBOUND Rialto			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	0	2	1	0	0	0	2	0	0	0	1	0	6
	7:15 AM	0	0	0	0	0	0	1	0	0	0	1	0	2
	7:30 AM	0	0	0	0	0	0	1	3	1	0	2	0	7
	7:45 AM	0	0	0	0	0	1	0	3	0	2	1	0	7
	8:00 AM	0	0	0	0	0	0	1	1	0	0	2	0	4
	8:15 AM	1	0	0	0	0	1	1	2	0	0	2	0	7
	8:30 AM	0	0	0	0	0	1	1	1	0	3	1	0	7
	8:45 AM	0	0	0	0	0	0	0	3	0	1	2	0	6
	VOLUMES	1	2	1	0	0	3	7	13	1	6	12	0	46
	APPROACH %	25%	50%	25%	0%	0%	100%	33%	62%	5%	33%	67%	0%	
	APP/DEPART	4	/	9	3	/	7	21	/	14	18	/	16	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	1	0	0	0	0	2	3	9	1	2	7	0	25
	APPROACH %	100%	0%	0%	0%	0%	100%	23%	69%	8%	22%	78%	0%	
	PEAK HR FACTOR		0.250			0.500			0.650			0.750		0.893
	APP/DEPART	1	/	3	2	/	3	13	/	9	9	/	10	0
PM	4:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	2
	4:15 PM	0	1	0	0	0	1	0	0	1	1	1	0	5
	4:30 PM	1	0	1	0	0	0	2	2	0	0	1	0	7
	4:45 PM	0	0	0	0	0	1	1	0	0	1	1	0	4
	5:00 PM	0	1	0	0	0	0	1	1	0	0	0	0	3
	5:15 PM	0	0	0	0	0	1	0	0	1	0	3	0	5
	5:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	2
	5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	VOLUMES	1	2	1	0	0	3	5	6	2	3	6	0	29
	APPROACH %	25%	50%	25%	0%	0%	100%	38%	46%	15%	33%	67%	0%	
	APP/DEPART	4	/	7	3	/	5	13	/	7	9	/	10	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	1	1	1	0	0	2	4	3	1	1	5	0	19
	APPROACH %	33%	33%	33%	0%	0%	100%	50%	38%	13%	17%	83%	0%	
	PEAK HR FACTOR		0.375			0.500			0.500			0.500		0.679
	APP/DEPART	3	/	5	2	/	2	8	/	4	6	/	8	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR 0	SRR 0	ERR 0	WRR 0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

Arrowhead

NORTH SIDE

Rialto WEST SIDE EAST SIDE **Rialto**

SOUTH SIDE

Arrowhead

INTERSECTION TURNING MOVEMENT COUNTS

T42321

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Feb 24, 22

LOCATION: San Bernardino
NORTH & SOUTH: Mountain View
EAST & WEST: Rialto

PROJECT #: SC3303
LOCATION #: 2
CONTROL: STOP S

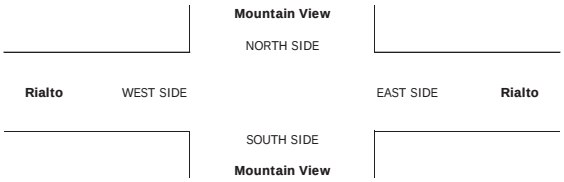
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

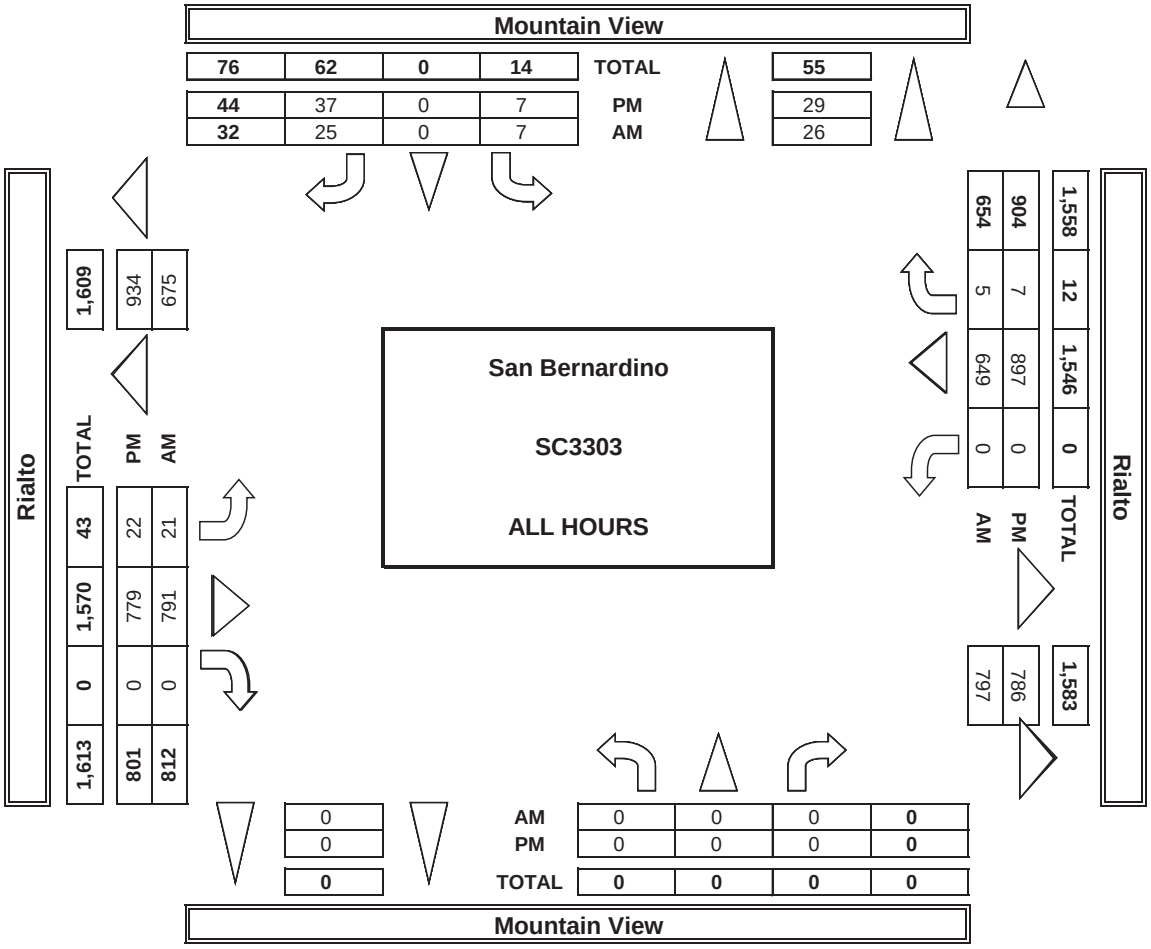
		NORTHBOUND (Mountain View)			SOUTHBOUND (Mountain View)			EASTBOUND (Rialto)			WESTBOUND (Rialto)				U-TURNS					RTOR			
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 2	ER X	WL X	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL	NRR X	SRR X	ERR X	WRR X
AM	7:00 AM	0	0	0	0	0	2	3	57	0	0	36	0	98	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	1	0	5	0	89	0	0	68	0	163	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	2	0	3	2	120	0	0	87	1	215	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	4	8	131	0	0	109	0	252	0	0	1	0	1	0	0	0	0
	8:00 AM	0	0	0	1	0	0	3	134	0	0	114	0	252	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	1	0	4	0	102	0	0	81	1	189	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	2	0	1	2	81	0	0	79	2	167	0	1	0	0	1	0	0	0	0
	8:45 AM	0	0	0	0	0	6	3	77	0	0	75	1	162	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	7	0	25	21	791	0	0	649	5	1,498	0	1	1	0	2	0	0	0	0
	APPROACH %	0%	0%	0%	22%	0%	78%	3%	97%	0%	0%	99%	1%										
	APP/DEPART	0	/	26	32	/	0	812	/	797	654	/	675	0									
	BEGIN PEAK HR	7:30 AM																					
	VOLUMES	0	0	0	4	0	11	13	487	0	0	391	2	908						0	0	0	0
	APPROACH %	0%	0%	0%	27%	0%	73%	3%	97%	0%	0%	99%	1%										
	PEAK HR FACTOR	0.000			0.750				0.899			0.862		0.901									
	APP/DEPART	0	/	14	15	/	0	500	/	491	393	/	403	0									
PM	4:00 PM	0	0	0	1	0	9	2	107	0	0	113	0	232	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	2	0	6	4	83	0	0	91	0	186	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	3	3	108	0	0	124	2	240	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	3	3	90	0	0	102	1	199	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	8	3	115	0	0	142	1	269	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	1	0	1	2	99	0	0	121	0	224	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	3	0	4	3	95	0	0	116	2	223	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	3	2	82	0	0	88	1	176	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	7	0	37	22	779	0	0	897	7	1,749	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	16%	0%	84%	3%	97%	0%	0%	99%	1%										
	APP/DEPART	0	/	29	44	/	0	801	/	786	904	/	934	0									
	BEGIN PEAK HR	4:30 PM																					
	VOLUMES	0	0	0	1	0	15	11	412	0	0	489	4	932						0	0	0	0
	APPROACH %	0%	0%	0%	6%	0%	94%	3%	97%	0%	0%	99%	1%										
	PEAK HR FACTOR	0.000			0.500				0.896			0.862		0.866									
	APP/DEPART	0	/	15	16	/	0	423	/	413	493	/	504	0									

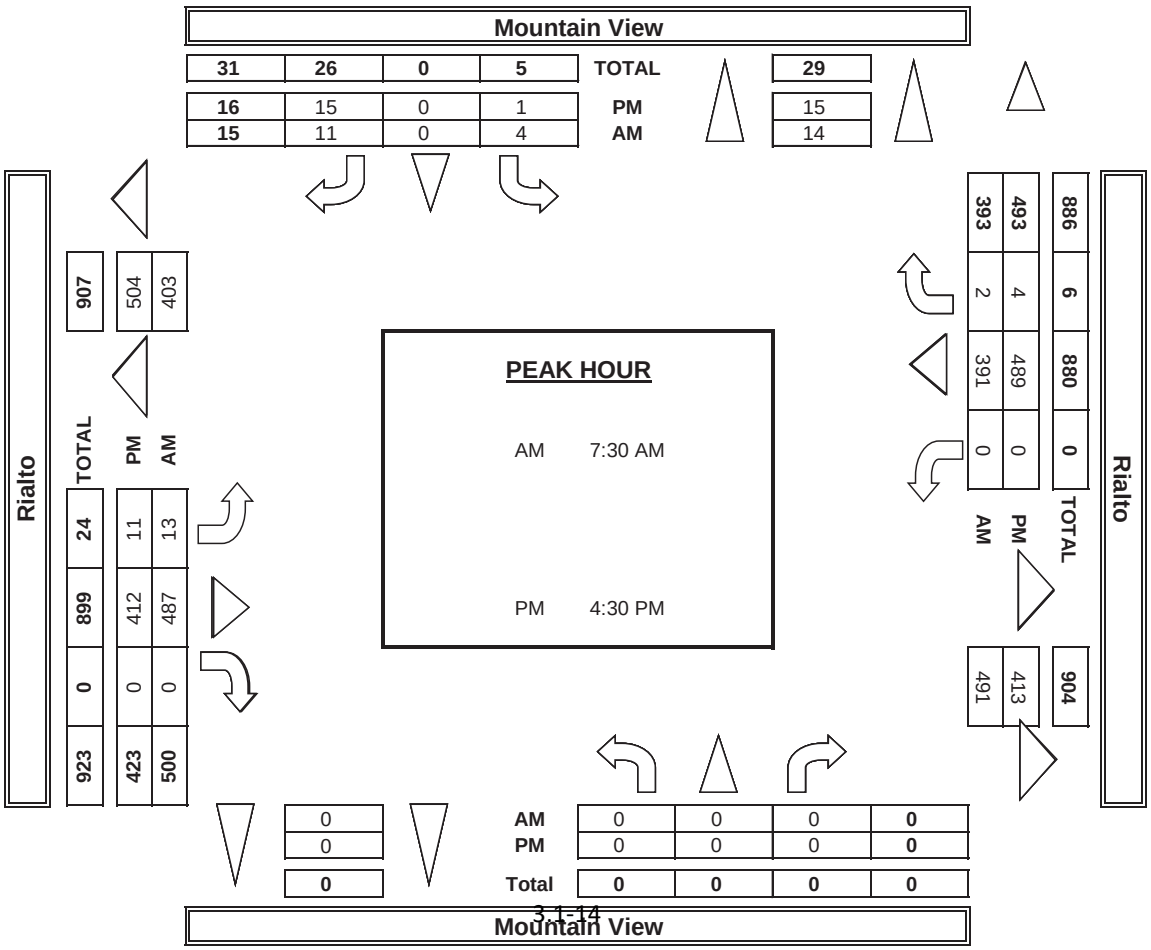


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	TOTAL	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
PM	4:00 PM	0	0	1	1	2	0	0	0	0	0	0	0	1	1	2
	4:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	4:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	2	0	1	3	0	2	0	1	3	0	0	0	0	0
	5:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	5:45 PM	0	1	0	3	4	0	1	0	3	4	0	0	0	0	0
	TOTAL	0	3	3	6	12	0	3	0	4	7	0	0	3	2	5

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Mountain View	LOCATION #:	2
THURSDAY	EAST & WEST:	Rialto	CONTROL:	STOP S

CLASS 1:	NOTES:
PASSENGER VEHICLES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

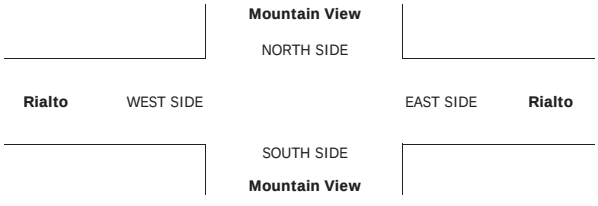
		NORTHBOUND (Mountain View)			SOUTHBOUND (Mountain View)			EASTBOUND (Rialto)			WESTBOUND (Rialto)			
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 2	ER X	WL X	WT 2	WR 0	TOTAL
AM	7:00 AM	0	0	0	0	0	1	2	51	0	0	32	0	86
	7:15 AM	0	0	0	1	0	5	0	87	0	0	62	0	155
	7:30 AM	0	0	0	2	0	2	1	113	0	0	79	1	198
	7:45 AM	0	0	0	0	0	4	7	124	0	0	100	0	235
	8:00 AM	0	0	0	0	0	0	2	123	0	0	104	0	229
	8:15 AM	0	0	0	0	0	3	0	92	0	0	75	1	171
	8:30 AM	0	0	0	2	0	1	2	75	0	0	67	2	149
	8:45 AM	0	0	0	0	0	6	2	73	0	0	68	1	150
	VOLUMES	0	0	0	5	0	22	16	738	0	0	587	5	1,373
	APPROACH %	0%	0%	0%	19%	0%	81%	2%	98%	0%	0%	99%	1%	
	APP/DEPART	0	/	21	27	/	0	754	/	742	592	/	610	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	0	0	0	2	0	9	9	452	0	0	358	2	833
	APPROACH %	0%	0%	0%	18%	0%	82%	2%	98%	0%	0%	99%	1%	
	PEAK HR FACTOR		0.000			0.688			0.882			0.865		0.886
	APP/DEPART	0	/	11	11	/	0	462	/	454	360	/	368	0
PM	4:00 PM	0	0	0	0	0	8	2	97	0	0	111	0	218
	4:15 PM	0	0	0	2	0	5	4	78	0	0	86	0	175
	4:30 PM	0	0	0	0	0	2	3	98	0	0	118	2	223
	4:45 PM	0	0	0	0	0	2	3	90	0	0	99	1	195
	5:00 PM	0	0	0	0	0	8	2	108	0	0	139	1	258
	5:15 PM	0	0	0	0	0	0	2	92	0	0	118	0	212
	5:30 PM	0	0	0	2	0	4	3	90	0	0	110	2	211
	5:45 PM	0	0	0	0	0	3	2	75	0	0	81	1	162
	VOLUMES	0	0	0	4	0	32	21	728	0	0	862	7	1,654
	APPROACH %	0%	0%	0%	11%	0%	89%	3%	97%	0%	0%	99%	1%	
	APP/DEPART	0	/	28	36	/	0	749	/	732	869	/	894	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	0	0	12	10	388	0	0	474	4	888
	APPROACH %	0%	0%	0%	0%	0%	100%	3%	97%	0%	0%	99%	1%	
	PEAK HR FACTOR		0.000			0.375			0.905			0.854		0.860
	APP/DEPART	0	/	14	12	/	0	398	/	388	478	/	486	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	1	1	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Mountain View	LOCATION #:	2
THURSDAY	EAST & WEST:	Rialto	CONTROL:	STOP S

CLASS 2:	NOTES:	AM		▲ N	
2-AXLE		PM			
WORK		MD	◄ W		E ►
VEHICLES/		OTHER		S ▼	
TRUCKS		OTHER			

		NORTHBOUND Mountain View			SOUTHBOUND Mountain View			EASTBOUND Rialto			WESTBOUND Rialto			
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 2	ER X	WL X	WT 2	WR 0	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	2	0	0	2	0	4
	7:15 AM	0	0	0	0	0	0	0	1	0	0	3	0	4
	7:30 AM	0	0	0	0	0	1	1	4	0	0	4	0	10
	7:45 AM	0	0	0	0	0	0	1	5	0	0	4	0	10
	8:00 AM	0	0	0	1	0	0	0	8	0	0	5	0	14
	8:15 AM	0	0	0	0	0	0	0	8	0	0	4	0	12
	8:30 AM	0	0	0	0	0	0	0	4	0	0	4	0	8
	8:45 AM	0	0	0	0	0	0	0	2	0	0	5	0	7
	VOLUMES	0	0	0	1	0	1	2	34	0	0	31	0	69
	APPROACH %	0%	0%	0%	50%	0%	50%	6%	94%	0%	0%	100%	0%	
	APP/DEPART	0	/	2	2	/	0	36	/	35	31	/	32	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	0	0	0	1	0	1	2	25	0	0	17	0	46
	APPROACH %	0%	0%	0%	50%	0%	50%	7%	93%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.500			0.844			0.850		0.821
	APP/DEPART	0	/	2	2	/	0	27	/	26	17	/	18	0
PM	4:00 PM	0	0	0	1	0	1	0	6	0	0	2	0	10
	4:15 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
	4:30 PM	0	0	0	0	0	1	0	5	0	0	5	0	11
	4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
	5:00 PM	0	0	0	0	0	0	0	6	0	0	3	0	9
	5:15 PM	0	0	0	1	0	0	0	5	0	0	1	0	7
	5:30 PM	0	0	0	1	0	0	0	2	0	0	5	0	8
	5:45 PM	0	0	0	0	0	0	0	2	0	0	5	0	7
	VOLUMES	0	0	0	3	0	3	0	29	0	0	23	0	58
	APPROACH %	0%	0%	0%	50%	0%	50%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	6	/	0	29	/	32	23	/	26	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	1	0	2	0	16	0	0	9	0	28
	APPROACH %	0%	0%	0%	33%	0%	67%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.750			0.667			0.450		0.636
	APP/DEPART	0	/	0	3	/	0	16	/	17	9	/	11	0

U-TURNS					
NB	SB	EB	WB	TTL	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	

RTOR			
NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

Mountain View

NORTH SIDE

Rialto WEST SIDE EAST SIDE **Rialto**

SOUTH SIDE

Mountain View

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
2/24/22	NORTH & SOUTH:	Mountain View	LOCATION #:	2
THURSDAY	EAST & WEST:	Rialto	CONTROL:	STOP S
	LOCATION:	San Bernardino	PROJECT #:	SC3303

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Mountain View			SOUTHBOUND Mountain View			EASTBOUND Rialto			WESTBOUND Rialto			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	0	X	0	0	2	X	X	2	0	
AM	7:00 AM	0	0	0	0	0	0	0	2	0	0	2	0	4
AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
AM	8:15 AM	0	0	0	1	0	0	0	0	0	0	1	0	2
AM	8:30 AM	0	0	0	0	0	0	0	1	0	0	3	0	4
AM	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	0	0	1	0	0	0	3	0	0	12	0	16
AM	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%	
AM	APP/DEPART	0	/	0	1	/	0	3	/	4	12	/	12	0
AM	BEGIN PEAK HR		7:30 AM											
AM	VOLUMES	0	0	0	1	0	0	0	0	0	0	6	0	7
AM	APPROACH %	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	
AM	PEAK HR FACTOR		0.000			0.250			0.000			0.750		0.875
AM	APP/DEPART	0	/	0	1	/	0	0	/	1	6	/	6	0
PM	4:00 PM	0	0	0	0	0	0	0	3	0	0	0	0	3
PM	4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
PM	4:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
PM	5:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
PM	5:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
PM	VOLUMES	0	0	0	0	0	0	0	10	0	0	4	0	14
PM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PM	APP/DEPART	0	/	0	0	/	0	10	/	10	4	/	4	0
PM	BEGIN PEAK HR		4:30 PM											
PM	VOLUMES	0	0	0	0	0	0	0	4	0	0	1	0	5
PM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PM	PEAK HR FACTOR		0.000			0.000			0.500			0.250		0.625
PM	APP/DEPART	0	/	0	0	/	0	4	/	4	1	/	1	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES						X	X	X	X
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
AM PEAK VOLUMES						0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PM PEAK VOLUMES						0	0	0	0

Mountain View

NORTH SIDE

Rialto WEST SIDE

EAST SIDE **Rialto**

SOUTH SIDE

Mountain View

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Mountain View	LOCATION #:	2
THURSDAY	EAST & WEST:	Rialto	CONTROL:	STOP S

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND (Mountain View)			SOUTHBOUND (Mountain View)			EASTBOUND (Rialto)			WESTBOUND (Rialto)			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	0	X	0	0	2	X	X	2	0	
AM	7:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
AM	7:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
AM	8:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	0	0	0	0	0	0	5	0	0	3	0	8
AM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
AM	APP/DEPART	0	/	0	0	/	0	5	/	5	3	/	3	0
AM	BEGIN PEAK HR		7:30 AM											
AM	VOLUMES	0	0	0	0	0	0	0	2	0	0	2	0	4
AM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
AM	PEAK HR FACTOR		0.000			0.000			0.500			0.500		0.500
AM	APP/DEPART	0	/	0	0	/	0	2	/	2	2	/	2	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
PM	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:45 PM	0	0	0	0	0	0	0	3	0	0	1	0	4
PM	VOLUMES	0	0	0	0	0	0	0	6	0	0	1	0	7
PM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PM	APP/DEPART	0	/	0	0	/	0	6	/	6	1	/	1	0
PM	BEGIN PEAK HR		4:30 PM											
PM	VOLUMES	0	0	0	0	0	0	0	1	0	0	0	0	1
PM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
PM	PEAK HR FACTOR		0.000			0.000			0.250			0.000		0.250
PM	APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						X	X	X	X
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
AM PEAK HR VOLUMES						0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PM PEAK HR VOLUMES						0	0	0	0

Mountain View

NORTH SIDE

Rialto WEST SIDE

EAST SIDE **Rialto**

SOUTH SIDE

Mountain View

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Mountain View	LOCATION #:	2
THURSDAY	EAST & WEST:	Rialto	CONTROL:	STOP S

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Mountain View			SOUTHBOUND Mountain View			EASTBOUND Rialto			WESTBOUND Rialto			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	0	X	0	0	2	X	X	2	0	
AM													
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM													
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES:	X	X	X	X
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Mountain View

NORTH SIDE

Rialto WEST SIDE

EAST SIDE **Rialto**

SOUTH SIDE

Mountain View

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Mountain View	LOCATION #:	2
THURSDAY	EAST & WEST:	Rialto	CONTROL:	STOP S

CLASS 6: BUSES

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Mountain View			SOUTHBOUND Mountain View			EASTBOUND Rialto			WESTBOUND Rialto			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	0	X	0	0	2	X	X	2	0	
AM 7:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:30 AM	0	0	0	0	0	0	0	3	0	0	2	0	5
7:45 AM	0	0	0	0	0	0	0	1	0	0	3	0	4
8:00 AM	0	0	0	0	0	0	1	2	0	0	2	0	5
8:15 AM	0	0	0	0	0	1	0	2	0	0	1	0	4
8:30 AM	0	0	0	0	0	0	0	1	0	0	5	0	6
8:45 AM	0	0	0	0	0	0	1	2	0	0	2	0	5
VOLUMES	0	0	0	0	0	2	3	11	0	0	16	0	32
APPROACH %	0%	0%	0%	0%	0%	100%	21%	79%	0%	0%	100%	0%	
APP/DEPART	0	/	3	2	/	0	14	/	11	16	/	18	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	0	0	0	0	0	1	1	8	0	0	8	0	18
APPROACH %	0%	0%	0%	0%	0%	100%	11%	89%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.250			0.750			0.667		0.900
APP/DEPART	0	/	1	1	/	0	9	/	8	8	/	9	0
PM 4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	1	0	0	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	3	0	0	1	0	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
5:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	1	0	0	0	0	2	0	3
5:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
VOLUMES	0	0	0	0	0	2	1	6	0	0	7	0	16
APPROACH %	0%	0%	0%	0%	0%	100%	14%	86%	0%	0%	100%	0%	
APP/DEPART	0	/	1	2	/	0	7	/	6	7	/	9	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	0	0	0	0	1	1	3	0	0	5	0	10
APPROACH %	0%	0%	0%	0%	0%	100%	25%	75%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.250			0.333			0.625		0.625
APP/DEPART	0	/	1	1	/	0	4	/	3	5	/	6	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES:	X	X	X	X
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Mountain View

NORTH SIDE

Rialto WEST SIDE

EAST SIDE **Rialto**

SOUTH SIDE

Mountain View

INTERSECTION TURNING MOVEMENT COUNTS

T42321

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Thu, Feb 24, 22	LOCATION:	San Bernardino	PROJECT #:	SC3303	
	NORTH & SOUTH:	Sierra	LOCATION #:	3	
	EAST & WEST:	Rialto	CONTROL:	SIGNAL	

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

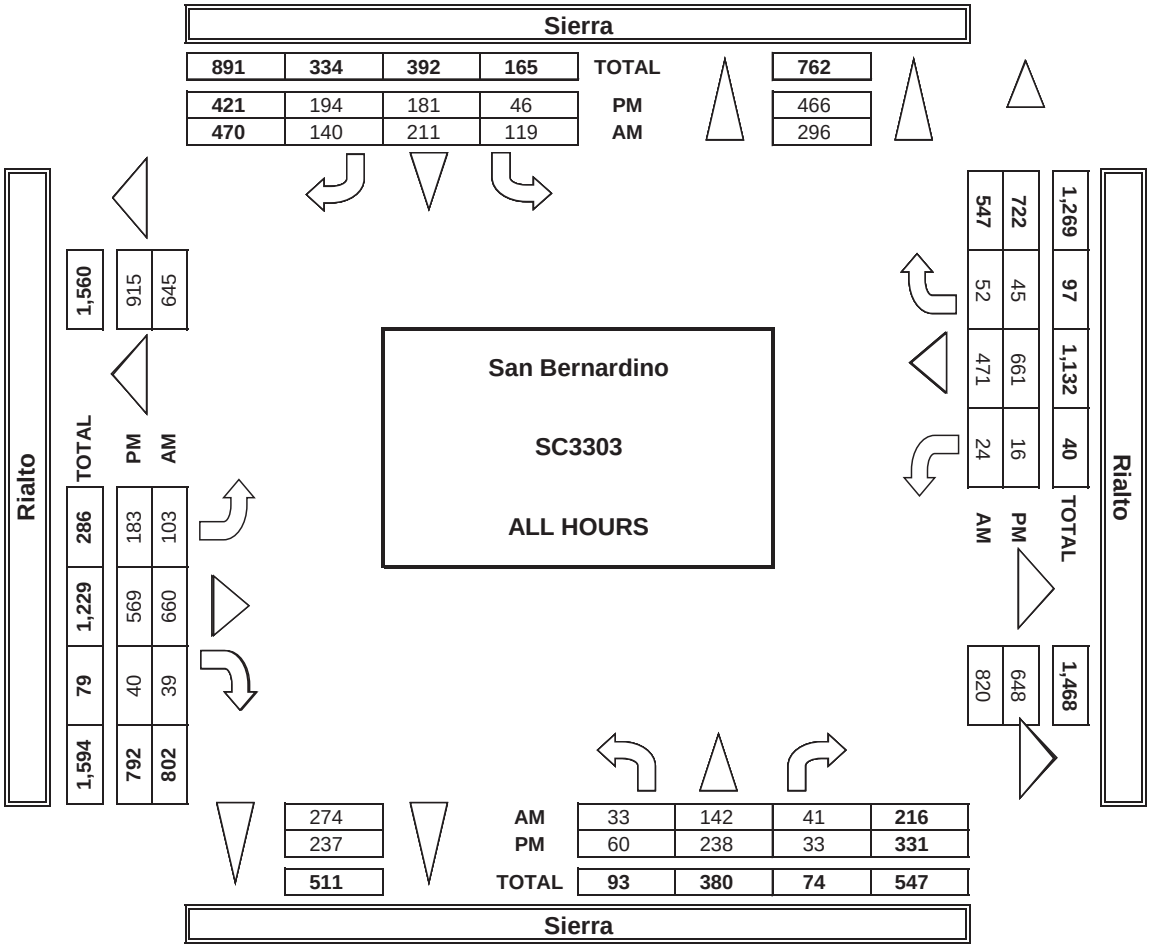
☑ Add U-Turns to Left Turns

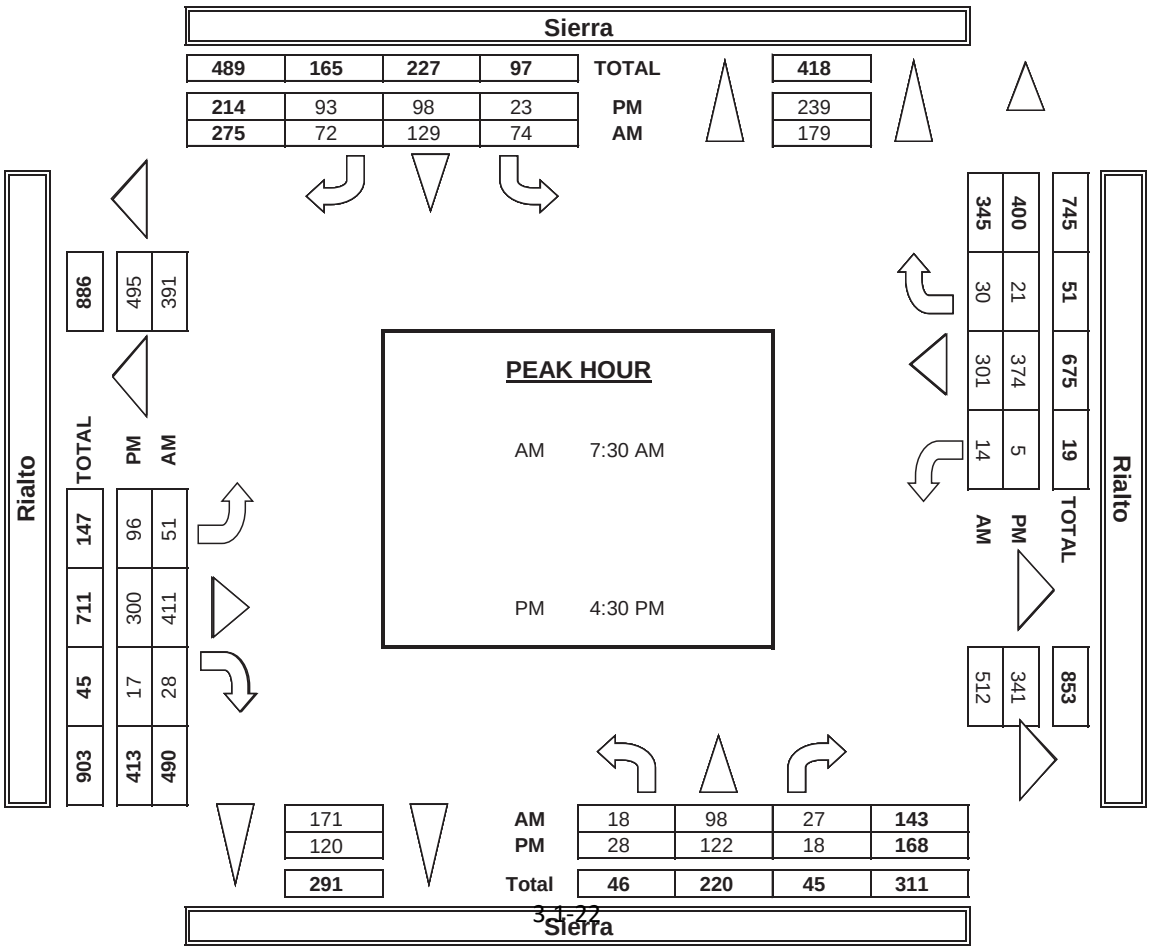
		NORTHBOUND (Sierra)			SOUTHBOUND (Sierra)			EASTBOUND (Rialto)			WESTBOUND (Rialto)				U-TURNS					RTOR			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL	NRR 0	SRR 0	ERR 0	WRR 0
AM	7:00 AM	1	18	5	8	19	13	6	50	2	4	21	2	149	0	0	0	0	0	2	5	1	0
	7:15 AM	6	6	4	7	31	21	14	71	2	3	38	0	203	0	0	0	0	0	1	10	1	0
	7:30 AM	6	17	3	10	27	15	18	99	4	2	68	4	273	0	0	0	0	0	2	2	1	2
	7:45 AM	6	42	8	22	58	22	11	109	12	5	83	4	382	0	0	0	0	0	3	4	1	1
	8:00 AM	4	24	11	19	25	19	10	111	8	3	87	12	333	0	0	0	0	0	1	7	1	5
	8:15 AM	2	15	5	23	19	16	12	92	4	4	63	10	265	0	0	0	0	0	2	7	1	3
	8:30 AM	5	10	4	17	14	17	17	66	1	2	57	16	226	0	0	0	0	0	1	4	1	5
	8:45 AM	3	10	1	13	18	17	15	62	6	1	54	4	204	0	0	1	0	1	0	4	2	2
	VOLUMES	33	142	41	119	211	140	103	660	39	24	471	52	2,035	0	0	1	0	1	12	43	9	18
	APPROACH %	15%	66%	19%	25%	45%	30%	13%	82%	5%	4%	86%	10%										
	APP/DEPART	216	/	296	470	/	274	802	/	820	547	/	645	0									
	BEGIN PEAK HR		7:30 AM																				
	VOLUMES	18	98	27	74	129	72	51	411	28	14	301	30	1,253						8	20	4	11
	APPROACH %	13%	69%	19%	27%	47%	26%	10%	84%	6%	4%	87%	9%										
	PEAK HR FACTOR		0.638			0.674			0.928			0.846		0.820									
	APP/DEPART	143	/	179	275	/	171	490	/	512	345	/	391	0									
PM	4:00 PM	10	42	4	4	28	32	25	77	6	4	79	7	318	0	0	0	0	0	0	6	3	2
	4:15 PM	7	28	2	8	24	22	20	59	8	2	67	3	250	0	0	0	0	0	0	4	4	0
	4:30 PM	7	31	4	7	28	21	23	71	7	0	99	3	301	0	0	0	0	0	0	0	4	1
	4:45 PM	4	24	3	5	17	23	20	70	3	2	79	4	254	0	0	0	0	0	1	5	1	1
	5:00 PM	8	34	6	8	29	26	26	86	2	1	110	9	345	0	0	0	0	0	1	9	1	2
	5:15 PM	9	33	5	3	24	23	27	73	5	2	86	5	295	0	0	0	0	0	3	10	3	2
	5:30 PM	13	18	6	4	11	25	19	75	7	5	78	6	267	0	0	0	0	0	2	15	5	2
	5:45 PM	2	28	3	7	20	22	23	58	2	0	63	8	236	0	0	0	0	0	1	11	1	4
	VOLUMES	60	238	33	46	181	194	183	569	40	16	661	45	2,266	0	0	0	0	0	8	60	22	14
	APPROACH %	18%	72%	10%	11%	43%	46%	23%	72%	5%	2%	92%	6%										
	APP/DEPART	331	/	466	421	/	237	792	/	648	722	/	915	0									
	BEGIN PEAK HR		4:30 PM																				
	VOLUMES	28	122	18	23	98	93	96	300	17	5	374	21	1,195						5	24	9	6
	APPROACH %	17%	73%	11%	11%	46%	43%	23%	73%	4%	1%	94%	5%										
	PEAK HR FACTOR		0.875			0.849			0.906			0.833		0.866									
	APP/DEPART	168	/	239	214	/	120	413	/	341	400	/	495	0									

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	7:45 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	8:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:15 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	8:30 AM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
	8:45 AM	2	1	1	1	5	2	1	1	1	5	0	0	0	0	0
	TOTAL	4	4	3	2	13	3	3	3	1	10	1	1	0	1	3
PM	4:00 PM	1	0	1	2	4	0	0	0	1	1	1	0	1	1	3
	4:15 PM	2	0	1	0	3	1	0	0	0	1	1	0	1	0	2
	4:30 PM	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	2	0	0	2	4	2	0	0	2	4	0	0	0	0	0
	5:15 PM	2	2	5	1	10	2	2	5	1	10	0	0	0	0	0
	5:30 PM	0	2	2	0	4	0	2	2	0	4	0	0	0	0	0
	5:45 PM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
	TOTAL	8	5	9	7	29	6	5	7	6	24	2	0	2	1	5

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Sierra	LOCATION #:	3
THURSDAY	EAST & WEST:	Rialto	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

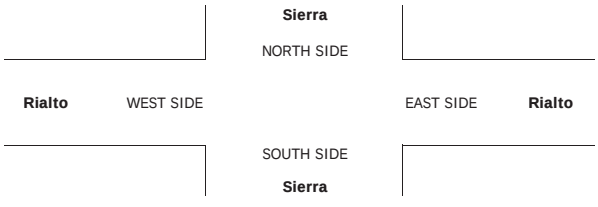
		NORTHBOUND (Sierra)			SOUTHBOUND (Sierra)			EASTBOUND (Rialto)			WESTBOUND (Rialto)			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	0	15	4	8	18	12	5	46	2	4	19	1	134
	7:15 AM	5	5	4	7	30	20	14	68	2	3	35	0	193
	7:30 AM	6	16	3	9	27	15	18	92	4	1	61	4	256
	7:45 AM	3	39	8	21	57	20	11	104	11	5	79	3	361
	8:00 AM	4	22	10	18	23	16	6	104	6	3	81	11	304
	8:15 AM	1	12	4	23	15	15	11	83	3	4	58	8	237
	8:30 AM	3	9	4	17	12	16	15	63	1	2	49	15	206
	8:45 AM	2	7	1	13	16	15	15	59	4	1	49	4	186
	VOLUMES	24	125	38	116	198	129	95	619	33	23	431	46	1,877
	APPROACH %	13%	67%	20%	26%	45%	29%	13%	83%	4%	5%	86%	9%	
	APP/DEPART	187	/	265	443	/	254	747	/	773	500	/	585	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	14	89	25	71	122	66	46	383	24	13	279	26	1,158
	APPROACH %	11%	70%	20%	27%	47%	25%	10%	85%	5%	4%	88%	8%	
	PEAK HR FACTOR		0.640			0.661			0.899			0.837		0.802
	APP/DEPART	128	/	161	259	/	159	453	/	479	318	/	359	0
PM	4:00 PM	8	42	4	4	27	31	23	70	4	4	79	7	303
	4:15 PM	7	27	2	8	19	21	20	57	6	1	64	1	233
	4:30 PM	6	31	3	6	25	20	23	65	4	0	95	3	281
	4:45 PM	4	24	3	5	16	22	20	68	3	2	77	4	248
	5:00 PM	8	34	6	8	29	25	24	83	2	0	108	9	336
	5:15 PM	8	33	5	3	24	23	25	66	5	2	84	5	283
	5:30 PM	13	18	6	4	11	24	19	70	5	4	73	6	253
	5:45 PM	1	28	3	7	19	21	23	51	2	0	57	8	220
	VOLUMES	55	237	32	45	170	187	177	530	31	13	637	43	2,157
	APPROACH %	17%	73%	10%	11%	42%	47%	24%	72%	4%	2%	92%	6%	
	APP/DEPART	324	/	457	402	/	214	738	/	607	693	/	879	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	26	122	17	22	94	90	92	282	14	4	364	21	1,148
	APPROACH %	16%	74%	10%	11%	46%	44%	24%	73%	4%	1%	94%	5%	
	PEAK HR FACTOR		0.859			0.831			0.890			0.831		0.854
	APP/DEPART	165	/	235	206	/	112	388	/	321	389	/	480	0

U-TURNS

	NB	SB	EB	WB	TTL
AM	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	1	0	1
	0	0	1	0	1
PM	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0

RTOR

	NRR 0	SRR 0	ERR 0	WRR 0
AM	1	5	1	0
	1	9	1	0
	2	2	1	2
	3	4	1	0
	1	5	1	5
	1	7	0	1
	1	4	1	5
	0	4	2	2
	10	40	8	15
	7	18	3	8
PM	0	6	3	2
	0	4	4	0
	0	0	3	1
	1	5	1	1
	1	8	1	2
	3	10	3	2
	2	14	4	2
	1	11	1	4
	8	58	20	14
	5	23	8	6



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Sierra	LOCATION #:	3
THURSDAY	EAST & WEST:	Rialto	CONTROL:	SIGNAL

CLASS 2:	NOTES:	
2-AXLE WORK VEHICLES/ TRUCKS		AM PM MD OTHER OTHER

▲ N
◄ W E ►
S ▼

		NORTHBOUND Sierra			SOUTHBOUND Sierra			EASTBOUND Rialto			WESTBOUND Rialto				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
	LANES:	1	2	0	1	2	0	1	2	0	1	2	0							0	0	0	0
AM	7:00 AM	1	2	0	0	1	1	0	1	0	0	0	0	6	0	0	0	0	0	0	0	0	0
AM	7:15 AM	1	1	0	0	0	1	0	2	0	0	0	0	5	0	0	0	0	0	0	1	0	0
AM	7:30 AM	0	1	0	1	0	0	0	4	0	1	3	0	10	0	0	0	0	0	0	0	0	0
AM	7:45 AM	2	2	0	1	1	0	0	4	0	0	2	0	12	0	0	0	0	0	0	0	0	0
AM	8:00 AM	0	2	1	1	1	2	3	5	2	0	2	1	20	0	0	0	0	0	0	1	0	0
AM	8:15 AM	1	2	1	0	3	1	1	6	1	0	3	2	21	0	0	0	0	0	1	0	1	2
AM	8:30 AM	1	1	0	0	1	0	2	1	0	0	2	0	8	0	0	0	0	0	0	0	0	0
AM	8:45 AM	0	2	0	0	2	2	0	2	1	0	4	0	13	0	0	0	0	0	0	0	0	0
AM	VOLUMES	6	13	2	3	9	7	6	25	4	1	16	3	95	0	0	0	0	0	1	2	1	2
AM	APPROACH %	29%	62%	10%	16%	47%	37%	17%	71%	11%	5%	80%	15%										
AM	APP/DEPART	21	/	22	19	/	14	35	/	30	20	/	29	0									
AM	BEGIN PEAK HR		7:30 AM																				
AM	VOLUMES	3	7	2	3	5	3	4	19	3	1	10	3	63						1	1	1	2
AM	APPROACH %	25%	58%	17%	27%	45%	27%	15%	73%	12%	7%	71%	21%										
AM	PEAK HR FACTOR		0.750			0.688			0.650			0.700		0.750									
AM	APP/DEPART	12	/	14	11	/	9	26	/	24	14	/	16	0									
PM	4:00 PM	1	0	0	0	1	1	1	4	2	0	0	0	10	0	0	0	0	0	0	0	0	0
PM	4:15 PM	0	0	0	0	1	1	0	2	0	1	0	1	6	0	0	0	0	0	0	0	0	0
PM	4:30 PM	1	0	1	1	3	1	0	3	2	0	3	0	15	0	0	0	0	0	0	0	1	0
PM	4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
PM	5:00 PM	0	0	0	0	0	1	2	2	0	1	2	0	8	0	0	0	0	0	0	1	0	0
PM	5:15 PM	0	0	0	0	0	0	2	5	0	0	1	0	8	0	0	0	0	0	0	0	0	0
PM	5:30 PM	0	0	0	0	0	1	0	3	1	1	4	0	10	0	0	0	0	0	0	1	0	0
PM	5:45 PM	1	0	0	0	1	1	0	2	0	0	4	0	9	0	0	0	0	0	0	0	0	0
PM	VOLUMES	3	0	1	1	6	6	5	22	5	3	14	1	67	0	0	0	0	0	0	2	1	0
PM	APPROACH %	75%	0%	25%	8%	46%	46%	16%	69%	16%	17%	78%	6%										
PM	APP/DEPART	4	/	6	13	/	14	32	/	24	18	/	23	0									
PM	BEGIN PEAK HR		4:30 PM																				
PM	VOLUMES	1	0	1	1	3	2	4	11	2	1	6	0	32						0	1	1	0
PM	APPROACH %	50%	0%	50%	17%	50%	33%	24%	65%	12%	14%	86%	0%										
PM	PEAK HR FACTOR		0.250			0.300			0.607			0.583		0.533									
PM	APP/DEPART	2	/	4	6	/	6	17	/	13	7	/	9	0									

Sierra

NORTH SIDE

Rialto WEST SIDE EAST SIDE **Rialto**

SOUTH SIDE

Sierra

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
2/24/22	LOCATION:	San Bernardino	PROJECT #:	SC3303
THURSDAY	NORTH & SOUTH:	Sierra	LOCATION #:	3
	EAST & WEST:	Rialto	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Sierra			SOUTHBOUND Sierra			EASTBOUND Rialto			WESTBOUND Rialto			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
AM 7:00 AM	0	1	0	0	0	0	1	1	0	0	2	0	5
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 AM	0	0	0	0	1	1	0	0	0	0	2	0	4
8:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
8:30 AM	1	0	0	0	0	0	0	1	0	0	2	0	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	1	0	0	1	1	1	3	0	0	11	0	19
APPROACH %	50%	50%	0%	0%	50%	50%	25%	75%	0%	0%	100%	0%	
APP/DEPART	2	/	2	2	/	1	4	/	3	11	/	13	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	0	0	0	0	1	1	0	1	0	0	6	0	9
APPROACH %	0%	0%	0%	0%	50%	50%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.250			0.250			0.750		0.563
APP/DEPART	0	/	0	2	/	1	1	/	1	6	/	7	0
PM 4:00 PM	0	0	0	0	0	0	0	3	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	1	3
4:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
VOLUMES	0	0	0	0	0	0	0	10	0	0	4	1	15
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	80%	20%	
APP/DEPART	0	/	1	0	/	0	10	/	10	5	/	4	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	0	0	0	0	0	0	4	0	0	1	0	5
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.000			0.500			0.250		0.625
APP/DEPART	0	/	0	0	/	0	4	/	4	1	/	1	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES:	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	1	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
VOLUMES	0	1	0	0
PEAK HR VOLUMES	0	1	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Sierra

NORTH SIDE

Rialto WEST SIDE

EAST SIDE **Rialto**

SOUTH SIDE

Sierra

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
2/24/22	LOCATION:	San Bernardino	PROJECT #:	SC3303
THURSDAY	NORTH & SOUTH:	Sierra	LOCATION #:	3
	EAST & WEST:	Rialto	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Sierra			SOUTHBOUND Sierra			EASTBOUND Rialto			WESTBOUND Rialto			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
AM													
7:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
8:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
8:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
VOLUMES	0	2	0	0	1	0	0	5	0	0	3	0	11
APPROACH %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	2	/	2	1	/	1	5	/	5	3	/	3	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	0	1	0	0	1	0	0	2	0	0	2	0	6
APPROACH %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.250			0.250			0.500			0.500		0.750
APP/DEPART	1	/	1	1	/	1	2	/	2	2	/	2	0
PM													
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	2	0	0	0	2	0	0	0	5
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	3	0	0	1	0	4
VOLUMES	0	1	0	0	3	0	0	4	2	0	1	0	11
APPROACH %	0%	100%	0%	0%	100%	0%	0%	67%	33%	0%	100%	0%	
APP/DEPART	1	/	1	3	/	5	6	/	4	1	/	1	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	0	0	0	1	0	0	1	0	0	0	0	2
APPROACH %	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.250			0.250			0.000		0.500
APP/DEPART	0	/	0	1	/	1	1	/	1	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Sierra

NORTH SIDE

Rialto WEST SIDE

EAST SIDE **Rialto**

SOUTH SIDE

Sierra

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Sierra	LOCATION #:	3
THURSDAY	EAST & WEST:	Rialto	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W E ►
S ▼

		NORTHBOUND (Sierra)			SOUTHBOUND (Sierra)			EASTBOUND (Rialto)			WESTBOUND (Rialto)			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
AM	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
AM	BEGIN PEAK HR		7:30 AM											
AM	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
AM	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
AM	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	BEGIN PEAK HR		4:30 PM											
PM	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
PM	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Sierra
NORTH SIDE

Rialto WEST SIDE

EAST SIDE **Rialto**

SOUTH SIDE
Sierra

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Sierra	LOCATION #:	3
THURSDAY	EAST & WEST:	Rialto	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

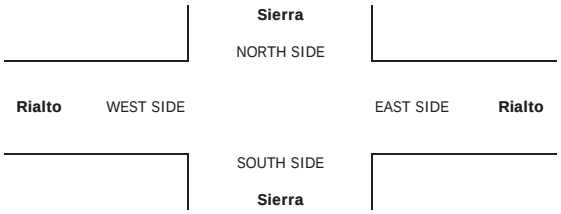
		NORTHBOUND (Sierra)			SOUTHBOUND (Sierra)			EASTBOUND (Rialto)			WESTBOUND (Rialto)			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	0	0	1	0	0	0	0	0	0	0	0	1	2
	7:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
	7:30 AM	0	0	0	0	0	0	0	3	0	0	2	0	5
	7:45 AM	1	1	0	0	0	2	0	0	1	0	0	1	6
	8:00 AM	0	0	0	0	0	0	1	1	0	0	1	0	3
	8:15 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
	8:30 AM	0	0	0	0	1	1	0	1	0	0	4	1	8
	8:45 AM	1	0	0	0	0	0	0	1	1	0	1	0	4
	VOLUMES	2	1	1	0	2	3	1	8	2	0	10	3	33
	APPROACH %	50%	25%	25%	0%	40%	60%	9%	73%	18%	0%	77%	23%	
	APP/DEPART	4	/	5	5	/	4	11	/	9	13	/	15	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	1	1	0	0	0	2	1	6	1	0	4	1	17
	APPROACH %	50%	50%	0%	0%	0%	100%	13%	75%	13%	0%	80%	20%	
	PEAK HR FACTOR		0.250			0.250			0.667			0.625		0.708
	APP/DEPART	2	/	3	2	/	1	8	/	6	5	/	7	0
PM	4:00 PM	1	0	0	0	0	0	1	0	0	0	0	0	2
	4:15 PM	0	0	0	0	2	0	0	0	0	0	1	0	3
	4:30 PM	0	0	0	0	0	0	0	1	1	0	1	0	3
	4:45 PM	0	0	0	0	0	1	0	1	0	0	1	0	3
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	1	0	0	0	0	0	0	0	0	0	1	0	2
	5:30 PM	0	0	0	0	0	0	0	0	1	0	1	0	2
	5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	VOLUMES	2	0	0	0	2	1	1	3	2	0	5	0	16
	APPROACH %	100%	0%	0%	0%	67%	33%	17%	50%	33%	0%	100%	0%	
	APP/DEPART	2	/	1	3	/	4	6	/	3	5	/	8	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	1	0	0	0	0	1	0	2	1	0	3	0	8
	APPROACH %	100%	0%	0%	0%	0%	100%	0%	67%	33%	0%	100%	0%	
	PEAK HR FACTOR		0.250			0.250			0.375			0.750		0.667
	APP/DEPART	1	/	0	1	/	1	3	/	2	3	/	5	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR 0	SRR 0	ERR 0	WRR 0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	1
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	0
0	0	0	0
0	0	1	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

T42321

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Thu, Feb 24, 22	LOCATION:	San Bernardino	PROJECT #:	SC3303
	NORTH & SOUTH:	Sierra	LOCATION #:	4
	EAST & WEST:	Driveway	CONTROL:	STOP W

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

	NORTHBOUND Sierra			SOUTHBOUND Sierra			EASTBOUND Driveway			WESTBOUND Driveway			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	2	0	0	2	X	X	X	X	0	X	0	
AM 7:00 AM	0	24	0	0	25	0	0	0	0	0	0	0	49
7:15 AM	0	16	0	0	36	0	0	0	0	0	0	0	52
7:30 AM	0	26	0	1	32	0	0	0	0	1	0	0	60
7:45 AM	0	56	0	2	73	0	0	0	0	0	0	0	131
8:00 AM	0	38	0	1	35	0	0	0	0	0	0	1	75
8:15 AM	0	22	1	0	27	0	0	0	0	1	0	0	51
8:30 AM	0	19	2	0	17	0	0	0	0	0	0	0	38
8:45 AM	0	13	0	0	24	0	0	0	0	0	0	2	39
VOLUMES	0	214	3	4	269	0	0	0	0	2	0	3	495
APPROACH %	0%	99%	1%	1%	99%	0%	0%	0%	0%	40%	0%	60%	
APP/DEPART	217	/	217	273	/	271	0	/	7	5	/	0	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	0	136	0	4	176	0	0	0	0	1	0	1	318
APPROACH %	0%	100%	0%	2%	98%	0%	0%	0%	0%	50%	0%	50%	
PEAK HR FACTOR		0.607			0.600			0.000			0.500		0.607
APP/DEPART	136	/	137	180	/	177	0	/	4	2	/	0	0
PM 4:00 PM	0	56	0	0	38	0	0	0	0	0	0	0	94
4:15 PM	0	37	0	0	34	0	0	0	0	0	0	0	71
4:30 PM	0	41	0	0	35	0	0	0	0	0	0	1	77
4:45 PM	0	30	0	0	22	0	0	0	0	0	0	1	53
5:00 PM	0	47	0	0	32	0	0	0	0	0	0	1	80
5:15 PM	0	46	0	0	31	0	0	0	0	1	0	1	79
5:30 PM	0	32	0	0	23	0	0	0	0	0	0	5	60
5:45 PM	0	34	0	0	22	0	0	0	0	0	0	0	56
VOLUMES	0	323	0	0	237	0	0	0	0	1	0	9	570
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	10%	0%	90%	
APP/DEPART	323	/	332	237	/	238	0	/	0	10	/	0	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	0	164	0	0	129	0	0	0	0	0	0	2	295
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	
PEAK HR FACTOR		0.732			0.849			0.000			0.500		0.785
APP/DEPART	164	/	166	129	/	129	0	/	0	2	/	0	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:	0	0	0	0		X	X	X	X
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
AM PEAK HR VOLUMES						0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PM PEAK HR VOLUMES						0	0	0	0

Sierra

NORTH SIDE

Driveway WEST SIDE EAST SIDE **Driveway**

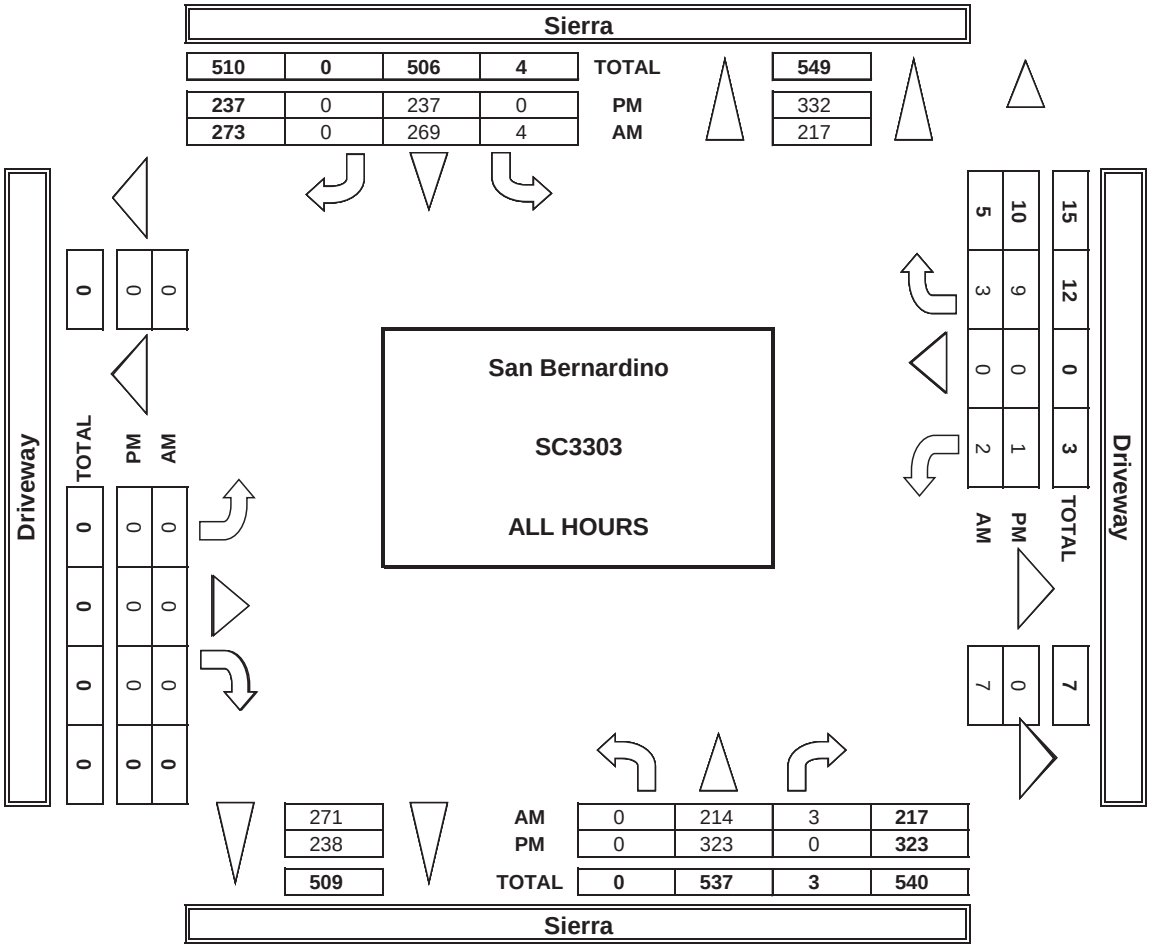
SOUTH SIDE

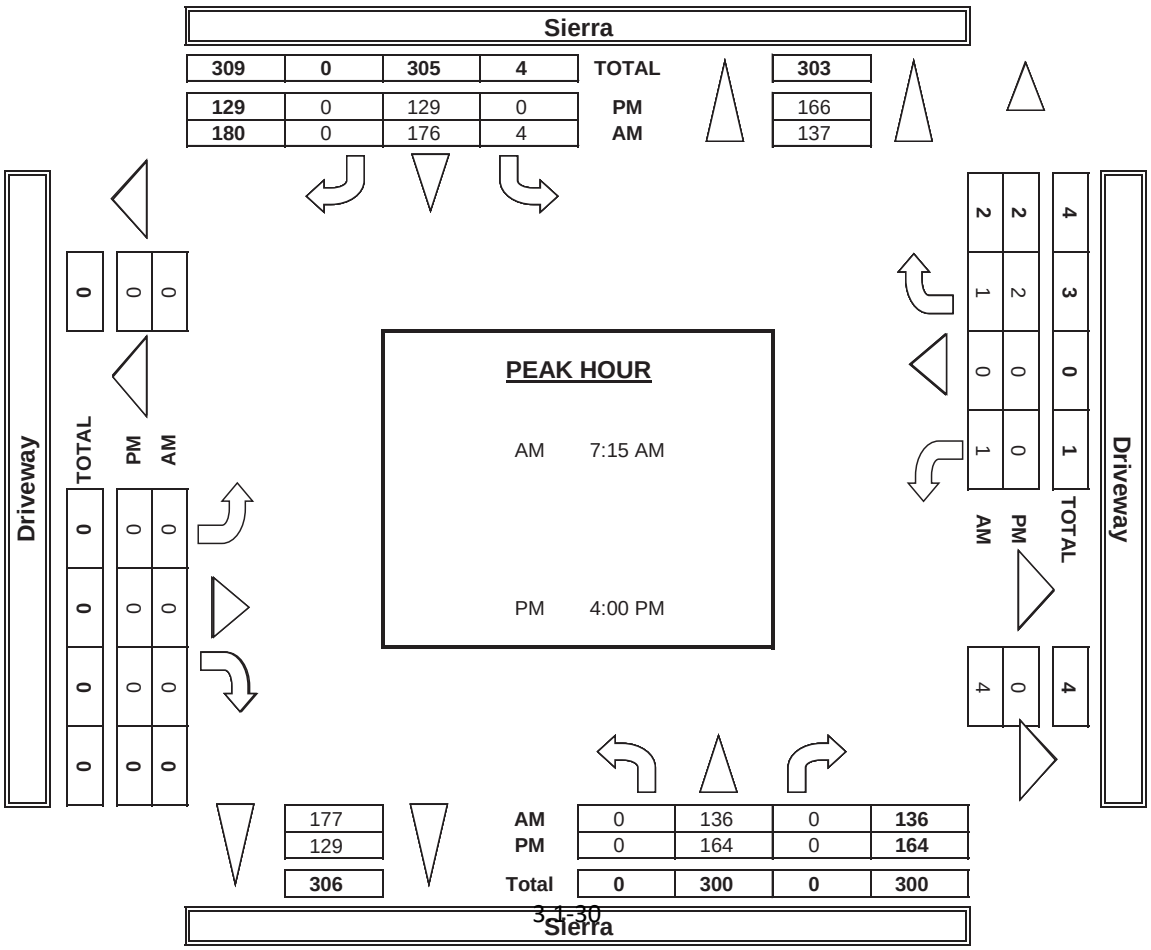
Sierra

	ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	3	0	0	0	3	3	0	0	0	3	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
8:30 AM	2	0	0	0	2	2	0	0	0	2	0	0	0	0	0
8:45 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
TOTAL	6	1	0	0	7	6	0	0	0	6	0	1	0	0	1
PM 4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	0	0	0	2	1	0	0	0	1	1	0	0	0	1

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 2/24/22 THURSDAY	LOCATION:	San Bernardino	PROJECT #:	SC3303
	NORTH & SOUTH:	Sierra	LOCATION #:	4
	EAST & WEST:	Driveway	CONTROL:	STOP W

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

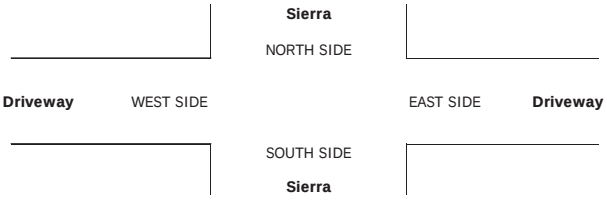
	NORTHBOUND (Sierra)			SOUTHBOUND (Sierra)			EASTBOUND (Driveway)			WESTBOUND (Driveway)			
LANES:	NL X	NT 2	NR 0	SL 0	ST 2	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL
7:00 AM	0	19	0	0	24	0	0	0	0	0	0	0	43
7:15 AM	0	14	0	0	35	0	0	0	0	0	0	0	49
7:30 AM	0	25	0	0	32	0	0	0	0	0	0	0	57
7:45 AM	0	50	0	2	71	0	0	0	0	0	0	0	123
8:00 AM	0	36	0	1	31	0	0	0	0	0	0	0	68
8:15 AM	0	17	1	0	22	0	0	0	0	1	0	0	41
8:30 AM	0	16	1	0	15	0	0	0	0	0	0	0	32
8:45 AM	0	11	0	0	20	0	0	0	0	0	0	0	31
AM VOLUMES	0	188	2	3	250	0	0	0	0	1	0	0	444
AM APPROACH %	0%	99%	1%	1%	99%	0%	0%	0%	0%	100%	0%	0%	
AM APP/DEPART	190	/	188	253	/	251	0	/	5	1	/	0	0
AM BEGIN PEAK HR		7:15 AM											
AM VOLUMES	0	125	0	3	169	0	0	0	0	0	0	0	297
AM APPROACH %	0%	100%	0%	2%	98%	0%	0%	0%	0%	0%	0%	0%	
AM PEAK HR FACTOR		0.625			0.589			0.000			0.000		0.604
AM APP/DEPART	125	/	125	172	/	169	0	/	3	0	/	0	0
4:00 PM	0	54	0	0	35	0	0	0	0	0	0	0	89
4:15 PM	0	36	0	0	26	0	0	0	0	0	0	0	62
4:30 PM	0	39	0	0	29	0	0	0	0	0	0	1	69
4:45 PM	0	30	0	0	21	0	0	0	0	0	0	1	52
5:00 PM	0	47	0	0	31	0	0	0	0	0	0	1	79
5:15 PM	0	45	0	0	31	0	0	0	0	1	0	1	78
5:30 PM	0	32	0	0	20	0	0	0	0	0	0	5	57
5:45 PM	0	33	0	0	21	0	0	0	0	0	0	0	54
PM VOLUMES	0	316	0	0	214	0	0	0	0	1	0	9	540
PM APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	10%	0%	90%	
PM APP/DEPART	316	/	325	214	/	215	0	/	0	10	/	0	0
PM BEGIN PEAK HR		4:00 PM											
PM VOLUMES	0	159	0	0	111	0	0	0	0	0	0	2	272
PM APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	
PM PEAK HR FACTOR		0.736			0.793			0.000			0.500		0.764
PM APP/DEPART	159	/	161	111	/	111	0	/	0	2	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
AM	0	0	0	0	0
PM	0	0	0	0	0

RTOR

	NRR X	SRR X	ERR X	WRR X
AM	0	0	0	0
PM	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Sierra	LOCATION #:	4
THURSDAY	EAST & WEST:	Driveway	CONTROL:	STOP W

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

		NORTHBOUND Sierra			SOUTHBOUND Sierra			EASTBOUND Driveway			WESTBOUND Driveway			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	2	0	0	2	X	X	X	X	0	X	0	
AM	7:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	4
	7:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
	7:30 AM	0	1	0	1	0	0	0	0	0	1	0	0	3
	7:45 AM	0	4	0	0	1	0	0	0	0	0	0	0	5
	8:00 AM	0	2	0	0	3	0	0	0	0	0	0	1	6
	8:15 AM	0	4	0	0	4	0	0	0	0	0	0	0	8
	8:30 AM	0	2	1	0	1	0	0	0	0	0	0	0	4
	8:45 AM	0	0	0	0	3	0	0	0	0	0	0	2	5
	VOLUMES	0	18	1	1	13	0	0	0	0	1	0	3	37
	APPROACH %	0%	95%	5%	7%	93%	0%	0%	0%	0%	25%	0%	75%	
	APP/DEPART	19	/	21	14	/	14	0	/	2	4	/	0	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	9	0	1	4	0	0	0	0	1	0	1	16
	APPROACH %	0%	100%	0%	20%	80%	0%	0%	0%	0%	50%	0%	50%	
	PEAK HR FACTOR		0.563			0.417			0.000			0.500		0.667
	APP/DEPART	9	/	10	5	/	5	0	/	1	2	/	0	0
PM	4:00 PM	0	1	0	0	3	0	0	0	0	0	0	0	4
	4:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
	4:30 PM	0	2	0	0	5	0	0	0	0	0	0	0	7
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
	5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
	VOLUMES	0	4	0	0	14	0	0	0	0	0	0	0	18
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	4	/	4	14	/	14	0	/	0	0	/	0	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	3	0	0	10	0	0	0	0	0	0	0	13
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.375			0.500			0.000			0.000		0.464
	APP/DEPART	3	/	3	10	/	10	0	/	0	0	/	0	0

		U-TURNS					RTOR			
		NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
	LANES:						X	X	X	X
AM	7:00 AM	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0
	PEAK HR VOLUMES						0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0
	PEAK HR VOLUMES						0	0	0	0

Sierra

NORTH SIDE

Driveway WEST SIDE

EAST SIDE **Driveway**

SOUTH SIDE

Sierra

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
2/24/22	LOCATION:	San Bernardino	PROJECT #:	SC3303
THURSDAY	NORTH & SOUTH:	Sierra	LOCATION #:	4
	EAST & WEST:	Driveway	CONTROL:	STOP W

CLASS 3:	NOTES:		
3-AXLE TRUCKS		AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼

		NORTHBOUND Sierra			SOUTHBOUND Sierra			EASTBOUND Driveway			WESTBOUND Driveway			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	2	0	0	2	X	X	X	X	0	X	0	
AM	7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	0	0	1	0	0	0	0	0	0	0	3
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	2	/	2	1	/	1	0	/	0	0	/	0	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
AM VOLUMES	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
PM VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	X	X	X	X
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
AM VOLUMES	0	0	0	0
AM PEAK HR VOLUMES	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
PM VOLUMES	0	0	0	0
PM PEAK HR VOLUMES	0	0	0	0

Sierra

NORTH SIDE

Driveway WEST SIDE

EAST SIDE **Driveway**

SOUTH SIDE

Sierra

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:			
2/24/22	LOCATION: San Bernardino	PROJECT #:	SC3303
THURSDAY	NORTH & SOUTH: Sierra	LOCATION #:	4
	EAST & WEST: Driveway	CONTROL:	STOP W

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND (Sierra)			SOUTHBOUND (Sierra)			EASTBOUND (Driveway)			WESTBOUND (Driveway)			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	2	0	0	2	X	X	X	X	0	X	0	
AM 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
VOLUMES	0	2	0	0	1	0	0	0	0	0	0	0	3
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	2	/	2	1	/	1	0	/	0	0	/	0	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM 4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	4	0	0	0	0	0	0	0	5
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1	0	0	5	0	0	0	0	0	0	0	6
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	1	/	1	5	/	5	0	/	0	0	/	0	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	0	1	0	0	5	0	0	0	0	0	0	0	6
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.250			0.313			0.000			0.000		0.300
APP/DEPART	1	/	1	5	/	5	0	/	0	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES:	X	X	X	X
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Sierra

NORTH SIDE

Driveway WEST SIDE | EAST SIDE **Driveway**

SOUTH SIDE

Sierra

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Sierra	LOCATION #:	4
THURSDAY	EAST & WEST:	Driveway	CONTROL:	STOP W

CLASS 5:	NOTES:	AM	▲ N ▼ S
RV		PM	◄ W
		MD	E ►
		OTHER	
		OTHER	

		NORTHBOUND Sierra			SOUTHBOUND Sierra			EASTBOUND Driveway			WESTBOUND Driveway			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	2	0	0	2	X	X	X	X	0	X	0	
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

	U-TURNS				
	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
VOLUMES	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

	RTOR			
	NRR	SRR	ERR	WRR
LANES:	X	X	X	X
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Sierra

NORTH SIDE

Driveway WEST SIDE

EAST SIDE **Driveway**

SOUTH SIDE

Sierra

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC3303
2/24/22	NORTH & SOUTH:	Sierra	LOCATION #:	4
THURSDAY	EAST & WEST:	Driveway	CONTROL:	STOP W

CLASS 6:	NOTES:	AM PM MD OTHER OTHER	N ▲ ◄ W E ► S ▼
BUSES			

		NORTHBOUND (Sierra)			SOUTHBOUND (Sierra)			EASTBOUND (Driveway)			WESTBOUND (Driveway)				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
	LANES:	X	2	0	0	2	X	X	X	X	0	X	0							X	X	X	X
AM	7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
AM	7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:45 AM	0	2	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
AM	8:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	4	0	0	4	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
AM	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%										
AM	APP/DEPART	4	/	4	4	/	4	0	/	0	0	/	0	0									
AM	BEGIN PEAK HR		7:15 AM																				
AM	VOLUMES	0	2	0	0	2	0	0	0	0	0	0	0	4						0	0	0	0
AM	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%										
AM	PEAK HR FACTOR		0.250			0.500			0.000			0.000		0.333									
AM	APP/DEPART	2	/	2	2	/	2	0	/	0	0	/	0	0									
PM	4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
PM	4:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
PM	4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
PM	5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	VOLUMES	0	2	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
PM	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%										
PM	APP/DEPART	2	/	2	4	/	4	0	/	0	0	/	0	0									
PM	BEGIN PEAK HR		4:00 PM																				
PM	VOLUMES	0	1	0	0	3	0	0	0	0	0	0	0	4						0	0	0	0
PM	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%										
PM	PEAK HR FACTOR		0.250			0.375			0.000			0.000		0.500									
PM	APP/DEPART	1	/	1	3	/	3	0	/	0	0	/	0	0									

Sierra

NORTH SIDE

Driveway WEST SIDE

EAST SIDE **Driveway**

SOUTH SIDE

Sierra

APPENDIX 3.2: EXISTING (2022) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Volume Development - AM Peak Hour

1: Arrowhead Av. & Rialto Av.

PHF: 0.865 7:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**48**	**136**	**42**	**114**	**165**	**19**	**42**	**364**	**98**	**41**	**346**	**34**	**1,444**

2: Arrowhead Av. & Driveway 1

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**0**	**225**	**0**	**0**	**303**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**528**

3: Arrowhead Av. & Driveway 2

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**0**	**225**	**0**	**0**	**303**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**528**

4: Mountain View Av./Driveway 3 & Rialto Av.

PHF: 0.901 7:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**0**	**0**	**0**	**6**	**0**	**12**	**14**	**504**	**0**	**0**	**410**	**2**	**946**

5: Driveway 4 & Rialto Av.

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**508**	**0**	**0**	**410**	**0**	**918**

6: Sierra Wy. & Rialto Av.

PHF: 0.820 7:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**20**	**104**	**28**	**76**	**144**	**75**	**53**	**426**	**30**	**15**	**316**	**32**	**1,315**

7: Sierra Wy. & Driveway 5

PHF: 0.607 7:15 Count Date: 4/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**0**	**150**	**0**	**5**	**183**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**340**

8: Sierra Wy. & Driveway 6

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**0**	**150**	**0**	**0**	**185**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**334**

Volume Development - PM Peak Hour

1: Arrowhead Av. & Rialto Av.

PHF: 0.924 4:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**49**	**200**	**71**	**73**	**212**	**33**	**52**	**299**	**63**	**67**	**409**	**32**	**1,557**

2: Arrowhead Av. & Driveway 1

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**0**	**320**	**0**	**0**	**341**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**660**

3: Arrowhead Av. & Driveway 2

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**0**	**320**	**0**	**0**	**341**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**660**

4: Mountain View Av./Driveway 3 & Rialto Av.

PHF: 0.866 4:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**0**	**0**	**0**	**2**	**0**	**16**	**11**	**426**	**0**	**0**	**495**	**4**	**953**

5: Driveway 4 & Rialto Av.

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**428**	**0**	**0**	**501**	**0**	**929**

6: Sierra Wy. & Rialto Av.

PHF: 0.866 4:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**29**	**122**	**21**	**24**	**120**	**94**	**98**	**312**	**19**	**6**	**378**	**21**	**1,242**

7: Sierra Wy. & Driveway 5

PHF: 0.785 4:00 Count Date: 4/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**0**	**170**	**0**	**0**	**144**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**316**

8: Sierra Wy. & Driveway 6

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
2022 PCE:	**0**	**170**	**0**	**0**	**144**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**314**

S. Arrowhead Warehouse TA (JN:14660)
Existing (2022) Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arrowhead & Rialto

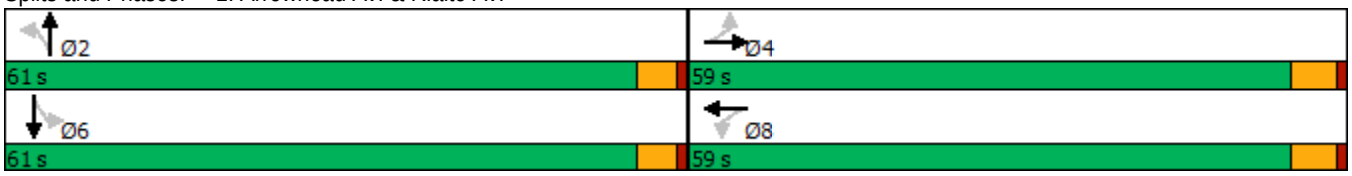
Cycle (sec):	100	Critical Vol./Cap.(X):	0.354
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

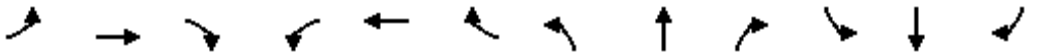
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	48	136	42	114	165	19	42	364	98	41	346	34
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	48	136	42	114	165	19	42	364	98	41	346	34
User Adj:	1.00	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:	48	136	42	114	165	19	42	364	98	41	346	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	48	136	42	114	165	19	42	364	98	41	346	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	48	136	42	114	165	19	42	364	98	41	346	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.53	0.47	1.00	1.79	0.21	1.00	1.58	0.42	1.00	1.82	0.18
Final Sat.:	1805	2903	897	1805	3408	392	1805	2994	806	1805	3460	340
Capacity Analysis Module:												
Vol/Sat:	0.03	0.05	0.05	0.06	0.05	0.05	0.02	0.12	0.12	0.02	0.10	0.10
Crit Moves:		****		****				****		****		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	42	364	41	346	48	136	114	165
Future Volume (vph)	42	364	41	346	48	136	114	165
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	59.0	59.0	59.0	59.0	61.0	61.0	61.0	61.0
Total Split (%)	49.2%	49.2%	49.2%	49.2%	50.8%	50.8%	50.8%	50.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	12.0	12.0	12.0	12.0	11.4	11.4	11.4	11.4
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.34	0.34	0.34	0.34
v/c Ratio	0.16	0.44	0.17	0.36	0.16	0.18	0.37	0.18
Control Delay	9.2	9.0	9.5	8.8	9.5	6.8	12.3	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	9.0	9.5	8.8	9.5	6.8	12.3	8.0
LOS	A	A	A	A	A	A	B	A
Approach Delay		9.0		8.9		7.4		9.6
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 33.3	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 8.8	Intersection LOS: A
Intersection Capacity Utilization 55.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Arrowhead Av. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	364	98	41	346	34	48	136	42	114	165	19
Future Volume (veh/h)	42	364	98	41	346	34	48	136	42	114	165	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	49	423	95	48	402	32	56	158	29	133	192	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	465	943	210	427	1088	86	573	971	175	581	1096	68
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	916	2778	619	847	3206	254	1130	2895	521	1148	3268	203
Grp Volume(v), veh/h	49	259	259	48	214	220	56	92	95	133	100	104
Grp Sat Flow(s),veh/h/ln	916	1710	1687	847	1710	1750	1130	1710	1706	1148	1710	1760
Q Serve(g_s), s	1.3	3.5	3.6	1.4	2.8	2.8	1.1	1.1	1.2	2.8	1.2	1.2
Cycle Q Clear(g_c), s	4.1	3.5	3.6	5.0	2.8	2.8	2.3	1.1	1.2	3.9	1.2	1.2
Prop In Lane	1.00		0.37	1.00		0.15	1.00		0.31	1.00		0.12
Lane Grp Cap(c), veh/h	465	580	572	427	580	594	573	573	572	581	573	590
V/C Ratio(X)	0.11	0.45	0.45	0.11	0.37	0.37	0.10	0.16	0.17	0.23	0.17	0.18
Avail Cap(c_a), veh/h	1809	3091	3049	1670	3091	3164	2332	3234	3227	2368	3234	3330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.0	7.7	7.7	9.6	7.4	7.4	7.8	7.0	7.0	8.4	7.0	7.0
Incr Delay (d2), s/veh	0.1	0.5	0.6	0.1	0.4	0.4	0.1	0.1	0.1	0.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.8	0.2	0.6	0.7	0.2	0.3	0.3	0.5	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	8.2	8.2	9.7	7.8	7.8	7.9	7.1	7.1	8.6	7.1	7.1
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		567			482			243			337	
Approach Delay, s/veh		8.3			8.0			7.3			7.7	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		15.2		14.6		15.2				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		56.4		53.9		56.4		53.9				
Max Q Clear Time (g_c+I1), s		4.3		6.1		5.9		7.0				
Green Ext Time (p_c), s		1.5		3.7		1.9		3.0				

Intersection Summary												
HCM 6th Ctrl Delay			7.9									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	504	410	2	6	12
Future Vol, veh/h	14	504	410	2	6	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	560	456	2	7	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	458	0	-	0	769	229
Stage 1	-	-	-	-	457	-
Stage 2	-	-	-	-	312	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1114	-	-	-	342	780
Stage 1	-	-	-	-	610	-
Stage 2	-	-	-	-	721	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1114	-	-	-	337	780
Mov Cap-2 Maneuver	-	-	-	-	450	-
Stage 1	-	-	-	-	601	-
Stage 2	-	-	-	-	721	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1114	-	-	-	450	780
HCM Lane V/C Ratio	0.014	-	-	-	0.015	0.017
HCM Control Delay (s)	8.3	-	-	-	13.1	9.7
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1

S. Arrowhead Warehouse TA (JN:14660)
Existing (2022) Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Sierra & Rialto

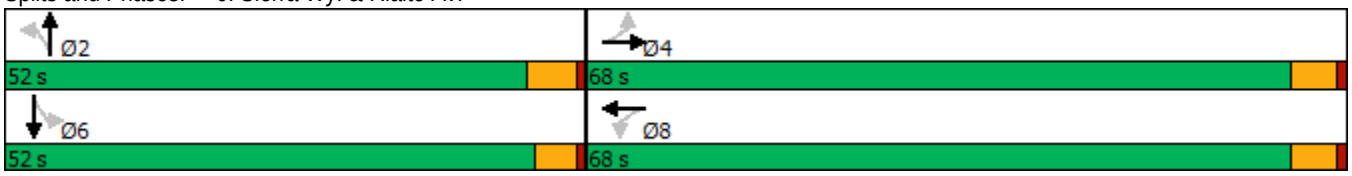
Cycle (sec):	100	Critical Vol./Cap.(X):	0.305
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

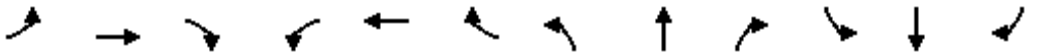
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	20	104	28	76	144	75	53	426	30	15	316	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	104	28	76	144	75	53	426	30	15	316	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	104	28	76	144	75	53	426	30	15	316	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	104	28	76	144	75	53	426	30	15	316	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	20	104	28	76	144	75	53	426	30	15	316	32
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.58	0.42	1.00	1.32	0.68	1.00	1.87	0.13	1.00	1.82	0.18
Final Sat.:	1805	2994	806	1805	2499	1301	1805	3550	250	1805	3451	349
Capacity Analysis Module:												
Vol/Sat:	0.01	0.03	0.03	0.04	0.06	0.06	0.03	0.12	0.12	0.01	0.09	0.09
Crit Moves:		****			****			****			****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	53	426	15	316	20	104	76	144
Future Volume (vph)	53	426	15	316	20	104	76	144
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	68.0	68.0	68.0	68.0	52.0	52.0	52.0	52.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	12.3	12.3	12.3	12.3	10.4	10.4	11.2	11.2
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.31	0.31	0.34	0.34
v/c Ratio	0.21	0.45	0.06	0.34	0.08	0.15	0.25	0.23
Control Delay	8.9	9.0	7.3	8.1	10.0	7.9	11.0	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	9.0	7.3	8.1	10.0	7.9	11.0	6.5
LOS	A	A	A	A	A	A	B	A
Approach Delay		9.0		8.0		8.2		7.6
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 33.3	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 8.3	Intersection LOS: A
Intersection Capacity Utilization 55.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Sierra Wy. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	426	30	15	316	32	20	104	28	76	144	75
Future Volume (veh/h)	53	426	30	15	316	32	20	104	28	76	144	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	65	520	32	18	385	26	24	127	24	93	176	67
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	466	1111	68	408	1104	74	524	930	172	576	788	289
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	935	3272	201	821	3252	219	1091	2881	532	1185	2442	894
Grp Volume(v), veh/h	65	271	281	18	202	209	24	74	77	93	121	122
Grp Sat Flow(s),veh/h/ln	935	1710	1763	821	1710	1761	1091	1710	1704	1185	1710	1626
Q Serve(g_s), s	1.7	3.9	3.9	0.5	2.7	2.8	0.5	1.0	1.0	1.9	1.6	1.7
Cycle Q Clear(g_c), s	4.5	3.9	3.9	4.4	2.7	2.8	2.2	1.0	1.0	2.9	1.6	1.7
Prop In Lane	1.00		0.11	1.00		0.12	1.00		0.31	1.00		0.55
Lane Grp Cap(c), veh/h	466	581	599	408	581	598	524	552	550	576	552	525
V/C Ratio(X)	0.14	0.47	0.47	0.04	0.35	0.35	0.05	0.13	0.14	0.16	0.22	0.23
Avail Cap(c_a), veh/h	2039	3458	3566	1788	3458	3560	1806	2562	2552	2000	2606	2477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	8.1	8.1	9.8	7.7	7.7	8.5	7.5	7.5	8.5	7.7	7.7
Incr Delay (d2), s/veh	0.1	0.6	0.6	0.0	0.4	0.3	0.0	0.1	0.1	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	1.0	0.1	0.7	0.7	0.1	0.2	0.2	0.4	0.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	8.6	8.6	9.9	8.0	8.0	8.6	7.6	7.6	8.6	7.9	7.9
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		617			429			175			336	
Approach Delay, s/veh		8.7			8.1			7.7			8.1	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		15.7		15.4		15.7				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		46.6		62.9		* 47		62.9				
Max Q Clear Time (g_c+I1), s		4.2		6.5		4.9		6.4				
Green Ext Time (p_c), s		0.9		4.0		2.0		2.7				

Intersection Summary												
HCM 6th Ctrl Delay			8.3									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	150	0	5	183
Future Vol, veh/h	2	2	150	0	5	183
Conflicting Peds, #/hr	0	0	0	3	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	3	246	0	8	300

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	415	126	0	0	249	0
Stage 1	249	-	-	-	-	-
Stage 2	166	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	571	907	-	-	1328	-
Stage 1	775	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	566	904	-	-	1324	-
Mov Cap-2 Maneuver	625	-	-	-	-	-
Stage 1	773	-	-	-	-	-
Stage 2	847	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	739	1324	-
HCM Lane V/C Ratio	-	-	0.009	0.006	-
HCM Control Delay (s)	-	-	9.9	7.7	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

S. Arrowhead Warehouse TA (JN:14660)
Existing (2022) Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arrowhead & Rialto

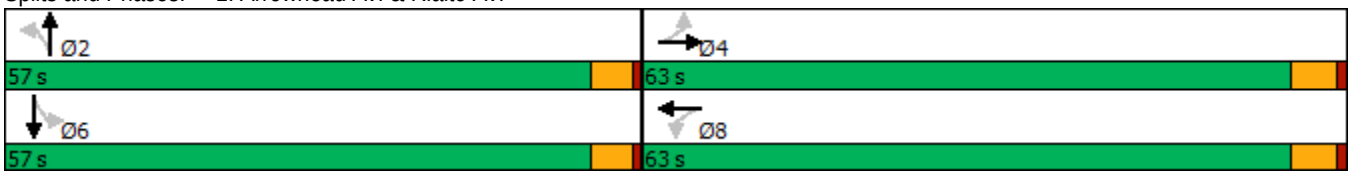
Cycle (sec):	100	Critical Vol./Cap.(X):	0.357
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

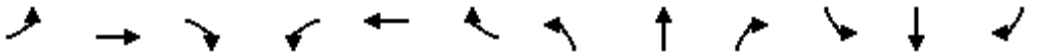
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	49	200	71	73	212	33	52	299	63	67	409	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	49	200	71	73	212	33	52	299	63	67	409	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	49	200	71	73	212	33	52	299	63	67	409	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	49	200	71	73	212	33	52	299	63	67	409	32
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:	49	200	71	73	212	33	52	299	63	67	409	32
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.48	0.52	1.00	1.73	0.27	1.00	1.65	0.35	1.00	1.85	0.15
Final Sat.:	1805	2804	996	1805	3288	512	1805	3139	661	1805	3524	276
Capacity Analysis Module:												
Vol/Sat:	0.03	0.07	0.07	0.04	0.06	0.06	0.03	0.10	0.10	0.04	0.12	0.12
Crit Moves:		****			****			****			****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	52	299	67	409	49	200	73	212
Future Volume (vph)	52	299	67	409	49	200	73	212
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	11.2	11.2	11.2	11.2	10.5	10.5	10.5	10.5
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.33	0.33	0.33	0.33
v/c Ratio	0.20	0.33	0.23	0.40	0.16	0.26	0.24	0.24
Control Delay	9.1	7.7	9.4	8.6	9.3	7.2	10.4	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	7.7	9.4	8.6	9.3	7.2	10.4	8.0
LOS	A	A	A	A	A	A	B	A
Approach Delay		7.9		8.7		7.5		8.6
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 31.5	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 54.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Arrowhead Av. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	299	63	67	409	32	49	200	71	73	212	33
Future Volume (veh/h)	52	299	63	67	409	32	49	200	71	73	212	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	57	325	61	73	445	31	53	217	65	79	230	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	449	985	182	486	1112	77	541	870	253	526	1032	120
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	879	2872	532	956	3243	225	1077	2603	758	1052	3087	358
Grp Volume(v), veh/h	57	192	194	73	234	242	53	140	142	79	126	131
Grp Sat Flow(s),veh/h/ln	879	1710	1694	956	1710	1758	1077	1710	1651	1052	1710	1735
Q Serve(g_s), s	1.6	2.5	2.6	1.8	3.1	3.2	1.1	1.8	1.9	1.8	1.6	1.6
Cycle Q Clear(g_c), s	4.7	2.5	2.6	4.4	3.1	3.2	2.7	1.8	1.9	3.7	1.6	1.6
Prop In Lane	1.00		0.31	1.00		0.13	1.00		0.46	1.00		0.21
Lane Grp Cap(c), veh/h	449	586	581	486	586	603	541	571	552	526	571	580
V/C Ratio(X)	0.13	0.33	0.33	0.15	0.40	0.40	0.10	0.25	0.26	0.15	0.22	0.23
Avail Cap(c_a), veh/h	1842	3296	3266	2001	3296	3389	2060	2983	2881	2009	2983	3028
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.3	7.3	7.3	9.0	7.5	7.5	8.2	7.3	7.3	8.6	7.2	7.2
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.1	0.4	0.4	0.1	0.2	0.2	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.6	0.3	0.7	0.7	0.2	0.5	0.5	0.3	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	7.6	7.7	9.1	8.0	8.0	8.3	7.5	7.5	8.7	7.4	7.4
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		443			549			335			336	
Approach Delay, s/veh		7.9			8.1			7.6			7.7	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		15.4		14.6		15.4				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		52.4		57.9		52.4		57.9				
Max Q Clear Time (g_c+I1), s		4.7		6.7		5.7		6.4				
Green Ext Time (p_c), s		2.2		2.8		2.1		3.4				

Intersection Summary												
HCM 6th Ctrl Delay			7.9									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	426	495	4	2	16
Future Vol, veh/h	11	426	495	4	2	16
Conflicting Peds, #/hr	0	0	0	1	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	490	569	5	2	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	575	0	-	0	844	290
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	271	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1008	-	-	-	306	713
Stage 1	-	-	-	-	533	-
Stage 2	-	-	-	-	756	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1007	-	-	-	301	711
Mov Cap-2 Maneuver	-	-	-	-	412	-
Stage 1	-	-	-	-	526	-
Stage 2	-	-	-	-	755	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1007	-	-	-	412	711
HCM Lane V/C Ratio	0.013	-	-	-	0.006	0.026
HCM Control Delay (s)	8.6	-	-	-	13.8	10.2
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1

S. Arrowhead Warehouse TA (JN:14660)
Existing (2022) Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Sierra & Rialto

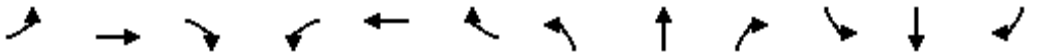
Cycle (sec):	100	Critical Vol./Cap.(X):	0.332
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	26	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	29	122	21	24	120	94	98	312	19	6	378	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	122	21	24	120	94	98	312	19	6	378	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	29	122	21	24	120	94	98	312	19	6	378	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	122	21	24	120	94	98	312	19	6	378	21
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:	29	122	21	24	120	94	98	312	19	6	378	21
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.71	0.29	1.00	1.12	0.88	1.00	1.89	0.11	1.00	1.89	0.11
Final Sat.:	1805	3242	558	1805	2131	1669	1805	3582	218	1805	3600	200
Capacity Analysis Module:												
Vol/Sat:	0.02	0.04	0.04	0.01	0.06	0.06	0.05	0.09	0.09	0.00	0.11	0.11
Crit Moves:	****				****		****				****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	98	312	6	378	29	122	24	120
Future Volume (vph)	98	312	6	378	29	122	24	120
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	77.0	77.0	77.0	77.0	43.0	43.0	43.0	43.0
Total Split (%)	64.2%	64.2%	64.2%	64.2%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	11.3	11.3	11.3	11.3	10.1	10.1	10.9	10.9
Actuated g/C Ratio	0.35	0.35	0.35	0.35	0.32	0.32	0.34	0.34
v/c Ratio	0.38	0.32	0.02	0.38	0.10	0.15	0.07	0.21
Control Delay	11.9	8.0	6.5	8.4	9.7	8.2	8.7	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	8.0	6.5	8.4	9.7	8.2	8.7	5.4
LOS	B	A	A	A	A	A	A	A
Approach Delay		8.9		8.4		8.4		5.8
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 31.9	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.38	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 55.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Sierra Wy. & Rialto Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	312	19	6	378	21	29	122	21	24	120	94
Future Volume (veh/h)	98	312	19	6	378	21	29	122	21	24	120	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	113	359	12	7	434	17	33	140	18	28	138	80
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	461	1221	41	497	1213	47	517	966	122	553	675	369
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	900	3377	113	968	3355	131	1114	3052	386	1174	2132	1165
Grp Volume(v), veh/h	113	181	190	7	221	230	33	77	81	28	109	109
Grp Sat Flow(s),veh/h/ln	900	1710	1779	968	1710	1776	1114	1710	1728	1174	1710	1586
Q Serve(g_s), s	3.4	2.5	2.5	0.2	3.1	3.1	0.7	1.1	1.1	0.6	1.5	1.6
Cycle Q Clear(g_c), s	6.5	2.5	2.5	2.7	3.1	3.1	2.4	1.1	1.1	1.7	1.5	1.6
Prop In Lane	1.00		0.06	1.00		0.07	1.00		0.22	1.00		0.73
Lane Grp Cap(c), veh/h	461	618	643	497	618	642	517	541	547	553	541	502
V/C Ratio(X)	0.25	0.29	0.29	0.01	0.36	0.36	0.06	0.14	0.15	0.05	0.20	0.22
Avail Cap(c_a), veh/h	2120	3769	3921	2281	3769	3914	1448	1971	1992	1564	2013	1867
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.0	7.4	7.4	8.4	7.6	7.6	9.1	8.0	8.0	8.6	8.1	8.2
Incr Delay (d2), s/veh	0.3	0.3	0.3	0.0	0.3	0.3	0.1	0.1	0.1	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.6	0.0	0.7	0.8	0.1	0.2	0.3	0.1	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.3	7.7	7.7	8.4	8.0	8.0	9.1	8.1	8.1	8.6	8.3	8.4
LnGrp LOS	B	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		484			458			191			246	
Approach Delay, s/veh		8.3			8.0			8.3			8.4	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.7		16.9		15.7		16.9				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		37.6		71.9		* 38		71.9				
Max Q Clear Time (g_c+I1), s		4.4		8.5		3.7		5.1				
Green Ext Time (p_c), s		1.0		3.0		1.5		2.9				

Intersection Summary												
HCM 6th Ctrl Delay			8.2									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	170	0	0	144
Future Vol, veh/h	0	2	170	0	0	144
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	25	79	79
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	215	0	0	182

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	307	109	0	0	216	0
Stage 1	216	-	-	-	-	-
Stage 2	91	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	666	930	-	-	1366	-
Stage 1	805	-	-	-	-	-
Stage 2	928	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	665	929	-	-	1365	-
Mov Cap-2 Maneuver	690	-	-	-	-	-
Stage 1	804	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	929	1365	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	-	-	8.9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

APPENDIX 3.3: EXISTING (2022) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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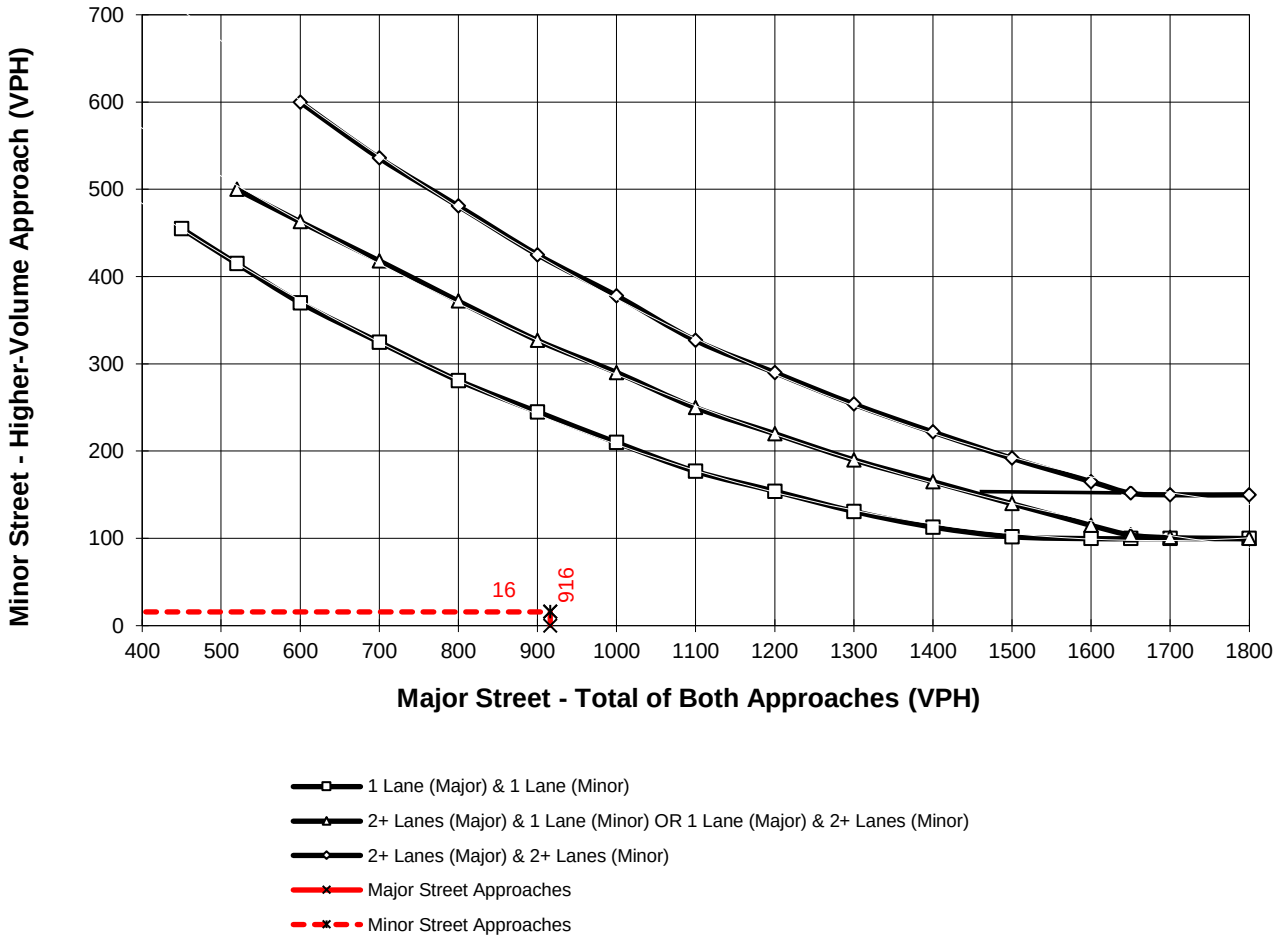
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **Existing (2022) Conditions - Weekday PM Peak Hour**

Major Street Name = **Mountain View Av.**
Total of Both Approaches (VPH) = **916**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Rialto Av.**
High Volume Approach (VPH) = **16**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

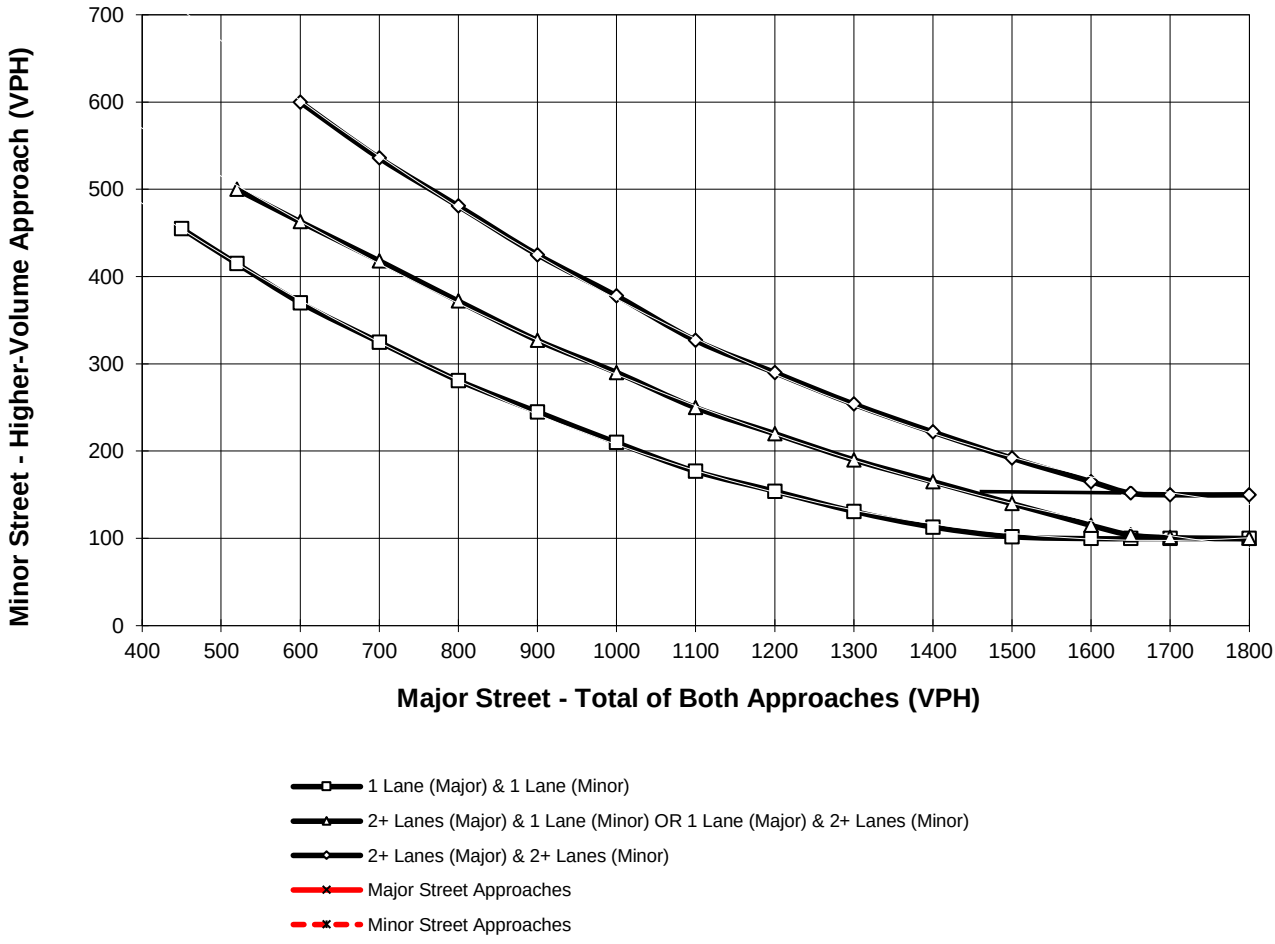
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **Existing (2022) Conditions - Weekday AM Peak Hour**

Major Street Name = **Sierra Wy.**
Total of Both Approaches (VPH) = **322**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Private Dwy.**
High Volume Approach (VPH) = **2**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

APPENDIX 4.1: CUMULATIVE DEVELOPMENT TRIP GENERATION

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Table Other TG

Cumulative Projects Trip Generation

Land Use	ITE Code	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual									
Automated Car Wash	948	TUN	N/A	N/A	N/A	38.75	38.75	77.5	775
General Office Building	710	TSF	1.338	0.182	1.52	0.245	1.195	1.44	10.84
Truck Trailer Yard/Storage	--	AC							
Passenger Cars			0.227	0.222	0.449	0.111	0.111	0.222	5.586
2-Axle Trucks			0.000	0.556	0.556	0.333	0.000	0.333	4.000
3-Axle Trucks			0.111	0.047	0.159	0.111	0.000	0.111	6.268
4+-Axle Trucks			0.111	0.000	0.111	0.000	0.333	0.333	8.717
Warehousing	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.120	0.030	0.150	0.034	0.116	0.150	1.110
2-Axle Trucks			0.002	0.001	0.003	0.003	0.002	0.005	0.100
3-Axle Trucks			0.002	0.002	0.004	0.003	0.003	0.006	0.124
4+-Axle Trucks			0.007	0.006	0.013	0.010	0.009	0.019	0.376
PCE									
Truck Trailer Yard/Storage	--	AC							
Passenger Cars			0.227	0.222	0.449	0.111	0.111	0.222	5.586
2-Axle Trucks			0.000	1.111	1.111	0.667	0.000	0.667	8.000
3-Axle Trucks			0.278	0.118	0.396	0.278	0.000	0.278	15.669
4+-Axle Trucks			0.333	0.000	0.333	0.000	1.000	1.000	26.152
Warehousing	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.120	0.030	0.150	0.034	0.116	0.150	1.110
2-Axle Trucks (PCE = 2.0)			0.004	0.003	0.007	0.006	0.004	0.010	0.200
3-Axle Trucks (PCE = 2.5)			0.005	0.005	0.010	0.008	0.008	0.016	0.311
4+-Axle Trucks (PCE = 3.0)			0.021	0.017	0.038	0.030	0.026	0.056	1.127

Table Other TG

Land Use	Quantity	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual									
SB1	7.97	AC	2	2	4	1	1	2	46
2-Axle Trucks			0	4	4	3	0	3	32
3-Axle Trucks			1	0	1	1	0	1	50
4+-Axle Trucks			3	0	3	0	8	8	210
SB2	1	TUN	0	0	0	39	39	78	776
SB3	1.93	AC	0	0	1	0	0	0	12
2-Axle Trucks			0	1	1	1	0	1	8
3-Axle Trucks			0	0	0	0	0	0	14
4+-Axle Trucks			0	0	0	0	1	1	18
SB4	30.805	TSF	41	6	47	8	37	44	334
SB6	104.850	TSF	13	3	16	4	12	16	118
2-Axle Trucks			0	0	0	0	0	1	12
3-Axle Trucks			0	0	0	0	0	1	14
4+-Axle Trucks			1	1	1	1	1	2	40
Total (Actual)			**61**	**18**	**79**	**57**	**99**	**156**	**1,684**
PCE									
SB1	7.97	AC	2	2	4	1	1	2	46
2-Axle Trucks			0	9	9	5	0	5	64
3-Axle Trucks			2	1	3	2	0	2	126
4+-Axle Trucks			3	0	3	0	8	8	210
SB2	1	TUN	0	0	0	39	39	78	776
SB3	1.93	AC	0	0	1	0	0	0	12
2-Axle Trucks			0	2	2	1	0	1	16
3-Axle Trucks			1	0	1	1	0	1	32
4+-Axle Trucks			1	0	1	0	2	2	52
SB4	30.805	TSF	41	6	47	8	37	44	334
SB6	104.850	TSF	13	3	16	4	12	16	118
2-Axle Trucks			0	0	1	1	0	1	22
3-Axle Trucks			1	1	1	1	1	2	34
4+-Axle Trucks			2	2	4	3	3	6	120
Total (PCE)			**65**	**26**	**91**	**65**	**103**	**168**	**1,962**

[1] TSF = thousand square feet

APPENDIX 4.2: POST PROCESSING WORKSHEETS

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Project:	S. Arrowhead Warehouse	Job #:	14660
Scenario:	Horizon Year (2040) Without Project	Analyst:	CP
		Date:	4/28/22

LOCATION: Arrowhead Av. & Rialto Av.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	48	48	1	1%	49	114	65	133%
	Through	136	133	-3	-2%	200	274	74	37%
	Right	42	59	18	42%	71	141	71	100%
	NB Total	225	240	16	7%	320	529	210	66%
SOUTH BOUND	Left	114	121	8	7%	73	61	-12	-16%
	Through	165	216	52	31%	212	227	16	7%
	Right	19	14	-5	-24%	33	32	-1	-3%
	SB Total	297	351	55	18%	317	320	3	1%
EAST BOUND	Left	42	34	-8	-18%	52	44	-8	-15%
	Through	364	427	64	17%	299	368	69	23%
	Right	98	141	44	45%	63	98	36	57%
	EB Total	503	602	100	20%	414	510	97	23%
WEST BOUND	Left	41	78	37	90%	67	86	20	29%
	Through	346	383	38	11%	409	483	75	18%
	Right	34	36	3	7%	32	22	-10	-30%
	WB Total	420	497	77	18%	507	591	85	17%
TOTAL ENTERING VOLUME		1,444	1,690	246.5	17%	1,557	1,950	394	25%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	351	320			
North Leg	Outbound	203	340			
North Leg	**TOTAL**	**554**	**660**	**22%**	**26%**	**2,553**
South Leg	Inbound	240	529			
South Leg	Outbound	435	411			
South Leg	**TOTAL**	**675**	**940**	**9%**	**13%**	**7,374**
East Leg	Inbound	497	591			
East Leg	Outbound	607	570			
East Leg	**TOTAL**	**1,104**	**1,161**	**15%**	**15%**	**7,570**
West Leg	Inbound	602	510			
West Leg	Outbound	445	629			
West Leg	**TOTAL**	**1,047**	**1,139**	**15%**	**16%**	**7,119**
OVERALL TOTAL		***3,380***	***3,900***	**14%**	***16%***	***24,616***

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Project:	S. Arrowhead Warehouse	Job #:	14660
Scenario:	Horizon Year (2040) Without Project	Analyst:	CP
		Date:	4/28/22

LOCATION: Mountain View Av. & Rialto
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	NB Total	0	0	0	#DIV/0!	0	0	0	#DIV/0!
SOUTH BOUND	Left	6	6	1	9%	2	2	1	33%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	12	14	3	22%	16	18	2	13%
	SB Total	17	20	3	18%	18	20	3	14%
EAST BOUND	Left	14	26	12	86%	11	23	12	109%
	Through	504	584	81	16%	426	548	122	29%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	EB Total	518	610	93	18%	437	571	134	31%
WEST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	410	486	77	19%	495	572	78	16%
	Right	2	4	2	100%	4	7	3	75%
	WB Total	412	490	79	19%	499	579	81	16%
TOTAL ENTERING VOLUME		946	1,120	174	18%	953	1,170	217	23%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	20	20			
North Leg	Outbound	30	30			
North Leg	**TOTAL**	**50**	**50**	**6%**	**6%**	**828**
South Leg	Inbound	0	0			
South Leg	Outbound	0	0			
South Leg	**TOTAL**	**0**	**0**	**#DIV/0!**	**#DIV/0!**	**-**
East Leg	Inbound	490	579			
East Leg	Outbound	590	550			
East Leg	**TOTAL**	**1,080**	**1,129**	**14%**	**15%**	**7,455**
West Leg	Inbound	610	571			
West Leg	Outbound	500	590			
West Leg	**TOTAL**	**1,110**	**1,161**	**15%**	**15%**	**7,570**
OVERALL TOTAL		***2,240***	***2,340***	**14%**	***15%***	***15,853***

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Project:	S. Arrowhead Warehouse	Job #:	14660
Scenario:	Horizon Year (2040) Without Project	Analyst:	CP
		Date:	4/28/22

LOCATION: Sierra Wy. & Rialto Av.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	20	19	-1	-3%	29	27	-2	-5%
	Through	104	100	-4	-3%	122	127	5	4%
	Right	28	32	4	14%	21	27	6	29%
	NB Total	151	151	0	0%	172	181	10	6%
SOUTH BOUND	Left	76	88	13	17%	24	32	9	36%
	Through	144	150	7	5%	120	125	6	5%
	Right	75	75	1	1%	94	92	-2	-2%
	SB Total	294	313	20	7%	237	249	12	5%
EAST BOUND	Left	53	53	0	0%	98	108	10	10%
	Through	426	510	85	20%	312	427	116	37%
	Right	30	32	3	8%	19	19	1	3%
	EB Total	508	595	87	17%	428	554	126	29%
WEST BOUND	Left	15	18	4	24%	6	8	2	33%
	Through	316	386	70	22%	378	469	91	24%
	Right	32	37	6	17%	21	29	8	38%
	WB Total	362	441	79	22%	405	506	101	25%
TOTAL ENTERING VOLUME		1,315	1,500	185.5	14%	1,242	1,490	249	20%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	313	249			
North Leg	Outbound	190	264			
North Leg	**TOTAL**	**503**	**513**	**96%**	**98%**	**525**
South Leg	Inbound	151	181			
South Leg	Outbound	200	152			
South Leg	**TOTAL**	**351**	**333**	**103%**	**98%**	**341**
East Leg	Inbound	441	506			
East Leg	Outbound	630	486			
East Leg	**TOTAL**	**1,071**	**992**	**14%**	**13%**	**7,719**
West Leg	Inbound	595	554			
West Leg	Outbound	480	588			
West Leg	**TOTAL**	**1,075**	**1,142**	**14%**	**15%**	**7,455**
OVERALL TOTAL		***3,000***	***2,980***	**19%**	***19%***	***16,040***

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APPENDIX 5.1: EA (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Volume Development - AM Peak Hour

1: Arrowhead Av. & Rialto Av.

PHF: 0.865 7:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	49	140	43	117	169	19	43	374	100	42	356	35	1,487

2: Arrowhead Av. & Driveway 1

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	0	231	0	0	312	0	0	0	0	0	0	0	543

3: Arrowhead Av. & Driveway 2

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	0	231	0	0	312	0	0	0	0	0	0	0	543

4: Mountain View Av./Driveway 3 & Rialto Av.

PHF: 0.901 7:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	0	0	0	6	0	12	14	519	0	0	422	2	974

5: Driveway 4 & Rialto Av.

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	0	0	0	0	0	0	0	523	0	0	422	0	946

6: Sierra Wy. & Rialto Av.

PHF: 0.820 7:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	20	107	29	78	148	77	55	438	30	15	325	32	1,354

7: Sierra Wy. & Driveway 5

PHF: 0.607 7:15 Count Date: 4/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	0	154	0	5	188	0	0	0	0	2	0	2	350

8: Sierra Wy. & Driveway 6

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	0	154	0	0	190	0	0	0	0	0	0	0	344

Volume Development - PM Peak Hour

1: Arrowhead Av. & Rialto Av.

	PHF:	0.924		4:30					Count Date:	2/24/2022		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	50	206	73	75	218	34	54	308	64	68	421	32	1,603

2: Arrowhead Av. & Driveway 1

	PHF:								Count Date:				
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	0	329	0	0	351	0	0	0	0	0	0	0	680

3: Arrowhead Av. & Driveway 2

	PHF:								Count Date:				
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	0	329	0	0	351	0	0	0	0	0	0	0	680

4: Mountain View Av./Driveway 3 & Rialto Av.

	PHF:	0.866		4:30					Count Date:	2/24/2022		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	0	0	0	2	0	16	11	439	0	0	509	4	982

5: Driveway 4 & Rialto Av.

	PHF:								Count Date:				
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	0	0	0	0	0	0	0	441	0	0	516	0	956

6: Sierra Wy. & Rialto Av.

	PHF:	0.866		4:30					Count Date:	2/24/2022		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	29	126	22	24	123	97	101	321	19	6	389	22	1,279

7: Sierra Wy. & Driveway 5

	PHF:	0.785		4:00					Count Date:	4/24/2022		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	0	175	0	0	148	0	0	0	0	0	0	2	325

8: Sierra Wy. & Driveway 6

	PHF:								Count Date:				
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
EA 2023 (PCE):	0	175	0	0	148	0	0	0	0	0	0	0	323

S. Arrowhead Warehouse TA (JN:14660)
EA (2023) Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arrowhead & Rialto

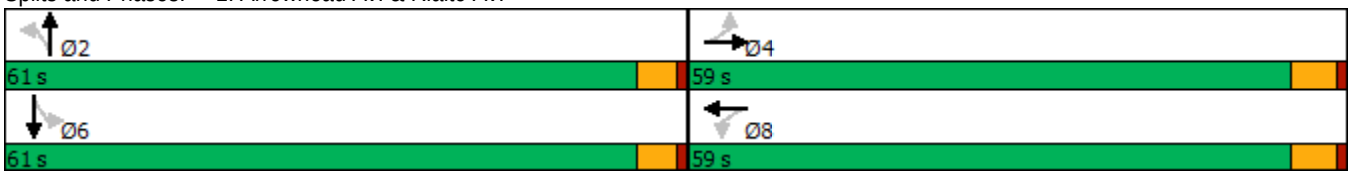
Cycle (sec):	100	Critical Vol./Cap.(X):	0.362
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	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 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	48	136	42	114	165	19	42	364	98	41	346	34
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	49	140	43	117	170	20	43	375	101	42	356	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	49	140	43	117	170	20	43	375	101	42	356	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	49	140	43	117	170	20	43	375	101	42	356	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	49	140	43	117	170	20	43	375	101	42	356	35
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.53	0.47	1.00	1.79	0.21	1.00	1.58	0.42	1.00	1.82	0.18
Final Sat.:	1805	2903	897	1805	3408	392	1805	2994	806	1805	3460	340
Capacity Analysis Module:												
Vol/Sat:	0.03	0.05	0.05	0.07	0.05	0.05	0.02	0.13	0.13	0.02	0.10	0.10
Crit Moves:		****			****			****			****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	43	374	42	356	49	140	117	169
Future Volume (vph)	43	374	42	356	49	140	117	169
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	59.0	59.0	59.0	59.0	61.0	61.0	61.0	61.0
Total Split (%)	49.2%	49.2%	49.2%	49.2%	50.8%	50.8%	50.8%	50.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	12.5	12.5	12.5	12.5	11.6	11.6	11.6	11.6
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.34	0.34	0.34	0.34
v/c Ratio	0.16	0.45	0.18	0.37	0.16	0.18	0.38	0.19
Control Delay	9.3	9.1	9.6	8.8	9.7	7.0	12.7	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	9.1	9.6	8.8	9.7	7.0	12.7	8.3
LOS	A	A	A	A	A	A	B	A
Approach Delay		9.1		8.9		7.6		10.0
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 34	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 55.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Arrowhead Av. & Rialto Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	374	100	42	356	35	49	140	43	117	169	19
Future Volume (veh/h)	43	374	100	42	356	35	49	140	43	117	169	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	50	435	97	49	414	33	57	163	30	136	197	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	464	961	213	426	1107	88	565	962	173	572	1088	66
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	905	2782	615	836	3206	254	1125	2894	522	1142	3273	198
Grp Volume(v), veh/h	50	266	266	49	220	227	57	95	98	136	102	107
Grp Sat Flow(s),veh/h/ln	905	1710	1687	836	1710	1750	1125	1710	1706	1142	1710	1761
Q Serve(g_s), s	1.3	3.6	3.7	1.5	2.9	2.9	1.1	1.2	1.2	2.9	1.3	1.3
Cycle Q Clear(g_c), s	4.3	3.6	3.7	5.1	2.9	2.9	2.4	1.2	1.2	4.1	1.3	1.3
Prop In Lane	1.00		0.36	1.00		0.15	1.00		0.31	1.00		0.11
Lane Grp Cap(c), veh/h	464	591	583	426	591	605	565	568	567	572	568	585
V/C Ratio(X)	0.11	0.45	0.46	0.12	0.37	0.38	0.10	0.17	0.17	0.24	0.18	0.18
Avail Cap(c_a), veh/h	1771	3063	3022	1634	3063	3135	2299	3205	3197	2332	3205	3301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.0	7.6	7.7	9.7	7.4	7.4	8.0	7.1	7.1	8.6	7.1	7.1
Incr Delay (d2), s/veh	0.1	0.5	0.6	0.1	0.4	0.4	0.1	0.1	0.1	0.2	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.8	0.2	0.7	0.7	0.2	0.3	0.3	0.5	0.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	8.2	8.2	9.8	7.8	7.8	8.1	7.2	7.3	8.8	7.3	7.3
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		582			496			250			345	
Approach Delay, s/veh		8.3			8.0			7.4			7.9	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		15.5		14.6		15.5				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		56.4		53.9		56.4		53.9				
Max Q Clear Time (g_c+I1), s		4.4		6.3		6.1		7.1				
Green Ext Time (p_c), s		1.5		3.8		1.9		3.1				

Intersection Summary												
HCM 6th Ctrl Delay			8.0									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	519	422	2	6	12
Future Vol, veh/h	14	519	422	2	6	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	577	469	2	7	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	471	0	-	0	791	236
Stage 1	-	-	-	-	470	-
Stage 2	-	-	-	-	321	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1101	-	-	-	331	772
Stage 1	-	-	-	-	601	-
Stage 2	-	-	-	-	714	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1101	-	-	-	326	772
Mov Cap-2 Maneuver	-	-	-	-	442	-
Stage 1	-	-	-	-	592	-
Stage 2	-	-	-	-	714	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1101	-	-	-	442	772
HCM Lane V/C Ratio	0.014	-	-	-	0.015	0.017
HCM Control Delay (s)	8.3	-	-	-	13.3	9.7
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1

S. Arrowhead Warehouse TA (JN:14660)
EA (2023) Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Sierra & Rialto

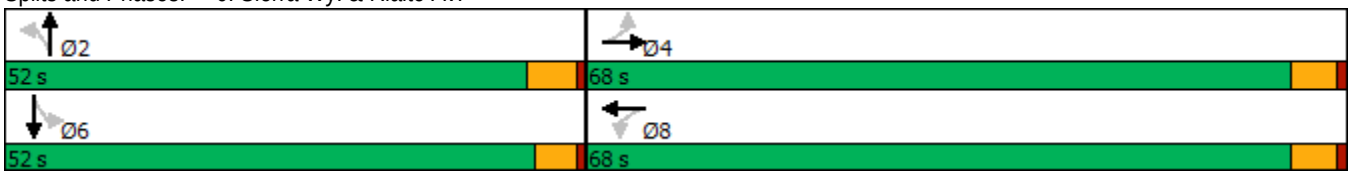
Cycle (sec):	100	Critical Vol./Cap.(X):	0.312
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

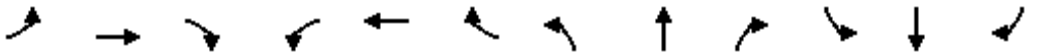
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	20	104	29	76	144	75	53	426	30	15	316	32
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	21	107	30	78	148	77	55	439	31	15	325	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	21	107	30	78	148	77	55	439	31	15	325	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	107	30	78	148	77	55	439	31	15	325	33
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	21	107	30	78	148	77	55	439	31	15	325	33
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.56	0.44	1.00	1.32	0.68	1.00	1.87	0.13	1.00	1.82	0.18
Final Sat.:	1805	2971	829	1805	2499	1301	1805	3550	250	1805	3451	349
Capacity Analysis Module:												
Vol/Sat:	0.01	0.04	0.04	0.04	0.06	0.06	0.03	0.12	0.12	0.01	0.09	0.09
Crit Moves:		****		****				****		****		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	55	438	15	325	20	107	78	148
Future Volume (vph)	55	438	15	325	20	107	78	148
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	68.0	68.0	68.0	68.0	52.0	52.0	52.0	52.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	12.4	12.4	12.4	12.4	10.4	10.4	11.3	11.3
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.31	0.31	0.34	0.34
v/c Ratio	0.21	0.45	0.07	0.34	0.08	0.16	0.26	0.24
Control Delay	9.0	9.0	7.3	8.1	10.2	8.0	11.3	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	9.0	7.3	8.1	10.2	8.0	11.3	6.5
LOS	A	A	A	A	B	A	B	A
Approach Delay		9.0		8.1		8.3		7.7
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 33.5	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Sierra Wy. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	438	30	15	325	32	20	107	29	78	148	77
Future Volume (veh/h)	55	438	30	15	325	32	20	107	29	78	148	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	67	534	32	18	396	26	24	130	25	95	180	70
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	465	1134	68	406	1127	74	514	918	173	568	776	290
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	926	3278	196	810	3258	213	1084	2872	540	1181	2426	907
Grp Volume(v), veh/h	67	278	288	18	207	215	24	76	79	95	125	125
Grp Sat Flow(s),veh/h/ln	926	1710	1764	810	1710	1762	1084	1710	1702	1181	1710	1623
Q Serve(g_s), s	1.8	4.0	4.0	0.6	2.8	2.9	0.5	1.0	1.0	2.0	1.7	1.8
Cycle Q Clear(g_c), s	4.7	4.0	4.0	4.6	2.8	2.9	2.3	1.0	1.0	3.0	1.7	1.8
Prop In Lane	1.00		0.11	1.00		0.12	1.00		0.32	1.00		0.56
Lane Grp Cap(c), veh/h	465	591	610	406	591	609	514	547	544	568	547	519
V/C Ratio(X)	0.14	0.47	0.47	0.04	0.35	0.35	0.05	0.14	0.14	0.17	0.23	0.24
Avail Cap(c_a), veh/h	2000	3425	3534	1749	3425	3529	1776	2538	2526	1973	2581	2450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	8.0	8.0	9.8	7.6	7.7	8.7	7.6	7.6	8.7	7.8	7.9
Incr Delay (d2), s/veh	0.1	0.6	0.6	0.0	0.4	0.3	0.0	0.1	0.1	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	1.0	0.1	0.7	0.7	0.1	0.2	0.2	0.4	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	8.6	8.6	9.9	8.0	8.0	8.8	7.7	7.7	8.8	8.0	8.1
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		633			440			179			345	
Approach Delay, s/veh		8.7			8.1			7.9			8.3	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		16.0		15.4		16.0				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		46.6		62.9		* 47		62.9				
Max Q Clear Time (g_c+I1), s		4.3		6.7		5.0		6.6				
Green Ext Time (p_c), s		0.9		4.1		2.1		2.8				

Intersection Summary												
HCM 6th Ctrl Delay			8.3									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	154	0	5	188
Future Vol, veh/h	2	2	154	0	5	188
Conflicting Peds, #/hr	0	0	0	3	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	3	252	0	8	308

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	425	129	0	0	255	0
Stage 1	255	-	-	-	-	-
Stage 2	170	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	563	903	-	-	1322	-
Stage 1	770	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	558	900	-	-	1318	-
Mov Cap-2 Maneuver	620	-	-	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	844	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	734	1318	-
HCM Lane V/C Ratio	-	-	0.009	0.006	-
HCM Control Delay (s)	-	-	9.9	7.7	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

S. Arrowhead Warehouse TA (JN:14660)
EA (2023) Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arrowhead & Rialto

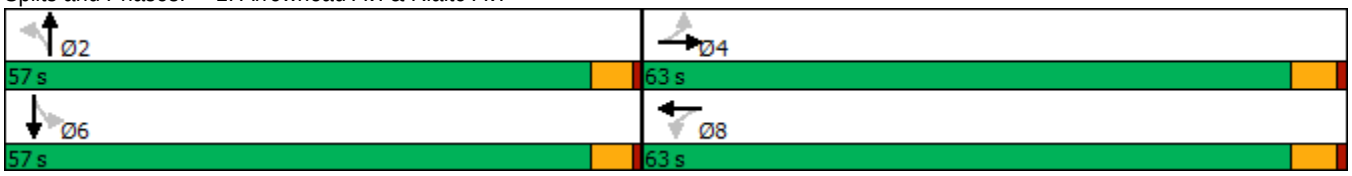
Cycle (sec):	100	Critical Vol./Cap.(X):	0.364
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	49	200	71	73	212	33	52	299	63	67	409	32
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	50	206	73	75	218	34	54	308	65	69	421	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	206	73	75	218	34	54	308	65	69	421	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	206	73	75	218	34	54	308	65	69	421	33
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:	50	206	73	75	218	34	54	308	65	69	421	33
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.48	0.52	1.00	1.73	0.27	1.00	1.65	0.35	1.00	1.85	0.15
Final Sat.:	1805	2804	996	1805	3288	512	1805	3139	661	1805	3524	276
Capacity Analysis Module:												
Vol/Sat:	0.03	0.07	0.07	0.04	0.07	0.07	0.03	0.10	0.10	0.04	0.12	0.12
Crit Moves:		****			****			****			****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	54	308	68	421	50	206	75	218
Future Volume (vph)	54	308	68	421	50	206	75	218
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	11.4	11.4	11.4	11.4	10.6	10.6	10.6	10.6
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.33	0.33	0.33	0.33
v/c Ratio	0.21	0.34	0.24	0.41	0.16	0.27	0.26	0.24
Control Delay	9.2	7.8	9.5	8.7	9.5	7.4	10.7	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	7.8	9.5	8.7	9.5	7.4	10.7	8.1
LOS	A	A	A	A	A	A	B	A
Approach Delay		8.0		8.8		7.7		8.7
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 31.7	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 8.3	Intersection LOS: A
Intersection Capacity Utilization 55.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Arrowhead Av. & Rialto Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	308	64	68	421	32	50	206	73	75	218	34
Future Volume (veh/h)	54	308	64	68	421	32	50	206	73	75	218	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	59	335	63	74	458	31	54	224	67	82	237	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	445	990	184	482	1120	76	535	868	253	519	1028	120
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	869	2871	533	945	3250	219	1069	2603	758	1043	3085	361
Grp Volume(v), veh/h	59	198	200	74	240	249	54	145	146	82	130	135
Grp Sat Flow(s),veh/h/ln	869	1710	1694	945	1710	1759	1069	1710	1651	1043	1710	1735
Q Serve(g_s), s	1.7	2.6	2.6	1.9	3.2	3.2	1.2	1.9	1.9	1.9	1.7	1.7
Cycle Q Clear(g_c), s	4.9	2.6	2.6	4.5	3.2	3.2	2.8	1.9	1.9	3.8	1.7	1.7
Prop In Lane	1.00		0.31	1.00		0.12	1.00		0.46	1.00		0.21
Lane Grp Cap(c), veh/h	445	589	584	482	589	606	535	570	550	519	570	578
V/C Ratio(X)	0.13	0.34	0.34	0.15	0.41	0.41	0.10	0.25	0.27	0.16	0.23	0.23
Avail Cap(c_a), veh/h	1815	3287	3257	1973	3287	3382	2039	2975	2873	1987	2975	3018
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	7.3	7.3	9.0	7.5	7.5	8.3	7.3	7.3	8.7	7.2	7.3
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.1	0.5	0.4	0.1	0.2	0.3	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.6	0.3	0.7	0.8	0.2	0.5	0.5	0.3	0.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	7.6	7.7	9.2	8.0	8.0	8.4	7.5	7.6	8.9	7.4	7.5
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		457			563			345			347	
Approach Delay, s/veh		7.9			8.1			7.7			7.8	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		15.5		14.6		15.5				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		52.4		57.9		52.4		57.9				
Max Q Clear Time (g_c+I1), s		4.8		6.9		5.8		6.5				
Green Ext Time (p_c), s		2.2		2.9		2.2		3.5				

Intersection Summary												
HCM 6th Ctrl Delay			7.9									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	439	509	4	2	16
Future Vol, veh/h	11	439	509	4	2	16
Conflicting Peds, #/hr	0	0	0	1	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	505	585	5	2	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	591	0	-	0	868	298
Stage 1	-	-	-	-	589	-
Stage 2	-	-	-	-	279	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	995	-	-	-	296	704
Stage 1	-	-	-	-	523	-
Stage 2	-	-	-	-	749	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	994	-	-	-	292	702
Mov Cap-2 Maneuver	-	-	-	-	404	-
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	748	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	994	-	-	-	404	702
HCM Lane V/C Ratio	0.013	-	-	-	0.006	0.026
HCM Control Delay (s)	8.7	-	-	-	14	10.3
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1

S. Arrowhead Warehouse TA (JN:14660)
EA (2023) Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Sierra & Rialto

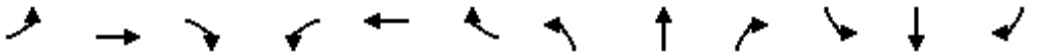
Cycle (sec):	100	Critical Vol./Cap.(X):	0.339
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	26	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	29	122	21	24	120	94	98	312	19	6	378	21
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	30	126	22	25	124	97	101	321	20	6	389	22
User Adj:	1.00	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:	30	126	22	25	124	97	101	321	20	6	389	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	126	22	25	124	97	101	321	20	6	389	22
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:	30	126	22	25	124	97	101	321	20	6	389	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.71	0.29	1.00	1.12	0.88	1.00	1.89	0.11	1.00	1.89	0.11
Final Sat.:	1805	3242	558	1805	2131	1669	1805	3582	218	1805	3600	200
Capacity Analysis Module:												
Vol/Sat:	0.02	0.04	0.04	0.01	0.06	0.06	0.06	0.09	0.09	0.00	0.11	0.11
Crit Moves:	****				****		****				****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	101	321	6	389	29	126	24	123
Future Volume (vph)	101	321	6	389	29	126	24	123
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	77.0	77.0	77.0	77.0	43.0	43.0	43.0	43.0
Total Split (%)	64.2%	64.2%	64.2%	64.2%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	11.4	11.4	11.4	11.4	10.0	10.0	10.8	10.8
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.31	0.31	0.34	0.34
v/c Ratio	0.40	0.32	0.02	0.39	0.10	0.16	0.08	0.22
Control Delay	12.2	8.0	6.5	8.5	9.8	8.2	8.8	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	8.0	6.5	8.5	9.8	8.2	8.8	5.5
LOS	B	A	A	A	A	A	A	A
Approach Delay		8.9		8.4		8.5		5.8
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 32	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 55.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Sierra Wy. & Rialto Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	321	19	6	389	22	29	126	22	24	123	97
Future Volume (veh/h)	101	321	19	6	389	22	29	126	22	24	123	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	116	369	12	7	447	18	33	145	19	28	141	83
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	460	1247	40	498	1236	50	507	953	123	543	663	368
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	889	3380	110	959	3351	135	1108	3044	393	1168	2119	1176
Grp Volume(v), veh/h	116	186	195	7	228	237	33	80	84	28	112	112
Grp Sat Flow(s),veh/h/ln	889	1710	1780	959	1710	1775	1108	1710	1727	1168	1710	1584
Q Serve(g_s), s	3.6	2.5	2.6	0.2	3.2	3.2	0.7	1.1	1.2	0.6	1.6	1.7
Cycle Q Clear(g_c), s	6.8	2.5	2.6	2.7	3.2	3.2	2.5	1.1	1.2	1.7	1.6	1.7
Prop In Lane	1.00		0.06	1.00		0.08	1.00		0.23	1.00		0.74
Lane Grp Cap(c), veh/h	460	631	657	498	631	655	507	535	541	543	535	496
V/C Ratio(X)	0.25	0.30	0.30	0.01	0.36	0.36	0.07	0.15	0.15	0.05	0.21	0.23
Avail Cap(c_a), veh/h	2068	3725	3877	2233	3725	3867	1422	1948	1967	1536	1989	1843
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.1	7.4	7.4	8.3	7.6	7.6	9.3	8.2	8.2	8.8	8.3	8.4
Incr Delay (d2), s/veh	0.3	0.3	0.2	0.0	0.3	0.3	0.1	0.1	0.1	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.6	0.0	0.8	0.8	0.1	0.3	0.3	0.1	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.4	7.6	7.6	8.4	7.9	7.9	9.3	8.3	8.3	8.9	8.5	8.6
LnGrp LOS	B	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		497			472			197			252	
Approach Delay, s/veh		8.3			7.9			8.5			8.6	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.7		17.3		15.7		17.3				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		37.6		71.9		* 38		71.9				
Max Q Clear Time (g_c+I1), s		4.5		8.8		3.7		5.2				
Green Ext Time (p_c), s		1.0		3.1		1.6		3.0				

Intersection Summary		
HCM 6th Ctrl Delay	8.2	
HCM 6th LOS	A	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	175	0	0	148
Future Vol, veh/h	0	2	175	0	0	148
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	25	79	79
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	222	0	0	187

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	317	112	0	0	223	0
Stage 1	223	-	-	-	-	-
Stage 2	94	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	657	926	-	-	1358	-
Stage 1	799	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	656	925	-	-	1357	-
Mov Cap-2 Maneuver	684	-	-	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	925	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	925	1357	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	-	-	8.9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

APPENDIX 5.2: EAP (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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S. Arrowhead Warehouse TA (JN:14660)
EAP (2023) Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Arrowhead & Rialto

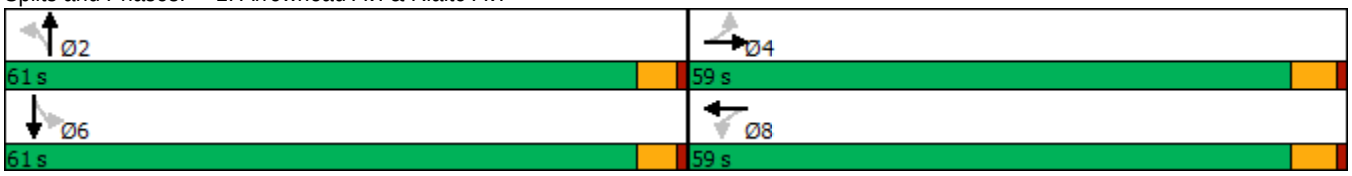
Cycle (sec):	100	Critical Vol./Cap.(X):	0.371
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

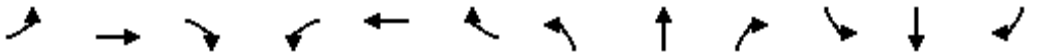
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0 1	1	0	1	0 1	1	0	1	0 1	1	0	1	0 1	1	0
Volume Module:																
Base Vol:	48	136	42		114	165	19		42	364	98		41	346	34	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	49	140	43		117	170	20		43	375	101		42	356	35	
Added Vol:	0	2	6		3	9	0		0	9	0		5	2	1	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	49	142	49		120	179	20		43	384	101		47	358	36	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	49	142	49		120	179	20		43	384	101		47	358	36	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	49	142	49		120	179	20		43	384	101		47	358	36	
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:	49	142	49		120	179	20		43	384	101		47	358	36	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00	
Lanes:	1.00	1.49	0.51		1.00	1.80	0.20		1.00	1.58	0.42		1.00	1.82	0.18	
Final Sat.:	1805	2822	978		1805	3425	375		1805	3009	791		1805	3453	347	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.05	0.05		0.07	0.05	0.05		0.02	0.13	0.13		0.03	0.10	0.10	
Crit Moves:		****				****					****			****		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	43	383	47	358	49	142	120	178
Future Volume (vph)	43	383	47	358	49	142	120	178
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	59.0	59.0	59.0	59.0	61.0	61.0	61.0	61.0
Total Split (%)	49.2%	49.2%	49.2%	49.2%	50.8%	50.8%	50.8%	50.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	12.7	12.7	12.7	12.7	12.0	12.0	12.0	12.0
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.35	0.35	0.35	0.35
v/c Ratio	0.16	0.45	0.20	0.37	0.16	0.19	0.39	0.19
Control Delay	9.5	9.4	10.2	9.0	9.7	6.8	12.9	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	9.4	10.2	9.0	9.7	6.8	12.9	8.3
LOS	A	A	B	A	A	A	B	A
Approach Delay		9.4		9.2		7.4		10.1
Approach LOS		A		A		A		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 34.6	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 9.2	Intersection LOS: A
Intersection Capacity Utilization 55.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Arrowhead Av. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	383	100	47	358	36	49	142	49	120	178	19
Future Volume (veh/h)	43	383	100	47	358	36	49	142	49	120	178	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	50	445	97	55	416	34	57	165	37	140	207	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	467	987	214	426	1130	92	552	916	201	559	1078	62
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	902	2795	605	828	3199	260	1115	2789	611	1132	3284	189
Grp Volume(v), veh/h	50	271	271	55	222	228	57	100	102	140	107	112
Grp Sat Flow(s),veh/h/ln	902	1710	1689	828	1710	1749	1115	1710	1690	1132	1710	1763
Q Serve(g_s), s	1.3	3.7	3.8	1.7	2.9	3.0	1.2	1.3	1.3	3.1	1.4	1.4
Cycle Q Clear(g_c), s	4.3	3.7	3.8	5.4	2.9	3.0	2.6	1.3	1.3	4.4	1.4	1.4
Prop In Lane	1.00		0.36	1.00		0.15	1.00		0.36	1.00		0.11
Lane Grp Cap(c), veh/h	467	604	597	426	604	618	552	561	555	559	561	579
V/C Ratio(X)	0.11	0.45	0.45	0.13	0.37	0.37	0.10	0.18	0.18	0.25	0.19	0.19
Avail Cap(c_a), veh/h	1746	3026	2990	1600	3026	3096	2250	3167	3130	2284	3167	3265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.9	7.6	7.6	9.7	7.3	7.3	8.3	7.3	7.3	8.9	7.3	7.3
Incr Delay (d2), s/veh	0.1	0.5	0.5	0.1	0.4	0.4	0.1	0.1	0.2	0.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.9	0.2	0.7	0.7	0.2	0.3	0.4	0.6	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.0	8.1	8.1	9.8	7.7	7.7	8.3	7.4	7.5	9.1	7.5	7.5
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		592			505			259			359	
Approach Delay, s/veh		8.2			7.9			7.7			8.1	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		15.9		14.6		15.9				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		56.4		53.9		56.4		53.9				
Max Q Clear Time (g_c+I1), s		4.6		6.3		6.4		7.4				
Green Ext Time (p_c), s		1.6		3.9		2.0		3.2				

Intersection Summary												
HCM 6th Ctrl Delay			8.0									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	2	237	8	9	317
Future Vol, veh/h	4	2	237	8	9	317
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	2	258	9	10	345

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	456	134	0	0	267	0
Stage 1	263	-	-	-	-	-
Stage 2	193	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	538	897	-	-	1308	-
Stage 1	763	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	534	897	-	-	1308	-
Mov Cap-2 Maneuver	604	-	-	-	-	-
Stage 1	763	-	-	-	-	-
Stage 2	820	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	678	1308	-
HCM Lane V/C Ratio	-	-	0.01	0.007	-
HCM Control Delay (s)	-	-	10.4	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	531	5	3	427	2	3	2	1	6	9	12
Future Vol, veh/h	14	531	5	3	427	2	3	2	1	6	9	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	577	5	3	464	2	3	2	1	7	10	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	466	0	0	582	0	0	853	1082	291	791	1083	233
Stage 1	-	-	-	-	-	-	610	610	-	471	471	-
Stage 2	-	-	-	-	-	-	243	472	-	320	612	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1106	-	-	1002	-	-	256	219	712	284	219	775
Stage 1	-	-	-	-	-	-	453	488	-	548	563	-
Stage 2	-	-	-	-	-	-	745	562	-	672	487	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1106	-	-	1002	-	-	243	215	712	279	215	775
Mov Cap-2 Maneuver	-	-	-	-	-	-	351	331	-	395	332	-
Stage 1	-	-	-	-	-	-	447	481	-	540	561	-
Stage 2	-	-	-	-	-	-	718	560	-	659	480	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	14.8	13
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	375	1106	-	-	1002	-	-	355	775
HCM Lane V/C Ratio	0.017	0.014	-	-	0.003	-	-	0.046	0.017
HCM Control Delay (s)	14.8	8.3	-	-	8.6	-	-	15.6	9.7
HCM Lane LOS	B	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	529	7	6	426	5	2
Future Vol, veh/h	529	7	6	426	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	575	8	7	463	5	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	583	0	825	292
Stage 1	-	-	-	-	579	-
Stage 2	-	-	-	-	246	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1001	-	315	710
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	778	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1001	-	313	710
Mov Cap-2 Maneuver	-	-	-	-	420	-
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	773	-

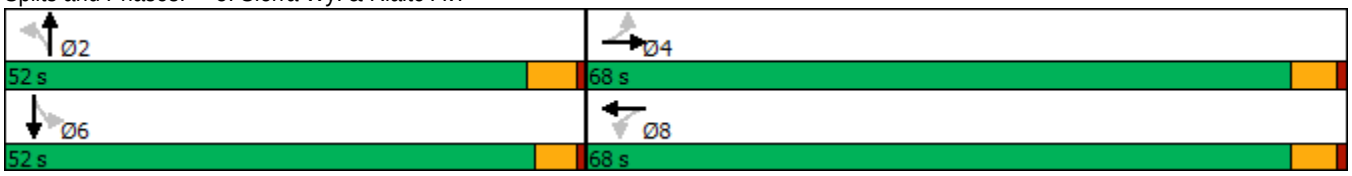
Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	12.7
HCM LOS			B

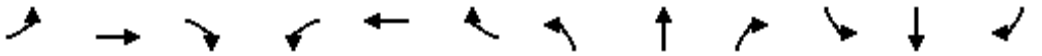
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	475	-	-	1001	-
HCM Lane V/C Ratio	0.016	-	-	0.007	-
HCM Control Delay (s)	12.7	-	-	8.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	55	440	15	334	21	109	78	157
Future Volume (vph)	55	440	15	334	21	109	78	157
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	68.0	68.0	68.0	68.0	52.0	52.0	52.0	52.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	12.5	12.5	12.5	12.5	10.5	10.5	11.3	11.3
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.31	0.31	0.34	0.34
v/c Ratio	0.21	0.46	0.07	0.35	0.09	0.16	0.26	0.25
Control Delay	9.0	9.1	7.3	8.2	10.2	8.2	11.3	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	9.1	7.3	8.2	10.2	8.2	11.3	6.9
LOS	A	A	A	A	B	A	B	A
Approach Delay		9.1		8.1		8.4		8.0
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 33.6	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 8.5	Intersection LOS: A
Intersection Capacity Utilization 56.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Sierra Wy. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	440	35	15	334	32	21	109	29	78	157	77
Future Volume (veh/h)	55	440	35	15	334	32	21	109	29	78	157	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	67	537	38	18	407	26	26	133	25	95	191	70
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	463	1134	80	405	1142	73	505	916	168	562	784	277
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	917	3240	229	803	3265	208	1073	2884	530	1178	2467	872
Grp Volume(v), veh/h	67	283	292	18	213	220	26	78	80	95	130	131
Grp Sat Flow(s),veh/h/ln	917	1710	1758	803	1710	1763	1073	1710	1704	1178	1710	1630
Q Serve(g_s), s	1.9	4.1	4.1	0.6	2.9	2.9	0.6	1.0	1.1	2.0	1.8	1.9
Cycle Q Clear(g_c), s	4.8	4.1	4.1	4.7	2.9	2.9	2.5	1.0	1.1	3.1	1.8	1.9
Prop In Lane	1.00		0.13	1.00		0.12	1.00		0.31	1.00		0.54
Lane Grp Cap(c), veh/h	463	598	615	405	598	617	505	543	541	562	543	518
V/C Ratio(X)	0.14	0.47	0.47	0.04	0.36	0.36	0.05	0.14	0.15	0.17	0.24	0.25
Avail Cap(c_a), veh/h	1967	3404	3501	1723	3404	3509	1747	2522	2513	1955	2565	2445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	8.0	8.0	9.8	7.6	7.6	8.9	7.7	7.7	8.8	8.0	8.0
Incr Delay (d2), s/veh	0.1	0.6	0.6	0.0	0.4	0.4	0.0	0.1	0.1	0.1	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	1.0	0.1	0.7	0.7	0.1	0.2	0.2	0.4	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.6	8.6	8.6	9.9	8.0	8.0	8.9	7.8	7.8	8.9	8.2	8.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		642			451			184			356	
Approach Delay, s/veh		8.7			8.1			8.0			8.4	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		16.2		15.4		16.2				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		46.6		62.9		* 47		62.9				
Max Q Clear Time (g_c+I1), s		4.5		6.8		5.1		6.7				
Green Ext Time (p_c), s		1.0		4.2		2.1		2.8				

Intersection Summary												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	0	1	2	0	2	6	154	0	5	193	9
Future Vol, veh/h	3	0	1	2	0	2	6	154	0	5	193	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	0	1	2	0	2	7	167	0	5	210	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	323	409	110	299	414	87	220	0	0	170	0	0
Stage 1	225	225	-	184	184	-	-	-	-	-	-	-
Stage 2	98	184	-	115	230	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	612	535	929	636	532	961	1361	-	-	1420	-	-
Stage 1	763	721	-	806	751	-	-	-	-	-	-	-
Stage 2	903	751	-	883	718	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	606	529	929	629	526	958	1361	-	-	1416	-	-
Mov Cap-2 Maneuver	644	574	-	666	571	-	-	-	-	-	-	-
Stage 1	759	718	-	800	745	-	-	-	-	-	-	-
Stage 2	896	745	-	879	715	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	9.6	0.3	0.2
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1361	-	-	697	786	1416	-	-
HCM Lane V/C Ratio	0.005	-	-	0.006	0.006	0.004	-	-
HCM Control Delay (s)	7.7	-	-	10.2	9.6	7.6	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	0	160	191	5
Future Vol, veh/h	0	1	0	160	191	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	0	174	208	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	107	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	933	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	933	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	933	-	-
HCM Lane V/C Ratio	-	0.001	-	-
HCM Control Delay (s)	-	8.9	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

S. Arrowhead Warehouse TA (JN:14660)
EAP (2023) Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Sierra & Rialto

Cycle (sec):	100	Critical Vol./Cap.(X):	0.314
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	20	104	29	76	144	75	53	426	30	15	316	32
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	21	107	30	78	148	77	55	439	31	15	325	33
Added Vol:	1	2	0	0	9	0	0	2	5	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	22	109	30	78	157	77	55	441	36	15	334	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	22	109	30	78	157	77	55	441	36	15	334	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	22	109	30	78	157	77	55	441	36	15	334	33
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:	22	109	30	78	157	77	55	441	36	15	334	33
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.57	0.43	1.00	1.34	0.66	1.00	1.85	0.15	1.00	1.82	0.18
Final Sat.:	1805	2983	817	1805	2549	1251	1805	3514	286	1805	3459	341
Capacity Analysis Module:												
Vol/Sat:	0.01	0.04	0.04	0.04	0.06	0.06	0.03	0.13	0.13	0.01	0.10	0.10
Crit Moves:		****		****				****		****		

S. Arrowhead Warehouse TA (JN:14660)
EAP (2023) Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Arrowhead & Rialto

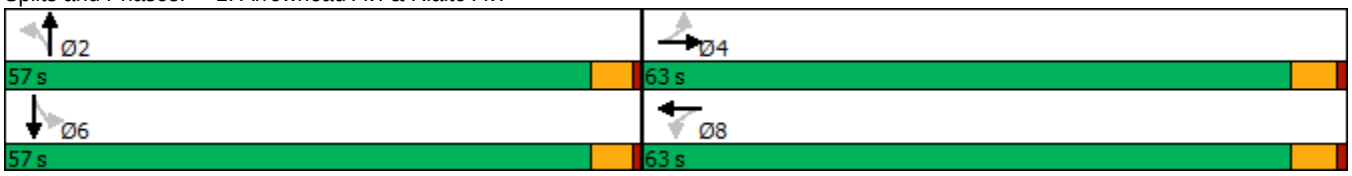
Cycle (sec):	100	Critical Vol./Cap.(X):	0.371
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

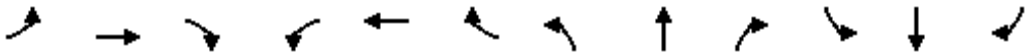
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	49	200	71	73	212	33	52	299	63	67	409	32
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	50	206	73	75	218	34	54	308	65	69	421	33
Added Vol:	0	8	6	1	3	0	0	3	0	8	8	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	214	79	76	221	34	54	311	65	77	429	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	214	79	76	221	34	54	311	65	77	429	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	214	79	76	221	34	54	311	65	77	429	36
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:	50	214	79	76	221	34	54	311	65	77	429	36
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.46	0.54	1.00	1.73	0.27	1.00	1.65	0.35	1.00	1.85	0.15
Final Sat.:	1805	2774	1026	1805	3294	506	1805	3144	656	1805	3506	294
Capacity Analysis Module:												
Vol/Sat:	0.03	0.08	0.08	0.04	0.07	0.07	0.03	0.10	0.10	0.04	0.12	0.12
Crit Moves:		****			****			****			****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	54	311	76	429	50	214	76	221
Future Volume (vph)	54	311	76	429	50	214	76	221
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	11.5	11.5	11.5	11.5	10.6	10.6	10.6	10.6
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.33	0.33	0.33	0.33
v/c Ratio	0.21	0.34	0.27	0.41	0.16	0.28	0.26	0.25
Control Delay	9.3	7.8	9.9	8.7	9.6	7.5	10.9	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	7.8	9.9	8.7	9.6	7.5	10.9	8.2
LOS	A	A	A	A	A	A	B	A
Approach Delay		8.0		8.9		7.8		8.8
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 31.9	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Arrowhead Av. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	311	64	76	429	35	50	214	79	76	221	34
Future Volume (veh/h)	54	311	64	76	429	35	50	214	79	76	221	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	59	338	63	83	466	34	54	233	74	83	240	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	446	1017	187	487	1143	83	525	842	260	503	1015	117
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	860	2876	530	943	3231	235	1066	2563	792	1028	3089	357
Grp Volume(v), veh/h	59	199	202	83	246	254	54	153	154	83	132	136
Grp Sat Flow(s),veh/h/ln	860	1710	1695	943	1710	1757	1066	1710	1645	1028	1710	1736
Q Serve(g_s), s	1.7	2.6	2.7	2.2	3.3	3.3	1.2	2.0	2.1	2.0	1.7	1.7
Cycle Q Clear(g_c), s	5.0	2.6	2.7	4.8	3.3	3.3	2.9	2.0	2.1	4.1	1.7	1.7
Prop In Lane	1.00		0.31	1.00		0.13	1.00		0.48	1.00		0.21
Lane Grp Cap(c), veh/h	446	605	599	487	605	621	525	562	541	503	562	571
V/C Ratio(X)	0.13	0.33	0.34	0.17	0.41	0.41	0.10	0.27	0.28	0.17	0.23	0.24
Avail Cap(c_a), veh/h	1772	3242	3214	1941	3242	3330	2004	2934	2822	1929	2934	2978
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	7.2	7.2	9.0	7.5	7.5	8.5	7.6	7.6	9.1	7.5	7.5
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.2	0.4	0.4	0.1	0.3	0.3	0.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.6	0.3	0.8	0.8	0.2	0.6	0.6	0.3	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	7.5	7.6	9.2	7.9	7.9	8.6	7.8	7.9	9.3	7.7	7.7
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		460			583			361			351	
Approach Delay, s/veh		7.8			8.1			8.0			8.0	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		15.9		14.6		15.9				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		52.4		57.9		52.4		57.9				
Max Q Clear Time (g_c+I1), s		4.9		7.0		6.1		6.8				
Green Ext Time (p_c), s		2.4		2.9		2.2		3.7				

Intersection Summary												
HCM 6th Ctrl Delay			8.0									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	8	335	5	3	359
Future Vol, veh/h	9	8	335	5	3	359
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	10	9	364	5	3	390

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	568	185	0	0	369	0
Stage 1	367	-	-	-	-	-
Stage 2	201	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	458	832	-	-	1201	-
Stage 1	677	-	-	-	-	-
Stage 2	819	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	457	832	-	-	1201	-
Mov Cap-2 Maneuver	542	-	-	-	-	-
Stage 1	677	-	-	-	-	-
Stage 2	817	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	648	1201	-
HCM Lane V/C Ratio	-	-	0.029	0.003	-
HCM Control Delay (s)	-	-	10.7	8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	446	3	1	522	4	5	8	3	2	3	16
Future Vol, veh/h	11	446	3	1	522	4	5	8	3	2	3	16
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	485	3	1	567	4	5	9	3	2	3	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	572	0	0	488	0	0	800	1085	244	843	1084	289
Stage 1	-	-	-	-	-	-	511	511	-	572	572	-
Stage 2	-	-	-	-	-	-	289	574	-	271	512	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1011	-	-	1086	-	-	280	218	763	260	219	714
Stage 1	-	-	-	-	-	-	519	540	-	477	508	-
Stage 2	-	-	-	-	-	-	700	506	-	717	540	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1010	-	-	1086	-	-	268	215	763	251	216	712
Mov Cap-2 Maneuver	-	-	-	-	-	-	383	332	-	363	336	-
Stage 1	-	-	-	-	-	-	513	534	-	471	507	-
Stage 2	-	-	-	-	-	-	677	505	-	694	534	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	14.7	11.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	389	1010	-	-	1086	-	-	346	712
HCM Lane V/C Ratio	0.045	0.012	-	-	0.001	-	-	0.016	0.024
HCM Control Delay (s)	14.7	8.6	-	-	8.3	-	-	15.6	10.2
HCM Lane LOS	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	447	4	2	520	10	5
Future Vol, veh/h	447	4	2	520	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	486	4	2	565	11	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	490	0	775	245
Stage 1	-	-	-	-	488	-
Stage 2	-	-	-	-	287	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1084	-	339	762
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	742	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1084	-	338	762
Mov Cap-2 Maneuver	-	-	-	-	449	-
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	741	-

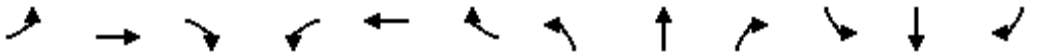
Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	520	-	-	1084	-
HCM Lane V/C Ratio	0.031	-	-	0.002	-
HCM Control Delay (s)	12.1	-	-	8.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	101	329	6	392	32	134	24	126
Future Volume (vph)	101	329	6	392	32	134	24	126
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	77.0	77.0	77.0	77.0	43.0	43.0	43.0	43.0
Total Split (%)	64.2%	64.2%	64.2%	64.2%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	11.6	11.6	11.6	11.6	10.1	10.1	10.9	10.9
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.31	0.31	0.34	0.34
v/c Ratio	0.40	0.33	0.02	0.39	0.12	0.17	0.08	0.22
Control Delay	12.0	7.9	6.5	8.4	10.1	8.5	9.0	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.0	7.9	6.5	8.4	10.1	8.5	9.0	5.6
LOS	B	A	A	A	B	A	A	A
Approach Delay		8.9		8.4		8.7		5.9
Approach LOS		A		A		A		A

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 32.2			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.40			
Intersection Signal Delay: 8.1		Intersection LOS: A	
Intersection Capacity Utilization 55.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: Sierra Wy. & Rialto Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	329	22	6	392	22	32	134	22	24	126	97
Future Volume (veh/h)	101	329	22	6	392	22	32	134	22	24	126	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	116	378	15	7	451	18	37	154	19	28	145	83
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	460	1246	49	494	1246	50	503	956	116	535	667	361
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	886	3353	133	949	3352	134	1104	3068	373	1159	2140	1157
Grp Volume(v), veh/h	116	192	201	7	230	239	37	85	88	28	114	114
Grp Sat Flow(s),veh/h/ln	886	1710	1775	949	1710	1776	1104	1710	1731	1159	1710	1588
Q Serve(g_s), s	3.6	2.6	2.7	0.2	3.2	3.2	0.9	1.2	1.2	0.6	1.6	1.8
Cycle Q Clear(g_c), s	6.9	2.6	2.7	2.8	3.2	3.2	2.6	1.2	1.2	1.8	1.6	1.8
Prop In Lane	1.00		0.07	1.00		0.08	1.00		0.22	1.00		0.73
Lane Grp Cap(c), veh/h	460	635	660	494	635	660	503	533	539	535	533	495
V/C Ratio(X)	0.25	0.30	0.30	0.01	0.36	0.36	0.07	0.16	0.16	0.05	0.21	0.23
Avail Cap(c_a), veh/h	2051	3709	3851	2199	3709	3851	1410	1940	1963	1516	1981	1839
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.1	7.4	7.4	8.4	7.6	7.6	9.4	8.3	8.3	8.9	8.4	8.5
Incr Delay (d2), s/veh	0.3	0.3	0.3	0.0	0.3	0.3	0.1	0.1	0.1	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.7	0.0	0.8	0.8	0.1	0.3	0.3	0.1	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.3	7.6	7.6	8.4	7.9	7.9	9.5	8.4	8.4	9.0	8.6	8.7
LnGrp LOS	B	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		509			476			210			256	
Approach Delay, s/veh		8.3			7.9			8.6			8.7	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.7		17.4		15.7		17.4				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		37.6		71.9		* 38		71.9				
Max Q Clear Time (g_c+I1), s		4.6		8.9		3.8		5.2				
Green Ext Time (p_c), s		1.1		3.2		1.6		3.0				

Intersection Summary												
HCM 6th Ctrl Delay			8.3									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	0	3	0	0	2	2	175	0	0	151	3
Future Vol, veh/h	11	0	3	0	0	2	2	175	0	0	151	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	0	3	0	0	2	2	190	0	0	164	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	265	361	84	277	362	96	167	0	0	191	0	0
Stage 1	166	166	-	195	195	-	-	-	-	-	-	-
Stage 2	99	195	-	82	167	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	672	569	965	659	569	948	1423	-	-	1395	-	-
Stage 1	825	765	-	794	743	-	-	-	-	-	-	-
Stage 2	902	743	-	923	764	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	670	568	965	656	568	947	1423	-	-	1394	-	-
Mov Cap-2 Maneuver	696	603	-	681	602	-	-	-	-	-	-	-
Stage 1	824	765	-	792	742	-	-	-	-	-	-	-
Stage 2	899	742	-	920	764	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	8.8	0.1	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1423	-	-	740	947	1394	-	-
HCM Lane V/C Ratio	0.002	-	-	0.021	0.002	-	-	-
HCM Control Delay (s)	7.5	-	-	10	8.8	0	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	177	151	3
Future Vol, veh/h	0	3	0	177	151	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	0	192	164	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	84	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	965	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	965	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	965	-	-
HCM Lane V/C Ratio	-	0.003	-	-
HCM Control Delay (s)	-	8.7	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

S. Arrowhead Warehouse TA (JN:14660)
EAP (2023) Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Sierra & Rialto

Cycle (sec):	100	Critical Vol./Cap.(X):	0.342
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	26	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	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 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	29	122	21	24	120	94	98	312	19	6	378	21
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	30	126	22	25	124	97	101	321	20	6	389	22
Added Vol:	3	8	0	0	3	0	0	8	3	0	3	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	33	134	22	25	127	97	101	329	23	6	392	22
User Adj:	1.00	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:	33	134	22	25	127	97	101	329	23	6	392	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	134	22	25	127	97	101	329	23	6	392	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	33	134	22	25	127	97	101	329	23	6	392	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.72	0.28	1.00	1.13	0.87	1.00	1.87	0.13	1.00	1.90	0.10
Final Sat.:	1805	3271	529	1805	2153	1647	1805	3556	244	1805	3601	199
Capacity Analysis Module:												
Vol/Sat:	0.02	0.04	0.04	0.01	0.06	0.06	0.06	0.09	0.09	0.00	0.11	0.11
Crit Moves:	****				****		****				****	

APPENDIX 5.3: EA (2023) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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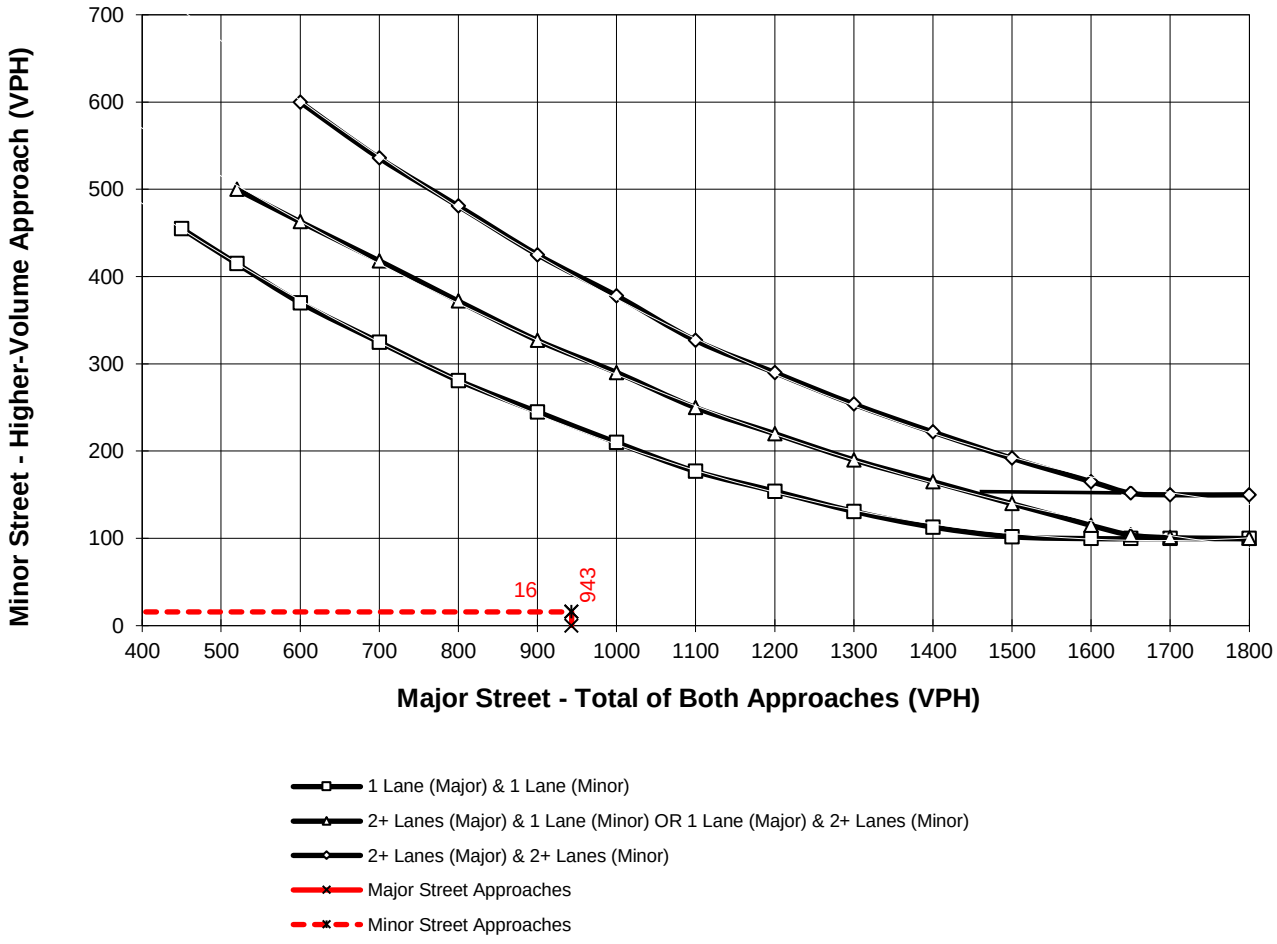
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EA(2023) Conditions - Weekday PM Peak Hour**

Major Street Name = **Mountain View Av.**
Total of Both Approaches (VPH) = **943**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Rialto Av.**
High Volume Approach (VPH) = **16**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

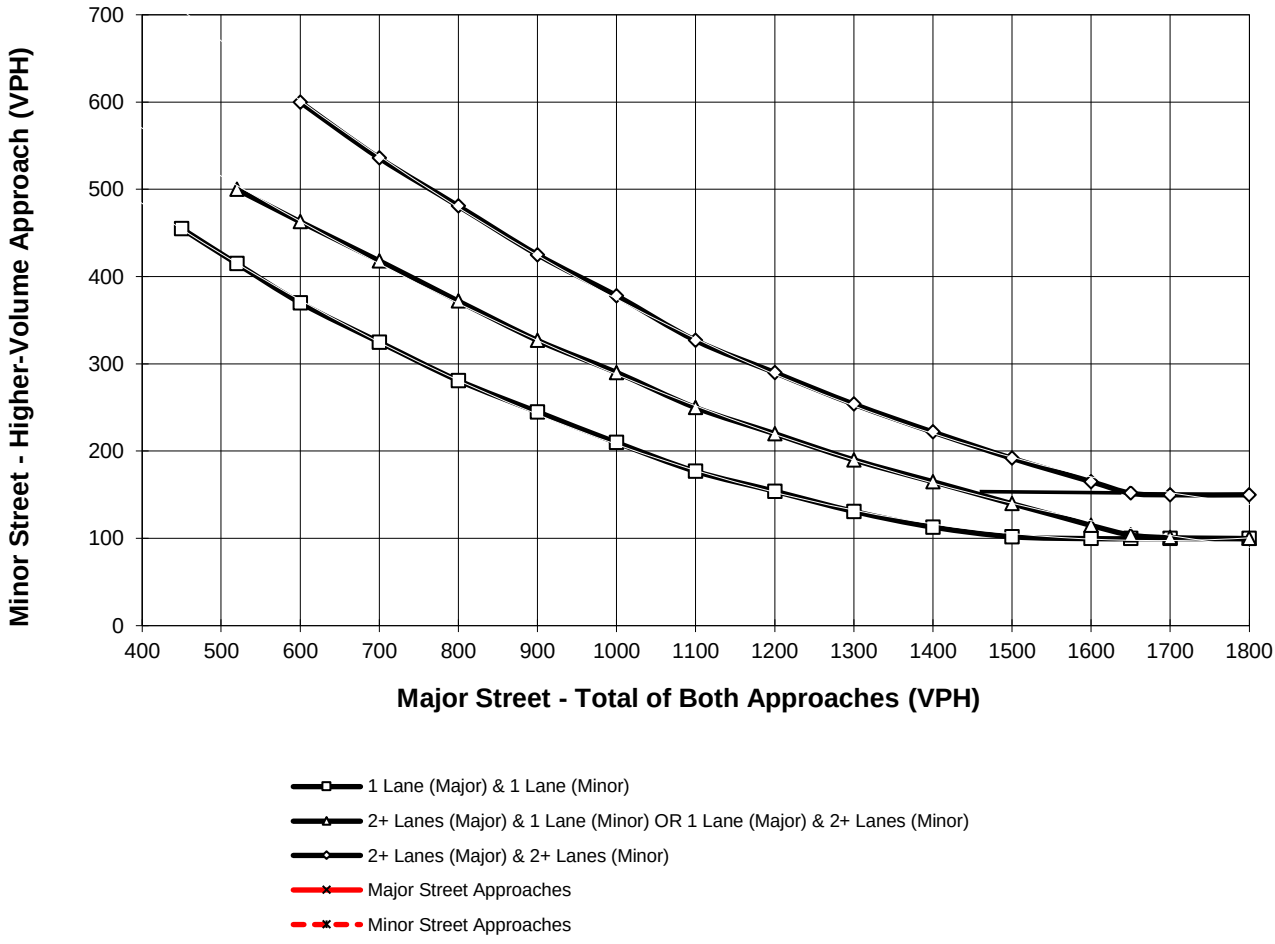
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EA (2023) Conditions - Weekday AM Peak Hour**

Major Street Name = **Sierra Wy.**
Total of Both Approaches (VPH) = **332**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Private Dwy.**
High Volume Approach (VPH) = **2**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

APPENDIX 5.4: EAP (2023) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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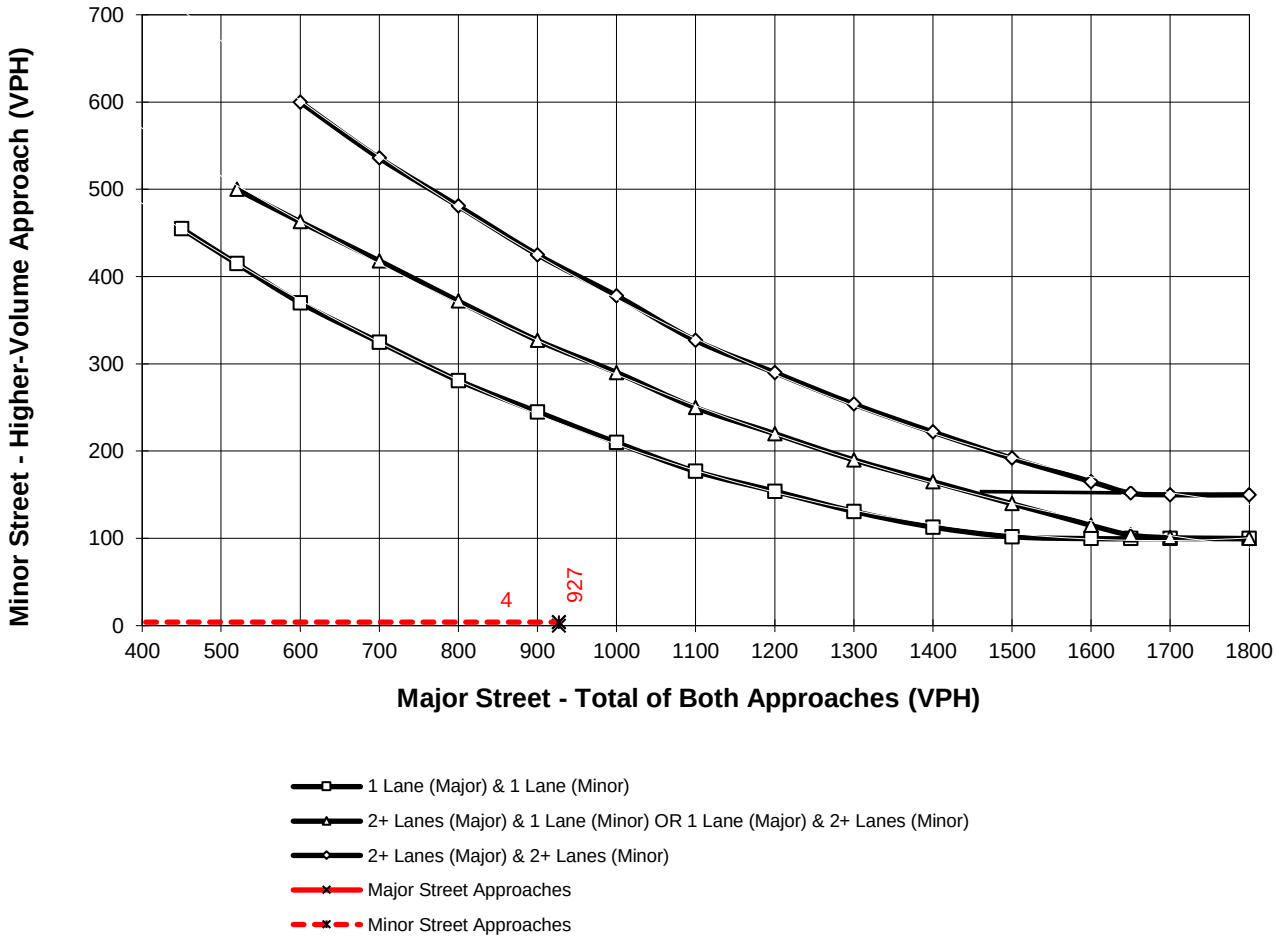
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAP (2023) Conditions - Weekday AM Peak Hour**

Major Street Name = **Mountain View Av.**
Total of Both Approaches (VPH) = **927**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Rialto Av.**
High Volume Approach (VPH) = **4**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		EAP (2023)
				CALC CP	DATE	04/29/22
Jurisdiction: City of San Bernardino				CHK CP	DATE	04/29/22
Major Street: Arrowhead Av.				Critical Approach Speed (Major)		35 mph
Minor Street: Driveway 1				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane

Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **6,576** vpd

Minor Street Future ADT = **87** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **6,576**	*1* **87**	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **6,576**	*1* **87**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 4% **B** 7%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		EAP (2023)
				CALC CP	DATE	04/29/22
Jurisdiction: City of San Bernardino				CHK CP	DATE	04/29/22
Major Street: Rialto Av.				Critical Approach Speed (Major)		40 mph
Minor Street: Driveway 3				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **9,504** vpd Minor Street Future ADT = **198** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. [ ]

or **RURAL (R)**

In built up area of isolated community of < 10,000 population …… [ ]

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **9,504**	*1* **198**	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **9,504**	*1* **198**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** **8%** **B** **16%**	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		EAP (2023)
				CALC CP	DATE	04/29/22
Jurisdiction: City of San Bernardino				CHK CP	DATE	04/29/22
Major Street: Rialto Av.				Critical Approach Speed (Major)		40 mph
Minor Street: Driveway 4				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane

Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **3,108** vpd

Minor Street Future ADT = **67** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **3,108**	*1* **67**	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **3,108**	*1* **67**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** **3%** **B** **6%**		2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

APPENDIX 6.1: EAC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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S. Arrowhead Warehouse TA (JN:14660)
EAC (2023) Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arrowhead & Rialto

Cycle (sec):	100	Critical Vol./Cap.(X):	0.362
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	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 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	48	136	42	114	165	19	42	364	98	41	346	34
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	49	140	43	117	170	20	43	375	101	42	356	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	49	140	43	117	170	20	43	375	101	42	356	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	49	140	43	117	170	20	43	375	101	42	356	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	49	140	43	117	170	20	43	375	101	42	356	35
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.53	0.47	1.00	1.79	0.21	1.00	1.58	0.42	1.00	1.82	0.18
Final Sat.:	1805	2903	897	1805	3408	392	1805	2994	806	1805	3460	340
Capacity Analysis Module:												
Vol/Sat:	0.03	0.05	0.05	0.07	0.05	0.05	0.02	0.13	0.13	0.02	0.10	0.10
Crit Moves:		****			****			****			****	

S. Arrowhead Warehouse TA (JN:14660)
EAC (2023) Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Sierra & Rialto

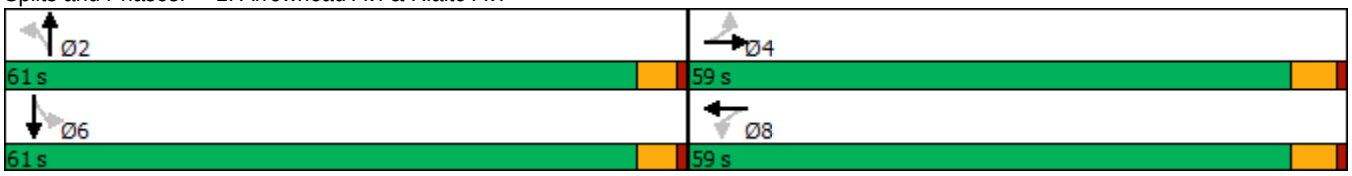
Cycle (sec):	100	Critical Vol./Cap.(X):	0.312
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

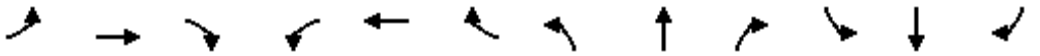
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	20	104	29	76	144	75	53	426	30	15	316	32
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	21	107	30	78	148	77	55	439	31	15	325	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	21	107	30	78	148	77	55	439	31	15	325	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	107	30	78	148	77	55	439	31	15	325	33
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	21	107	30	78	148	77	55	439	31	15	325	33
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.56	0.44	1.00	1.32	0.68	1.00	1.87	0.13	1.00	1.82	0.18
Final Sat.:	1805	2971	829	1805	2499	1301	1805	3550	250	1805	3451	349
Capacity Analysis Module:												
Vol/Sat:	0.01	0.04	0.04	0.04	0.06	0.06	0.03	0.12	0.12	0.01	0.09	0.09
Crit Moves:		****		****				****		****		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	43	382	42	358	49	149	117	175
Future Volume (vph)	43	382	42	358	49	149	117	175
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	59.0	59.0	59.0	59.0	61.0	61.0	61.0	61.0
Total Split (%)	49.2%	49.2%	49.2%	49.2%	50.8%	50.8%	50.8%	50.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	12.7	12.7	12.7	12.7	11.9	11.9	11.9	11.9
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.34	0.34	0.34	0.34
v/c Ratio	0.16	0.45	0.18	0.37	0.16	0.19	0.38	0.19
Control Delay	9.5	9.3	9.8	9.0	9.8	7.2	12.8	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	9.3	9.8	9.0	9.8	7.2	12.8	8.3
LOS	A	A	A	A	A	A	B	A
Approach Delay		9.3		9.1		7.7		10.0
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 34.5	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 55.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Arrowhead Av. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	382	100	42	358	35	49	149	43	117	175	19
Future Volume (veh/h)	43	382	100	42	358	35	49	149	43	117	175	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	50	444	97	49	416	33	57	173	30	136	203	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	464	971	211	423	1115	88	559	968	165	564	1086	64
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	903	2793	606	829	3207	253	1119	2923	498	1131	3280	193
Grp Volume(v), veh/h	50	271	270	49	221	228	57	100	103	136	105	110
Grp Sat Flow(s),veh/h/ln	903	1710	1689	829	1710	1751	1119	1710	1710	1131	1710	1762
Q Serve(g_s), s	1.3	3.7	3.8	1.5	2.9	3.0	1.2	1.3	1.3	2.9	1.3	1.3
Cycle Q Clear(g_c), s	4.3	3.7	3.8	5.2	2.9	3.0	2.5	1.3	1.3	4.2	1.3	1.3
Prop In Lane	1.00		0.36	1.00		0.14	1.00		0.29	1.00		0.11
Lane Grp Cap(c), veh/h	464	595	587	423	595	609	559	566	566	564	566	584
V/C Ratio(X)	0.11	0.45	0.46	0.12	0.37	0.37	0.10	0.18	0.18	0.24	0.19	0.19
Avail Cap(c_a), veh/h	1762	3052	3015	1614	3052	3124	2278	3193	3194	2303	3193	3291
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.0	7.6	7.7	9.7	7.4	7.4	8.1	7.2	7.2	8.7	7.2	7.2
Incr Delay (d2), s/veh	0.1	0.5	0.6	0.1	0.4	0.4	0.1	0.1	0.2	0.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.9	0.2	0.7	0.7	0.2	0.3	0.3	0.5	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	8.2	8.2	9.8	7.8	7.8	8.2	7.3	7.3	8.9	7.4	7.4
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		591			498			260			351	
Approach Delay, s/veh		8.3			8.0			7.5			8.0	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		15.6		14.6		15.6				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		56.4		53.9		56.4		53.9				
Max Q Clear Time (g_c+I1), s		4.5		6.3		6.2		7.2				
Green Ext Time (p_c), s		1.6		3.9		2.0		3.2				

Intersection Summary												
HCM 6th Ctrl Delay			8.0									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	527	424	2	6	12
Future Vol, veh/h	14	527	424	2	6	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	586	471	2	7	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	473	0	-	0	797	237
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	325	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1099	-	-	-	328	771
Stage 1	-	-	-	-	600	-
Stage 2	-	-	-	-	711	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1099	-	-	-	323	771
Mov Cap-2 Maneuver	-	-	-	-	440	-
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	711	-

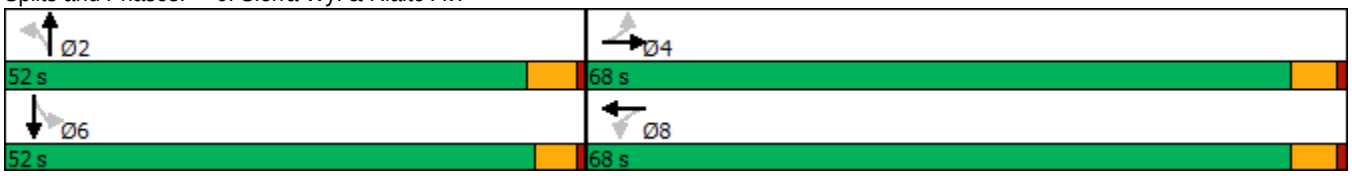
Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	11
HCM LOS			B

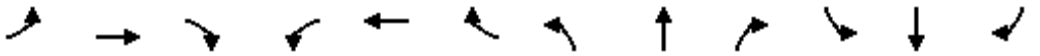
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1099	-	-	-	440	771
HCM Lane V/C Ratio	0.014	-	-	-	0.015	0.017
HCM Control Delay (s)	8.3	-	-	-	13.3	9.8
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	55	440	21	326	21	111	78	170
Future Volume (vph)	55	440	21	326	21	111	78	170
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	68.0	68.0	68.0	68.0	52.0	52.0	52.0	52.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	12.5	12.5	12.5	12.5	10.5	10.5	11.3	11.3
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.31	0.31	0.34	0.34
v/c Ratio	0.21	0.46	0.09	0.34	0.09	0.16	0.26	0.26
Control Delay	9.0	9.0	7.7	8.1	10.3	8.1	11.4	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	9.0	7.7	8.1	10.3	8.1	11.4	7.4
LOS	A	A	A	A	B	A	B	A
Approach Delay		9.0		8.1		8.4		8.4
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 33.6	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 8.5	Intersection LOS: A
Intersection Capacity Utilization 56.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Sierra Wy. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	440	36	21	326	32	21	111	30	78	170	77
Future Volume (veh/h)	55	440	36	21	326	32	21	111	30	78	170	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	67	537	39	26	398	26	26	135	27	95	207	70
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	466	1125	82	403	1135	74	499	909	178	562	804	263
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	924	3233	234	803	3260	212	1057	2852	557	1174	2522	826
Grp Volume(v), veh/h	67	283	293	26	208	216	26	80	82	95	138	139
Grp Sat Flow(s),veh/h/ln	924	1710	1757	803	1710	1762	1057	1710	1699	1174	1710	1639
Q Serve(g_s), s	1.8	4.1	4.1	0.8	2.8	2.9	0.6	1.0	1.1	2.0	1.9	2.0
Cycle Q Clear(g_c), s	4.7	4.1	4.1	4.9	2.8	2.9	2.6	1.0	1.1	3.1	1.9	2.0
Prop In Lane	1.00		0.13	1.00		0.12	1.00		0.33	1.00		0.50
Lane Grp Cap(c), veh/h	466	595	612	403	595	613	499	545	541	562	545	522
V/C Ratio(X)	0.14	0.48	0.48	0.06	0.35	0.35	0.05	0.15	0.15	0.17	0.25	0.27
Avail Cap(c_a), veh/h	1989	3414	3508	1726	3414	3517	1726	2529	2513	1953	2572	2465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	8.0	8.0	10.0	7.6	7.6	9.0	7.7	7.7	8.8	8.0	8.0
Incr Delay (d2), s/veh	0.1	0.6	0.6	0.1	0.4	0.3	0.0	0.1	0.1	0.1	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	1.0	0.1	0.7	0.7	0.1	0.2	0.2	0.4	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	8.6	8.6	10.0	8.0	8.0	9.0	7.8	7.8	8.9	8.2	8.3
LnGrp LOS	A	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		643			450			188			372	
Approach Delay, s/veh		8.7			8.1			8.0			8.4	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		16.1		15.4		16.1				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		46.6		62.9		* 47		62.9				
Max Q Clear Time (g_c+I1), s		4.6		6.7		5.1		6.9				
Green Ext Time (p_c), s		1.0		4.2		2.3		2.8				

Intersection Summary		
HCM 6th Ctrl Delay		8.4
HCM 6th LOS		A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	159	0	5	222
Future Vol, veh/h	2	2	159	0	5	222
Conflicting Peds, #/hr	0	0	0	3	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	3	261	0	8	364

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	462	134	0	0	264	0
Stage 1	264	-	-	-	-	-
Stage 2	198	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	533	897	-	-	1312	-
Stage 1	762	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	528	894	-	-	1308	-
Mov Cap-2 Maneuver	599	-	-	-	-	-
Stage 1	760	-	-	-	-	-
Stage 2	817	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	717	1308	-
HCM Lane V/C Ratio	-	-	0.009	0.006	-
HCM Control Delay (s)	-	-	10.1	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

S. Arrowhead Warehouse TA (JN:14660)
EAC (2023) Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arrowhead & Rialto

Cycle (sec):	100	Critical Vol./Cap.(X):	0.364
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	49	200	71	73	212	33	52	299	63	67	409	32
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	50	206	73	75	218	34	54	308	65	69	421	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	206	73	75	218	34	54	308	65	69	421	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	206	73	75	218	34	54	308	65	69	421	33
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:	50	206	73	75	218	34	54	308	65	69	421	33
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.48	0.52	1.00	1.73	0.27	1.00	1.65	0.35	1.00	1.85	0.15
Final Sat.:	1805	2804	996	1805	3288	512	1805	3139	661	1805	3524	276
Capacity Analysis Module:												
Vol/Sat:	0.03	0.07	0.07	0.04	0.07	0.07	0.03	0.10	0.10	0.04	0.12	0.12
Crit Moves:		****			****			****			****	

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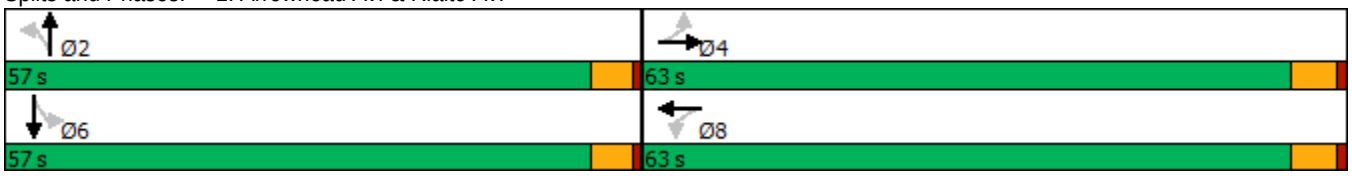
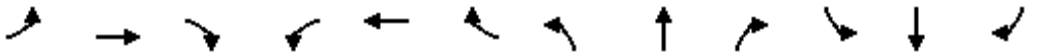
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	54	318	68	436	50	215	75	226
Future Volume (vph)	54	318	68	436	50	215	75	226
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	11.5	11.5	11.5	11.5	10.8	10.8	10.8	10.8
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.34	0.34	0.34	0.34
v/c Ratio	0.21	0.34	0.24	0.42	0.16	0.28	0.26	0.25
Control Delay	9.4	7.9	9.6	8.9	9.6	7.6	10.8	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.4	7.9	9.6	8.9	9.6	7.6	10.8	8.2
LOS	A	A	A	A	A	A	B	A
Approach Delay		8.1		9.0		7.9		8.8
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 32.1	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 8.5	Intersection LOS: A
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Arrowhead Av. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	318	64	68	436	32	50	215	73	75	226	34
Future Volume (veh/h)	54	318	64	68	436	32	50	215	73	75	226	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	59	346	63	74	474	31	54	234	67	82	246	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	441	1010	182	480	1139	74	526	870	243	510	1025	115
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	856	2887	520	936	3258	213	1060	2631	735	1034	3098	349
Grp Volume(v), veh/h	59	203	206	74	248	257	54	150	151	82	135	139
Grp Sat Flow(s),veh/h/ln	856	1710	1697	936	1710	1761	1060	1710	1656	1034	1710	1737
Q Serve(g_s), s	1.7	2.7	2.7	1.9	3.4	3.4	1.2	2.0	2.0	1.9	1.7	1.8
Cycle Q Clear(g_c), s	5.1	2.7	2.7	4.7	3.4	3.4	3.0	2.0	2.0	4.0	1.7	1.8
Prop In Lane	1.00		0.31	1.00		0.12	1.00		0.44	1.00		0.20
Lane Grp Cap(c), veh/h	441	598	593	480	598	616	526	566	548	510	566	575
V/C Ratio(X)	0.13	0.34	0.35	0.15	0.42	0.42	0.10	0.27	0.28	0.16	0.24	0.24
Avail Cap(c_a), veh/h	1775	3262	3237	1938	3262	3359	2006	2952	2859	1953	2952	2999
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	7.3	7.3	9.0	7.5	7.5	8.5	7.5	7.5	8.9	7.4	7.4
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.1	0.5	0.5	0.1	0.2	0.3	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.6	0.3	0.8	0.8	0.2	0.5	0.5	0.3	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.6	7.6	7.7	9.2	8.0	8.0	8.5	7.7	7.7	9.1	7.6	7.6
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		468			579			355			356	
Approach Delay, s/veh		7.9			8.1			7.8			7.9	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		15.7		14.6		15.7				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		52.4		57.9		52.4		57.9				
Max Q Clear Time (g_c+I1), s		5.0		7.1		6.0		6.7				
Green Ext Time (p_c), s		2.3		3.0		2.2		3.7				

Intersection Summary												
HCM 6th Ctrl Delay			8.0									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	449	524	4	2	16
Future Vol, veh/h	11	449	524	4	2	16
Conflicting Peds, #/hr	0	0	0	1	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	13	516	602	5	2	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	608	0	-	0	890	307
Stage 1	-	-	-	-	606	-
Stage 2	-	-	-	-	284	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	980	-	-	-	286	695
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	745	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	979	-	-	-	282	693
Mov Cap-2 Maneuver	-	-	-	-	395	-
Stage 1	-	-	-	-	506	-
Stage 2	-	-	-	-	744	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	979	-	-	-	395	693
HCM Lane V/C Ratio	0.013	-	-	-	0.006	0.027
HCM Control Delay (s)	8.7	-	-	-	14.2	10.3
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1

S. Arrowhead Warehouse TA (JN:14660)
EAC (2023) Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Sierra & Rialto

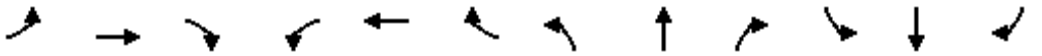
Cycle (sec):	100	Critical Vol./Cap.(X):	0.339
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	26	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	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 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	29	122	21	24	120	94	98	312	19	6	378	21
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	30	126	22	25	124	97	101	321	20	6	389	22
User Adj:	1.00	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:	30	126	22	25	124	97	101	321	20	6	389	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	126	22	25	124	97	101	321	20	6	389	22
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:	30	126	22	25	124	97	101	321	20	6	389	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.71	0.29	1.00	1.12	0.88	1.00	1.89	0.11	1.00	1.89	0.11
Final Sat.:	1805	3242	558	1805	2131	1669	1805	3582	218	1805	3600	200
Capacity Analysis Module:												
Vol/Sat:	0.02	0.04	0.04	0.01	0.06	0.06	0.06	0.09	0.09	0.00	0.11	0.11
Crit Moves:	****				****		****				****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	101	329	7	399	35	146	24	127
Future Volume (vph)	101	329	7	399	35	146	24	127
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	77.0	77.0	77.0	77.0	43.0	43.0	43.0	43.0
Total Split (%)	64.2%	64.2%	64.2%	64.2%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	11.5	11.5	11.5	11.5	10.0	10.0	10.8	10.8
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.31	0.31	0.34	0.34
v/c Ratio	0.40	0.33	0.03	0.40	0.13	0.19	0.08	0.22
Control Delay	12.2	8.0	6.4	8.5	10.1	8.5	9.0	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	8.0	6.4	8.5	10.1	8.5	9.0	5.6
LOS	B	A	A	A	B	A	A	A
Approach Delay		8.9		8.4		8.8		5.9
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 32.1	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 55.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Sierra Wy. & Rialto Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	329	20	7	399	22	35	146	28	24	127	97
Future Volume (veh/h)	101	329	20	7	399	22	35	146	28	24	127	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	116	378	13	8	459	18	40	168	26	28	146	83
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	457	1259	43	496	1253	49	500	924	141	522	667	358
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	879	3373	116	951	3355	131	1103	2974	452	1137	2146	1153
Grp Volume(v), veh/h	116	191	200	8	234	243	40	95	99	28	115	114
Grp Sat Flow(s),veh/h/ln	879	1710	1779	951	1710	1776	1103	1710	1716	1137	1710	1589
Q Serve(g_s), s	3.7	2.6	2.6	0.2	3.3	3.3	0.9	1.4	1.4	0.6	1.6	1.8
Cycle Q Clear(g_c), s	7.0	2.6	2.6	2.8	3.3	3.3	2.7	1.4	1.4	2.0	1.6	1.8
Prop In Lane	1.00		0.07	1.00		0.07	1.00		0.26	1.00		0.73
Lane Grp Cap(c), veh/h	457	638	664	496	638	663	500	531	533	522	531	494
V/C Ratio(X)	0.25	0.30	0.30	0.02	0.37	0.37	0.08	0.18	0.18	0.05	0.22	0.23
Avail Cap(c_a), veh/h	2030	3698	3847	2197	3698	3841	1405	1934	1941	1482	1975	1835
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.1	7.3	7.4	8.4	7.6	7.6	9.5	8.4	8.4	9.1	8.5	8.5
Incr Delay (d2), s/veh	0.3	0.3	0.3	0.0	0.4	0.3	0.1	0.2	0.2	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.7	0.0	0.8	0.8	0.2	0.3	0.3	0.1	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.4	7.6	7.6	8.4	7.9	7.9	9.6	8.5	8.5	9.2	8.7	8.7
LnGrp LOS	B	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		507			485			234			257	
Approach Delay, s/veh		8.2			7.9			8.7			8.8	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.7		17.5		15.7		17.5				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		37.6		71.9		* 38		71.9				
Max Q Clear Time (g_c+I1), s		4.7		9.0		4.0		5.3				
Green Ext Time (p_c), s		1.2		3.2		1.6		3.1				

Intersection Summary												
HCM 6th Ctrl Delay			8.3									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	206	0	0	155
Future Vol, veh/h	0	2	206	0	0	155
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	25	79	79
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	261	0	0	196

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	360	132	0	0	262	0
Stage 1	262	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	618	899	-	-	1314	-
Stage 1	764	-	-	-	-	-
Stage 2	921	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	617	898	-	-	1313	-
Mov Cap-2 Maneuver	653	-	-	-	-	-
Stage 1	763	-	-	-	-	-
Stage 2	921	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	898	1313	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	-	-	9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

APPENDIX 6.2: EAPC (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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S. Arrowhead Warehouse TA (JN:14660)
EAPC (2023) Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Arrowhead & Rialto

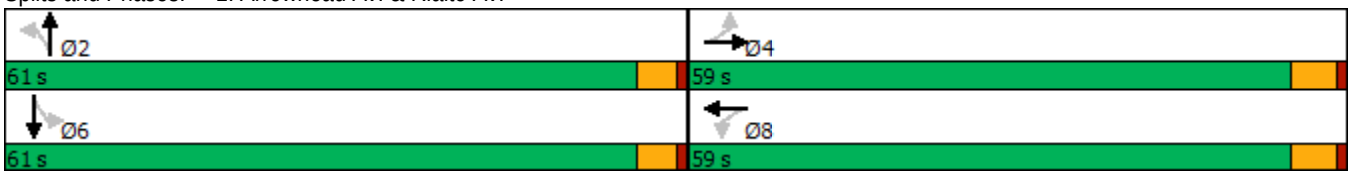
Cycle (sec):	100	Critical Vol./Cap.(X):	0.371
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

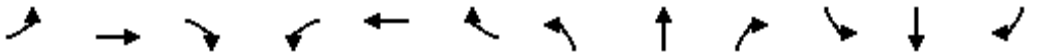
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	48	136	42	114	165	19	42	364	98	41	346	34
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	49	140	43	117	170	20	43	375	101	42	356	35
Added Vol:	0	2	6	3	9	0	0	9	0	5	2	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	49	142	49	120	179	20	43	384	101	47	358	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	49	142	49	120	179	20	43	384	101	47	358	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	49	142	49	120	179	20	43	384	101	47	358	36
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:	49	142	49	120	179	20	43	384	101	47	358	36
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.49	0.51	1.00	1.80	0.20	1.00	1.58	0.42	1.00	1.82	0.18
Final Sat.:	1805	2822	978	1805	3425	375	1805	3009	791	1805	3453	347
Capacity Analysis Module:												
Vol/Sat:	0.03	0.05	0.05	0.07	0.05	0.05	0.02	0.13	0.13	0.03	0.10	0.10
Crit Moves:	****		****				****			****		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	43	391	47	360	49	151	120	184
Future Volume (vph)	43	391	47	360	49	151	120	184
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	59.0	59.0	59.0	59.0	61.0	61.0	61.0	61.0
Total Split (%)	49.2%	49.2%	49.2%	49.2%	50.8%	50.8%	50.8%	50.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	12.9	12.9	12.9	12.9	12.1	12.1	12.1	12.1
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.35	0.35	0.35	0.35
v/c Ratio	0.16	0.46	0.20	0.37	0.16	0.20	0.39	0.20
Control Delay	9.6	9.5	10.3	9.1	9.8	7.1	13.1	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	9.5	10.3	9.1	9.8	7.1	13.1	8.5
LOS	A	A	B	A	A	A	B	A
Approach Delay		9.5		9.2		7.6		10.2
Approach LOS		A		A		A		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 34.9	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Arrowhead Av. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	391	100	47	360	36	49	151	49	120	184	19
Future Volume (veh/h)	43	391	100	47	360	36	49	151	49	120	184	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	50	455	97	55	419	34	57	176	37	140	214	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	468	999	211	424	1139	92	545	924	190	551	1076	60
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	900	2807	594	820	3201	259	1108	2824	581	1121	3291	183
Grp Volume(v), veh/h	50	276	276	55	223	230	57	105	108	140	111	115
Grp Sat Flow(s),veh/h/ln	900	1710	1691	820	1710	1750	1108	1710	1695	1121	1710	1764
Q Serve(g_s), s	1.3	3.8	3.8	1.7	3.0	3.0	1.2	1.3	1.4	3.1	1.4	1.4
Cycle Q Clear(g_c), s	4.3	3.8	3.8	5.5	3.0	3.0	2.6	1.3	1.4	4.5	1.4	1.4
Prop In Lane	1.00		0.35	1.00		0.15	1.00		0.34	1.00		0.10
Lane Grp Cap(c), veh/h	468	608	602	424	608	623	545	559	554	551	559	577
V/C Ratio(X)	0.11	0.45	0.46	0.13	0.37	0.37	0.10	0.19	0.19	0.25	0.20	0.20
Avail Cap(c_a), veh/h	1734	3014	2981	1578	3014	3083	2226	3154	3127	2252	3154	3254
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.9	7.6	7.6	9.7	7.3	7.3	8.4	7.4	7.4	9.0	7.4	7.4
Incr Delay (d2), s/veh	0.1	0.5	0.5	0.1	0.4	0.4	0.1	0.2	0.2	0.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.9	0.9	0.2	0.7	0.7	0.2	0.4	0.4	0.6	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.0	8.1	8.1	9.8	7.7	7.7	8.4	7.5	7.6	9.3	7.6	7.6
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		602			508			270			366	
Approach Delay, s/veh		8.2			7.9			7.7			8.2	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		16.0		14.6		16.0				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		56.4		53.9		56.4		53.9				
Max Q Clear Time (g_c+I1), s		4.6		6.3		6.5		7.5				
Green Ext Time (p_c), s		1.7		4.0		2.1		3.2				

Intersection Summary												
HCM 6th Ctrl Delay			8.0									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	2	246	8	9	323
Future Vol, veh/h	4	2	246	8	9	323
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	2	267	9	10	351

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	468	138	0	0	276	0
Stage 1	272	-	-	-	-	-
Stage 2	196	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	529	891	-	-	1299	-
Stage 1	755	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	525	891	-	-	1299	-
Mov Cap-2 Maneuver	597	-	-	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	817	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	671	1299	-
HCM Lane V/C Ratio	-	-	0.01	0.008	-
HCM Control Delay (s)	-	-	10.4	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	539	5	3	429	2	3	2	1	6	9	12
Future Vol, veh/h	14	539	5	3	429	2	3	2	1	6	9	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	586	5	3	466	2	3	2	1	7	10	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	468	0	0	591	0	0	863	1093	296	797	1094	234
Stage 1	-	-	-	-	-	-	619	619	-	473	473	-
Stage 2	-	-	-	-	-	-	244	474	-	324	621	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1104	-	-	995	-	-	252	216	706	281	216	774
Stage 1	-	-	-	-	-	-	448	483	-	546	562	-
Stage 2	-	-	-	-	-	-	744	561	-	668	482	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1104	-	-	995	-	-	239	212	706	276	212	774
Mov Cap-2 Maneuver	-	-	-	-	-	-	347	328	-	393	329	-
Stage 1	-	-	-	-	-	-	442	476	-	538	560	-
Stage 2	-	-	-	-	-	-	717	559	-	655	475	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	14.9	13
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	371	1104	-	-	995	-	-	352	774
HCM Lane V/C Ratio	0.018	0.014	-	-	0.003	-	-	0.046	0.017
HCM Control Delay (s)	14.9	8.3	-	-	8.6	-	-	15.7	9.7
HCM Lane LOS	B	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	537	7	6	428	5	2
Future Vol, veh/h	537	7	6	428	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	584	8	7	465	5	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	592	0	835	296
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	247	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	994	-	310	706
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	777	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	994	-	308	706
Mov Cap-2 Maneuver	-	-	-	-	416	-
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	772	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	12.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	471	-	-	994	-
HCM Lane V/C Ratio	0.016	-	-	0.007	-
HCM Control Delay (s)	12.8	-	-	8.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

S. Arrowhead Warehouse TA (JN:14660)
EAPC (2023) Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Sierra & Rialto

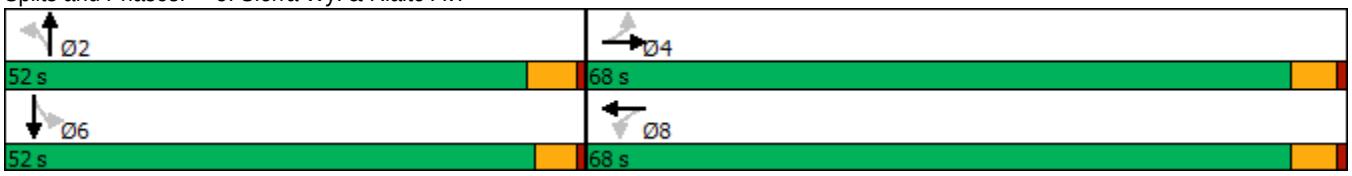
Cycle (sec):	100	Critical Vol./Cap.(X):	0.314
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

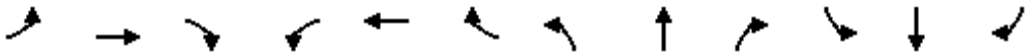
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	20	104	29	76	144	75	53	426	30	15	316	32
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	21	107	30	78	148	77	55	439	31	15	325	33
Added Vol:	1	2	0	0	9	0	0	2	5	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	22	109	30	78	157	77	55	441	36	15	334	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	22	109	30	78	157	77	55	441	36	15	334	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	22	109	30	78	157	77	55	441	36	15	334	33
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:	22	109	30	78	157	77	55	441	36	15	334	33
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.57	0.43	1.00	1.34	0.66	1.00	1.85	0.15	1.00	1.82	0.18
Final Sat.:	1805	2983	817	1805	2549	1251	1805	3514	286	1805	3459	341
Capacity Analysis Module:												
Vol/Sat:	0.01	0.04	0.04	0.04	0.06	0.06	0.03	0.13	0.13	0.01	0.10	0.10
Crit Moves:		****		****				****		****		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	55	442	21	335	22	113	78	179
Future Volume (vph)	55	442	21	335	22	113	78	179
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	68.0	68.0	68.0	68.0	52.0	52.0	52.0	52.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	12.7	12.7	12.7	12.7	10.7	10.7	11.5	11.5
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.31	0.31	0.34	0.34
v/c Ratio	0.21	0.47	0.10	0.35	0.09	0.17	0.26	0.27
Control Delay	9.2	9.2	7.9	8.3	10.4	8.2	11.4	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	9.2	7.9	8.3	10.4	8.2	11.4	7.7
LOS	A	A	A	A	B	A	B	A
Approach Delay		9.2		8.3		8.4		8.5
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 34	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 56.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Sierra Wy. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	442	41	21	335	32	22	113	30	78	179	77
Future Volume (veh/h)	55	442	41	21	335	32	22	113	30	78	179	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	67	539	45	26	409	26	27	138	27	95	218	70
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	464	1125	94	403	1149	73	490	907	173	556	810	253
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	915	3195	266	797	3266	207	1047	2863	548	1170	2557	797
Grp Volume(v), veh/h	67	288	296	26	214	221	27	81	84	95	144	144
Grp Sat Flow(s),veh/h/ln	915	1710	1752	797	1710	1763	1047	1710	1701	1170	1710	1644
Q Serve(g_s), s	1.9	4.2	4.2	0.8	2.9	3.0	0.6	1.1	1.1	2.0	2.0	2.1
Cycle Q Clear(g_c), s	4.8	4.2	4.2	5.0	2.9	3.0	2.7	1.1	1.1	3.1	2.0	2.1
Prop In Lane	1.00		0.15	1.00		0.12	1.00		0.32	1.00		0.48
Lane Grp Cap(c), veh/h	464	602	616	403	602	620	490	542	539	556	542	521
V/C Ratio(X)	0.14	0.48	0.48	0.06	0.35	0.36	0.06	0.15	0.16	0.17	0.27	0.28
Avail Cap(c_a), veh/h	1957	3393	3476	1703	3393	3498	1697	2514	2501	1936	2557	2459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	8.0	8.0	10.0	7.6	7.6	9.1	7.8	7.8	8.9	8.1	8.1
Incr Delay (d2), s/veh	0.1	0.6	0.6	0.1	0.4	0.3	0.0	0.1	0.1	0.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	1.0	0.1	0.7	0.7	0.1	0.2	0.3	0.4	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	8.6	8.6	10.0	8.0	8.0	9.2	7.9	7.9	9.1	8.3	8.4
LnGrp LOS	A	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		651			461			192			383	
Approach Delay, s/veh		8.7			8.1			8.1			8.5	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		16.3		15.4		16.3				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		46.6		62.9		* 47		62.9				
Max Q Clear Time (g_c+I1), s		4.7		6.8		5.1		7.0				
Green Ext Time (p_c), s		1.0		4.3		2.3		2.9				

Intersection Summary												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	0	1	2	0	2	6	159	0	5	227	9
Future Vol, veh/h	3	0	1	2	0	2	6	159	0	5	227	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	0	1	2	0	2	7	173	0	5	247	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	363	452	129	324	457	90	257	0	0	176	0	0
Stage 1	262	262	-	190	190	-	-	-	-	-	-	-
Stage 2	101	190	-	134	267	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	573	506	903	611	503	956	1320	-	-	1412	-	-
Stage 1	726	695	-	799	747	-	-	-	-	-	-	-
Stage 2	900	747	-	861	692	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	568	500	903	604	497	953	1320	-	-	1408	-	-
Mov Cap-2 Maneuver	613	553	-	649	550	-	-	-	-	-	-	-
Stage 1	722	692	-	793	741	-	-	-	-	-	-	-
Stage 2	893	741	-	857	689	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	9.7	0.3	0.2
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1320	-	-	667	772	1408	-	-
HCM Lane V/C Ratio	0.005	-	-	0.007	0.006	0.004	-	-
HCM Control Delay (s)	7.7	-	-	10.4	9.7	7.6	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	0	169	194	5
Future Vol, veh/h	0	1	0	169	194	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	0	184	211	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	108	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	932	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	932	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	932	-	-
HCM Lane V/C Ratio	-	0.001	-	-
HCM Control Delay (s)	-	8.9	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

S. Arrowhead Warehouse TA (JN:14660)
EAPC (2023) Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Arrowhead & Rialto

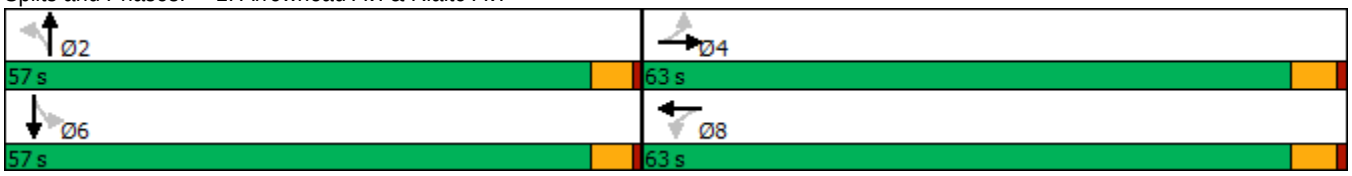
Cycle (sec):	100	Critical Vol./Cap.(X):	0.371
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

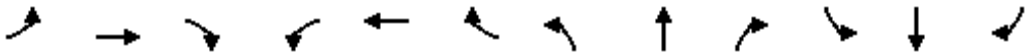
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	49	200	71	73	212	33	52	299	63	67	409	32
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	50	206	73	75	218	34	54	308	65	69	421	33
Added Vol:	0	8	6	1	3	0	0	3	0	8	8	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	214	79	76	221	34	54	311	65	77	429	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	214	79	76	221	34	54	311	65	77	429	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	214	79	76	221	34	54	311	65	77	429	36
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:	50	214	79	76	221	34	54	311	65	77	429	36
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.46	0.54	1.00	1.73	0.27	1.00	1.65	0.35	1.00	1.85	0.15
Final Sat.:	1805	2774	1026	1805	3294	506	1805	3144	656	1805	3506	294
Capacity Analysis Module:												
Vol/Sat:	0.03	0.08	0.08	0.04	0.07	0.07	0.03	0.10	0.10	0.04	0.12	0.12
Crit Moves:		****			****			****			****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	54	321	76	444	50	223	76	229
Future Volume (vph)	54	321	76	444	50	223	76	229
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	11.8	11.8	11.8	11.8	10.9	10.9	10.9	10.9
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.34	0.34	0.34	0.34
v/c Ratio	0.21	0.34	0.26	0.42	0.17	0.29	0.26	0.25
Control Delay	9.4	7.9	10.0	8.9	9.8	7.8	11.2	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.4	7.9	10.0	8.9	9.8	7.8	11.2	8.5
LOS	A	A	B	A	A	A	B	A
Approach Delay		8.1		9.1		8.1		9.1
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 32.5	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 56.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Arrowhead Av. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	321	64	76	444	35	50	223	79	76	229	34
Future Volume (veh/h)	54	321	64	76	444	35	50	223	79	76	229	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	59	349	63	83	483	34	54	242	74	83	249	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	442	1037	185	486	1163	82	516	844	252	494	1012	113
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	847	2892	516	933	3240	227	1057	2587	771	1020	3102	345
Grp Volume(v), veh/h	59	205	207	83	254	263	54	158	158	83	136	141
Grp Sat Flow(s),veh/h/ln	847	1710	1698	933	1710	1758	1057	1710	1649	1020	1710	1738
Q Serve(g_s), s	1.7	2.7	2.7	2.2	3.4	3.5	1.2	2.1	2.2	2.0	1.8	1.8
Cycle Q Clear(g_c), s	5.2	2.7	2.7	4.9	3.4	3.5	3.0	2.1	2.2	4.2	1.8	1.8
Prop In Lane	1.00		0.30	1.00		0.13	1.00		0.47	1.00		0.20
Lane Grp Cap(c), veh/h	442	613	609	486	613	631	516	558	538	494	558	567
V/C Ratio(X)	0.13	0.33	0.34	0.17	0.41	0.42	0.10	0.28	0.29	0.17	0.24	0.25
Avail Cap(c_a), veh/h	1731	3216	3193	1906	3216	3307	1971	2911	2806	1897	2911	2958
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	7.2	7.2	9.0	7.4	7.4	8.7	7.7	7.7	9.3	7.6	7.6
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.2	0.4	0.4	0.1	0.3	0.3	0.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.6	0.3	0.8	0.8	0.2	0.6	0.6	0.4	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	7.5	7.5	9.2	7.9	7.9	8.8	8.0	8.0	9.5	7.8	7.8
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		471			600			370			360	
Approach Delay, s/veh		7.8			8.1			8.1			8.2	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		16.1		14.6		16.1				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		52.4		57.9		52.4		57.9				
Max Q Clear Time (g_c+I1), s		5.0		7.2		6.2		6.9				
Green Ext Time (p_c), s		2.4		3.0		2.3		3.8				

Intersection Summary												
HCM 6th Ctrl Delay			8.0									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	8	344	5	3	367
Future Vol, veh/h	9	8	344	5	3	367
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	10	9	374	5	3	399

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	583	190	0	0	379	0
Stage 1	377	-	-	-	-	-
Stage 2	206	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	448	826	-	-	1191	-
Stage 1	669	-	-	-	-	-
Stage 2	814	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	447	826	-	-	1191	-
Mov Cap-2 Maneuver	534	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	812	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	641	1191	-
HCM Lane V/C Ratio	-	-	0.029	0.003	-
HCM Control Delay (s)	-	-	10.8	8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	456	3	1	537	4	5	8	3	2	3	16
Future Vol, veh/h	11	456	3	1	537	4	5	8	3	2	3	16
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	496	3	1	584	4	5	9	3	2	3	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	589	0	0	499	0	0	820	1113	250	866	1112	297
Stage 1	-	-	-	-	-	-	522	522	-	589	589	-
Stage 2	-	-	-	-	-	-	298	591	-	277	523	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	996	-	-	1075	-	-	270	210	756	250	211	705
Stage 1	-	-	-	-	-	-	511	534	-	466	499	-
Stage 2	-	-	-	-	-	-	692	498	-	712	534	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	995	-	-	1075	-	-	258	207	756	241	208	703
Mov Cap-2 Maneuver	-	-	-	-	-	-	375	325	-	354	329	-
Stage 1	-	-	-	-	-	-	505	528	-	460	498	-
Stage 2	-	-	-	-	-	-	669	497	-	689	528	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	14.9	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	382	995	-	-	1075	-	-	339	703
HCM Lane V/C Ratio	0.046	0.012	-	-	0.001	-	-	0.016	0.025
HCM Control Delay (s)	14.9	8.7	-	-	8.4	-	-	15.8	10.3
HCM Lane LOS	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	457	4	2	535	10	5
Future Vol, veh/h	457	4	2	535	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	497	4	2	582	11	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	501	0	794	251
Stage 1	-	-	-	-	499	-
Stage 2	-	-	-	-	295	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1074	-	329	755
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	736	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1074	-	328	755
Mov Cap-2 Maneuver	-	-	-	-	442	-
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	735	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	513	-	-	1074	-
HCM Lane V/C Ratio	0.032	-	-	0.002	-
HCM Control Delay (s)	12.2	-	-	8.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

S. Arrowhead Warehouse TA (JN:14660)
EAPC (2023) Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Sierra & Rialto

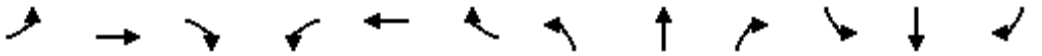
Cycle (sec):	100	Critical Vol./Cap.(X):	0.342
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	26	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	29	122	21	24	120	94	98	312	19	6	378	21
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	30	126	22	25	124	97	101	321	20	6	389	22
Added Vol:	3	8	0	0	3	0	0	8	3	0	3	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	33	134	22	25	127	97	101	329	23	6	392	22
User Adj:	1.00	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:	33	134	22	25	127	97	101	329	23	6	392	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	134	22	25	127	97	101	329	23	6	392	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	33	134	22	25	127	97	101	329	23	6	392	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.72	0.28	1.00	1.13	0.87	1.00	1.87	0.13	1.00	1.90	0.10
Final Sat.:	1805	3271	529	1805	2153	1647	1805	3556	244	1805	3601	199
Capacity Analysis Module:												
Vol/Sat:	0.02	0.04	0.04	0.01	0.06	0.06	0.06	0.09	0.09	0.00	0.11	0.11
Crit Moves:	****				****		****				****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	101	337	7	402	38	154	24	130
Future Volume (vph)	101	337	7	402	38	154	24	130
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	77.0	77.0	77.0	77.0	43.0	43.0	43.0	43.0
Total Split (%)	64.2%	64.2%	64.2%	64.2%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	11.8	11.8	11.8	11.8	10.1	10.1	10.9	10.9
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.31	0.31	0.34	0.34
v/c Ratio	0.40	0.33	0.03	0.39	0.14	0.20	0.08	0.23
Control Delay	12.0	7.9	6.4	8.4	10.6	8.8	9.3	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.0	7.9	6.4	8.4	10.6	8.8	9.3	5.8
LOS	B	A	A	A	B	A	A	A
Approach Delay		8.8		8.4		9.1		6.1
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 32.4	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Sierra Wy. & Rialto Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	337	23	7	402	22	38	154	28	24	130	97
Future Volume (veh/h)	101	337	23	7	402	22	38	154	28	24	130	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	116	387	16	8	462	18	44	177	26	28	149	83
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	458	1257	52	492	1261	49	497	928	134	515	669	353
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	877	3346	138	940	3356	131	1100	2996	433	1127	2161	1140
Grp Volume(v), veh/h	116	197	206	8	235	245	44	100	103	28	116	116
Grp Sat Flow(s),veh/h/ln	877	1710	1775	940	1710	1776	1100	1710	1720	1127	1710	1591
Q Serve(g_s), s	3.7	2.7	2.7	0.2	3.3	3.3	1.0	1.4	1.5	0.6	1.7	1.8
Cycle Q Clear(g_c), s	7.0	2.7	2.7	2.9	3.3	3.3	2.8	1.4	1.5	2.1	1.7	1.8
Prop In Lane	1.00		0.08	1.00		0.07	1.00		0.25	1.00		0.72
Lane Grp Cap(c), veh/h	458	643	667	492	643	667	497	529	532	515	529	493
V/C Ratio(X)	0.25	0.31	0.31	0.02	0.37	0.37	0.09	0.19	0.19	0.05	0.22	0.24
Avail Cap(c_a), veh/h	2017	3684	3823	2164	3684	3826	1395	1926	1937	1463	1967	1830
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.1	7.4	7.4	8.4	7.5	7.5	9.6	8.4	8.5	9.2	8.5	8.6
Incr Delay (d2), s/veh	0.3	0.3	0.3	0.0	0.3	0.3	0.1	0.2	0.2	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.7	0.0	0.8	0.8	0.2	0.3	0.4	0.1	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.4	7.6	7.6	8.4	7.9	7.9	9.7	8.6	8.6	9.3	8.7	8.8
LnGrp LOS	B	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		519			488			247			260	
Approach Delay, s/veh		8.2			7.9			8.8			8.8	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.7		17.6		15.7		17.6				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		37.6		71.9		* 38		71.9				
Max Q Clear Time (g_c+I1), s		4.8		9.0		4.1		5.3				
Green Ext Time (p_c), s		1.3		3.3		1.6		3.1				

Intersection Summary												
HCM 6th Ctrl Delay			8.3									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	0	3	0	0	2	2	206	0	0	158	3
Future Vol, veh/h	11	0	3	0	0	2	2	206	0	0	158	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	0	3	0	0	2	2	224	0	0	172	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	290	403	88	315	404	113	175	0	0	225	0	0
Stage 1	174	174	-	229	229	-	-	-	-	-	-	-
Stage 2	116	229	-	86	175	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	645	539	959	619	539	925	1414	-	-	1356	-	-
Stage 1	817	759	-	759	718	-	-	-	-	-	-	-
Stage 2	882	718	-	918	758	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	643	538	959	616	538	924	1414	-	-	1355	-	-
Mov Cap-2 Maneuver	678	581	-	650	581	-	-	-	-	-	-	-
Stage 1	816	759	-	757	717	-	-	-	-	-	-	-
Stage 2	879	717	-	915	758	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	8.9	0.1	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1414	-	-	723	924	1355	-	-
HCM Lane V/C Ratio	0.002	-	-	0.021	0.002	-	-	-
HCM Control Delay (s)	7.5	-	-	10.1	8.9	0	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	180	159	3
Future Vol, veh/h	0	3	0	180	159	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	0	196	173	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	88	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	959	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	959	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	959	-	-
HCM Lane V/C Ratio	-	0.003	-	-
HCM Control Delay (s)	-	8.8	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

APPENDIX 6.3: EAC (2023) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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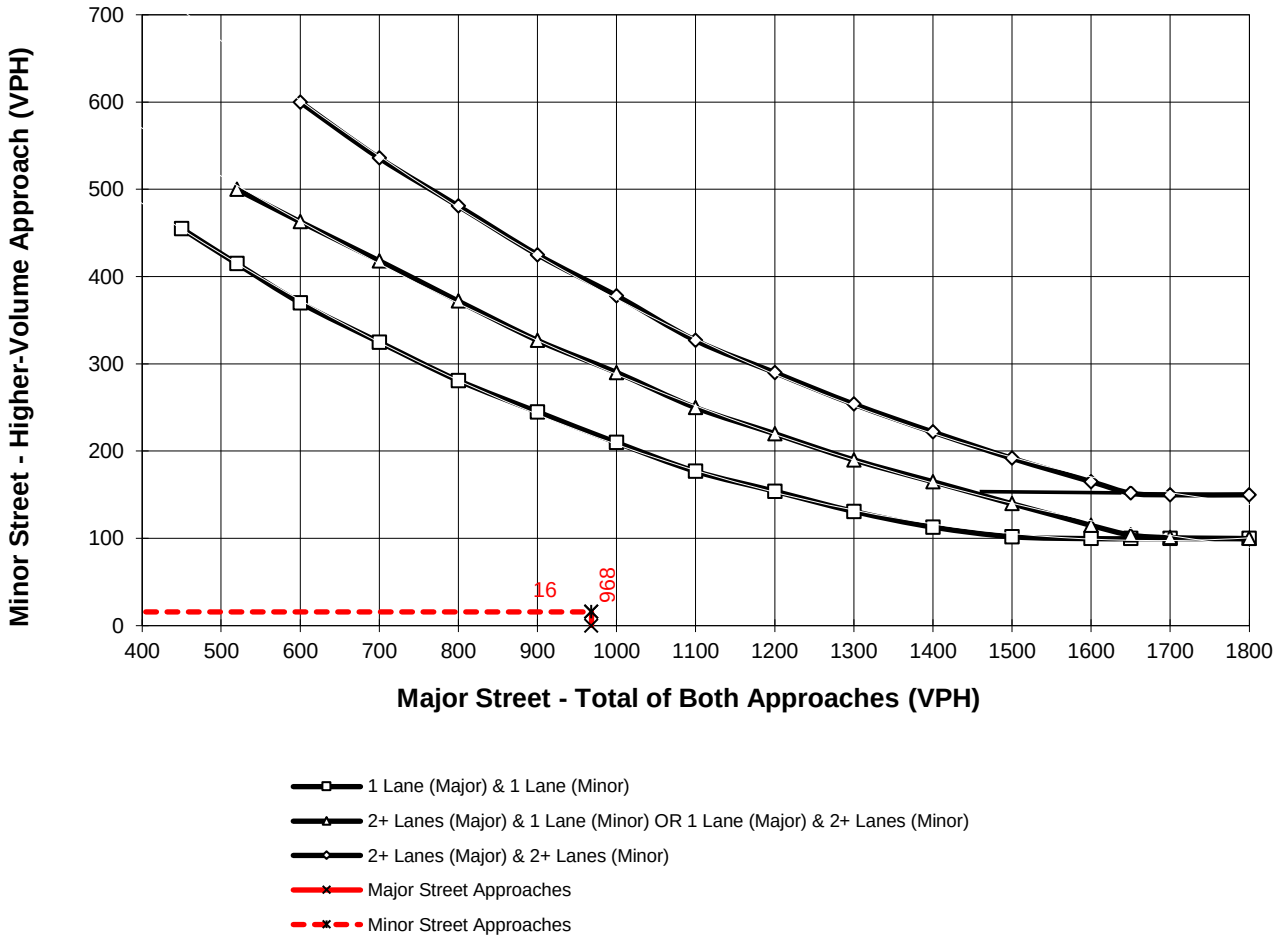
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAC (2023) Conditions - Weekday PM Peak Hour**

Major Street Name = **Mountain View Av.**
Total of Both Approaches (VPH) = **968**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Rialto Av.**
High Volume Approach (VPH) = **16**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

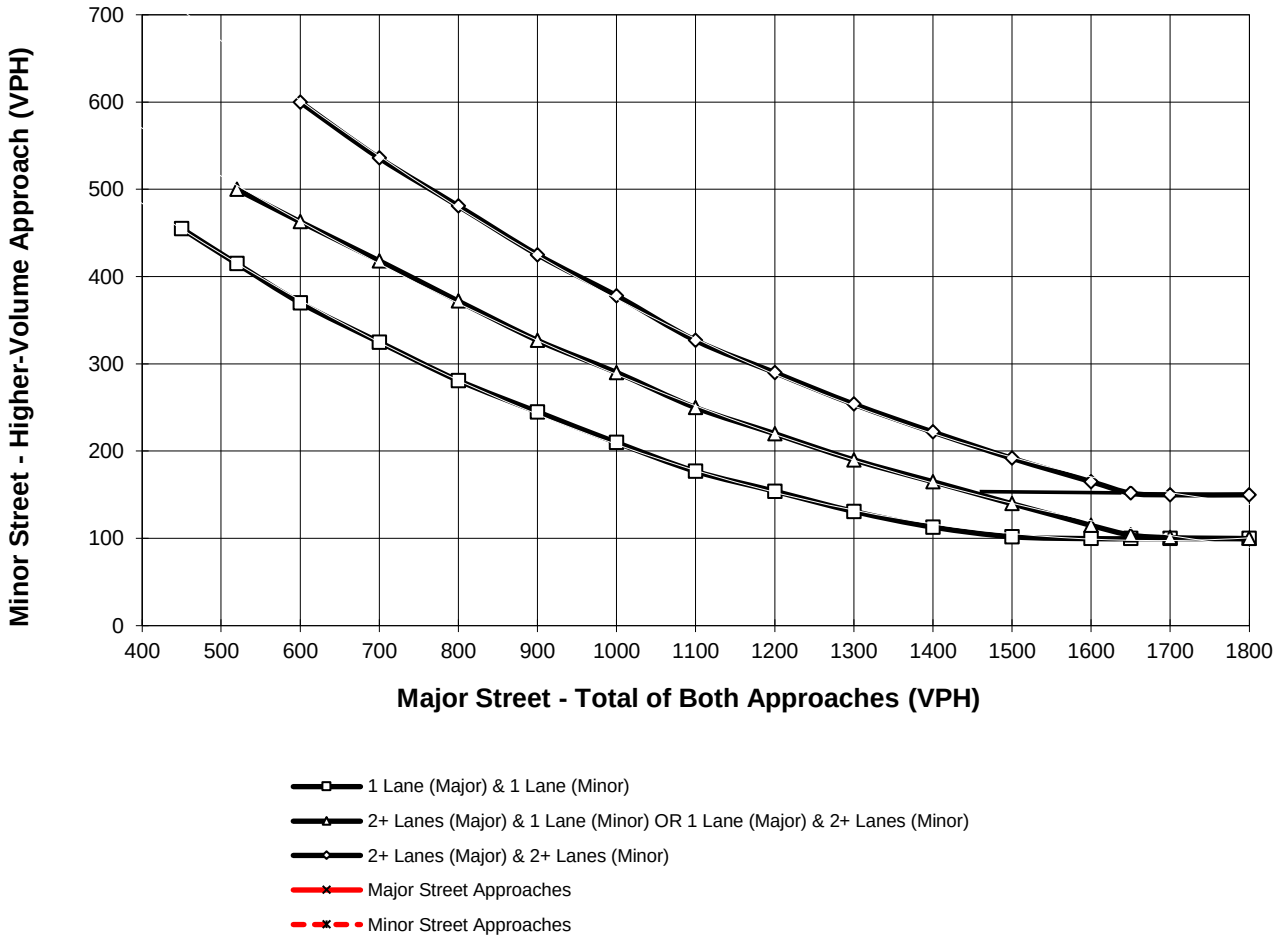
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAC (2023) Conditions - Weekday AM Peak Hour**

Major Street Name = **Sierra Wy.**
Total of Both Approaches (VPH) = **371**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Private Dwy.**
High Volume Approach (VPH) = **2**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

APPENDIX 6.4: EAPC (2023) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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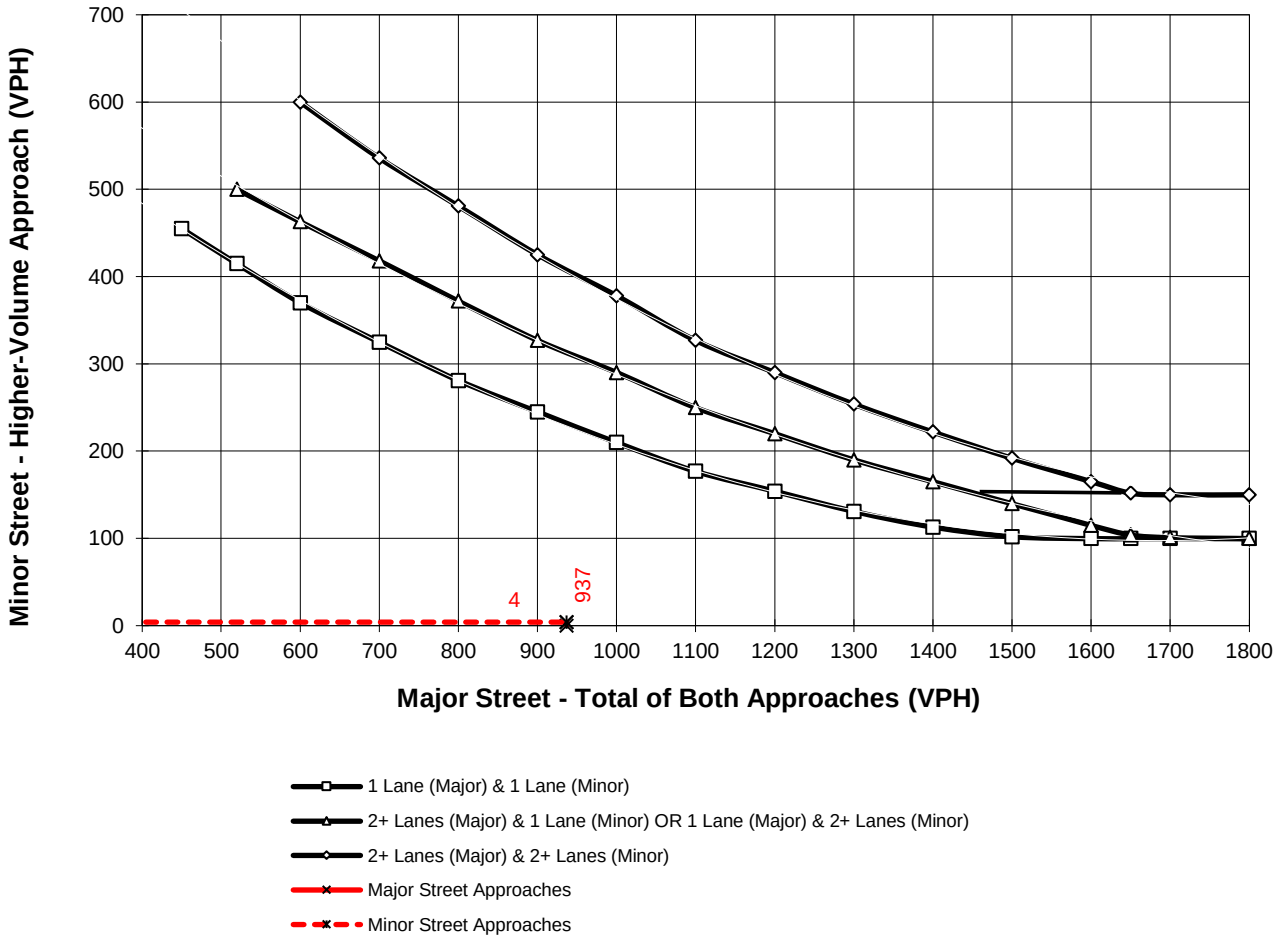
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAPC (2023) Conditions - Weekday AM Peak Hour**

Major Street Name = **Mountain View Av.**
Total of Both Approaches (VPH) = **937**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Rialto Av.**
High Volume Approach (VPH) = **4**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM		TRAFFIC CONDITIONS		EAPC (2023)
				CALC	CP	DATE	04/29/22
Jurisdiction:	City of San Bernardino			CHK	CP	DATE	04/29/22
Major Street:	Arrowhead Av.				Critical Approach Speed (Major)		35 mph
Minor Street:	Driveway 1				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane

Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **6,832** vpd

Minor Street Future ADT = **87** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **6,832**	*1* **87**	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **6,832**	*1* **87**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 4% **B** 7%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM				
				TRAFFIC CONDITIONS		**EAPC (2023)**	
				CALC	CP	DATE	04/29/22
Jurisdiction:	**City of San Bernardino**			CHK	CP	DATE	04/29/22
Major Street:	**Rialto Av.**				Critical Approach Speed (Major)		40 mph
Minor Street:	**Driveway 3**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **9,613** vpd Minor Street Future ADT = **76** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. [ ]

or **RURAL (R)**

In built up area of isolated community of < 10,000 population …… [ ]

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **9,613**	*1* **76**	9,600 *	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **9,613**	*1* **76**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied	2 CONDITIONS 80%		2 CONDITIONS 80%	
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 3% **B** 6%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM		TRAFFIC CONDITIONS		EAPC (2023)
				CALC	CP	DATE	04/29/22
Jurisdiction:	City of San Bernardino			CHK	CP	DATE	04/29/22
Major Street:	Rialto Av.				Critical Approach Speed (Major)		40 mph
Minor Street:	Driveway 4				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **3,392** vpd Minor Street Future ADT = **67** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. [ ]

or **RURAL (R)**

In built up area of isolated community of < 10,000 population …… [ ]

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **3,392**	*1* **67**	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **3,392**	*1* **67**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied	2 CONDITIONS 80%		2 CONDITIONS 80%	
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 3% **B** 6%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

APPENDIX 7.1: HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Volume Development - AM Peak Hour

1: Arrowhead Av. & Rialto Av.

PHF: 0.865 7:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	54	163	59	121	216	21	47	427	141	78	383	36	1,746

2: Arrowhead Av. & Driveway 1

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	0	264	0	0	350	0	0	0	0	0	0	0	614

3: Arrowhead Av. & Driveway 2

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	0	264	0	0	350	0	0	0	0	0	0	0	614

4: Mountain View Av./Driveway 3 & Rialto Av.

PHF: 0.901 7:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	0	0	0	6	0	14	26	584	0	0	486	4	1,120

5: Driveway 4 & Rialto Av.

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	0	0	0	0	0	0	0	584	0	0	467	0	1,051

6: Sierra Wy. & Rialto Av.

PHF: 0.820 7:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	23	122	32	88	187	84	60	510	40	23	386	37	1,592

7: Sierra Wy. & Driveway 5

PHF: 0.607 7:15 Count Date: 4/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	0	175	0	5	245	0	0	0	0	2	0	2	429

8: Sierra Wy. & Driveway 6

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	0	179	0	0	212	0	0	0	0	0	0	0	391

Volume Development - PM Peak Hour

1: Arrowhead Av. & Rialto Av.

PHF: 0.924 4:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	114	274	141	82	227	37	59	368	98	86	483	36	2,005

2: Arrowhead Av. & Driveway 1

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	0	372	0	0	395	0	0	0	0	0	0	0	767

3: Arrowhead Av. & Driveway 2

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	0	372	0	0	395	0	0	0	0	0	0	0	767

4: Mountain View Av./Driveway 3 & Rialto Av.

PHF: 0.866 4:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	0	0	0	2	0	18	23	548	0	0	572	7	1,170

5: Driveway 4 & Rialto Av.

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	0	0	0	0	0	0	0	496	0	0	584	0	1,080

6: Sierra Wy. & Rialto Av.

PHF: 0.866 4:30 Count Date: 2/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	39	160	30	32	140	107	108	427	22	8	469	29	1,571

7: Sierra Wy. & Driveway 5

PHF: 0.785 4:00 Count Date: 4/24/2022

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	0	226	0	0	171	0	0	0	0	0	0	2	399

8: Sierra Wy. & Driveway 6

PHF: Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
HY 2040 NP (PCE):	0	195	0	0	172	0	0	0	0	0	0	0	367

S. Arrowhead Warehouse TA (JN:14660)
Horizon Year (2040) Without Project
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arrowhead & Rialto

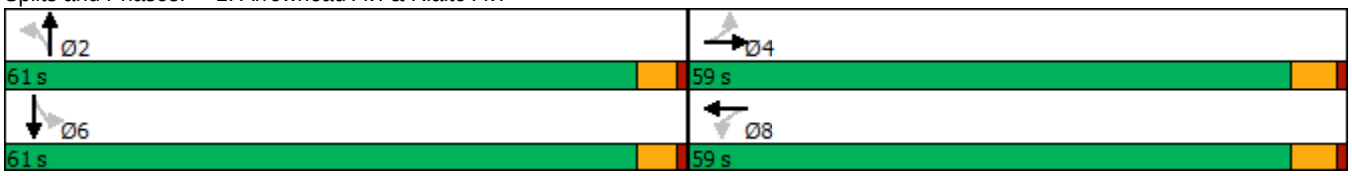
Cycle (sec):	100	Critical Vol./Cap.(X):	0.418
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

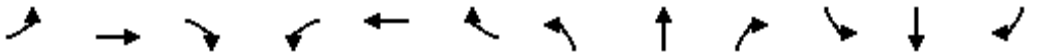
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	54	163	59	121	216	21	47	427	141	78	383	36
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	163	59	121	216	21	47	427	141	78	383	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	163	59	121	216	21	47	427	141	78	383	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	163	59	121	216	21	47	427	141	78	383	36
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:	54	163	59	121	216	21	47	427	141	78	383	36
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.47	0.53	1.00	1.82	0.18	1.00	1.50	0.50	1.00	1.83	0.17
Final Sat.:	1805	2790	1010	1805	3463	337	1805	2857	943	1805	3474	326
Capacity Analysis Module:												
Vol/Sat:	0.03	0.06	0.06	0.07	0.06	0.06	0.03	0.15	0.15	0.04	0.11	0.11
Crit Moves:		****			****			****			****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	47	427	78	383	54	163	121	216
Future Volume (vph)	47	427	78	383	54	163	121	216
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	59.0	59.0	59.0	59.0	61.0	61.0	61.0	61.0
Total Split (%)	49.2%	49.2%	49.2%	49.2%	50.8%	50.8%	50.8%	50.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	13.0	13.0	13.0	13.0	11.8	11.8	11.8	11.8
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.34	0.34	0.34	0.34
v/c Ratio	0.16	0.47	0.30	0.34	0.16	0.20	0.36	0.21
Control Delay	9.0	9.0	11.5	8.6	10.1	7.0	12.7	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	9.0	11.5	8.6	10.1	7.0	12.7	8.7
LOS	A	A	B	A	B	A	B	A
Approach Delay		9.0		9.0		7.6		10.1
Approach LOS		A		A		A		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 34.7	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Arrowhead Av. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	427	141	78	383	36	54	163	59	121	216	21
Future Volume (veh/h)	47	427	141	78	383	36	54	163	59	121	216	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	51	464	136	85	416	31	59	177	46	132	235	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	510	1056	307	439	1304	97	528	893	226	539	1089	60
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	958	2756	802	831	3403	253	1150	2853	722	1176	3476	191
Grp Volume(v), veh/h	51	303	297	85	220	227	59	110	113	132	121	127
Grp Sat Flow(s),veh/h/ln	958	1805	1753	831	1805	1851	1150	1805	1770	1176	1805	1863
Q Serve(g_s), s	1.3	4.0	4.0	2.7	2.7	2.8	1.3	1.4	1.5	3.0	1.6	1.6
Cycle Q Clear(g_c), s	4.0	4.0	4.0	6.7	2.7	2.8	2.9	1.4	1.5	4.5	1.6	1.6
Prop In Lane	1.00		0.46	1.00		0.14	1.00		0.41	1.00		0.10
Lane Grp Cap(c), veh/h	510	691	672	439	691	709	528	565	554	539	565	583
V/C Ratio(X)	0.10	0.44	0.44	0.19	0.32	0.32	0.11	0.20	0.20	0.24	0.21	0.22
Avail Cap(c_a), veh/h	1760	3047	2960	1524	3047	3124	2199	3188	3126	2248	3188	3290
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.3	7.3	7.3	9.8	6.9	6.9	9.1	8.0	8.0	9.7	8.1	8.1
Incr Delay (d2), s/veh	0.1	0.4	0.5	0.2	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.9	0.9	0.4	0.6	0.7	0.3	0.4	0.4	0.6	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.4	7.7	7.8	10.0	7.2	7.2	9.2	8.2	8.2	9.9	8.3	8.3
LnGrp LOS	A	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		651			532			282			380	
Approach Delay, s/veh		7.8			7.6			8.4			8.8	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		17.3		14.6		17.3				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		56.4		53.9		56.4		53.9				
Max Q Clear Time (g_c+I1), s		4.9		6.0		6.5		8.7				
Green Ext Time (p_c), s		1.7		4.4		2.2		3.4				

Intersection Summary												
HCM 6th Ctrl Delay			8.1									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	26	584	486	4	6	14
Future Vol, veh/h	26	584	486	4	6	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	28	635	528	4	7	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	532	0	-	0	904	266
Stage 1	-	-	-	-	530	-
Stage 2	-	-	-	-	374	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1046	-	-	-	280	738
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	672	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1046	-	-	-	272	738
Mov Cap-2 Maneuver	-	-	-	-	396	-
Stage 1	-	-	-	-	545	-
Stage 2	-	-	-	-	672	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1046	-	-	-	396	738
HCM Lane V/C Ratio	0.027	-	-	-	0.016	0.021
HCM Control Delay (s)	8.5	-	-	-	14.2	10
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0.1

S. Arrowhead Warehouse TA (JN:14660)
Horizon Year (2040) Without Project
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Sierra & Rialto

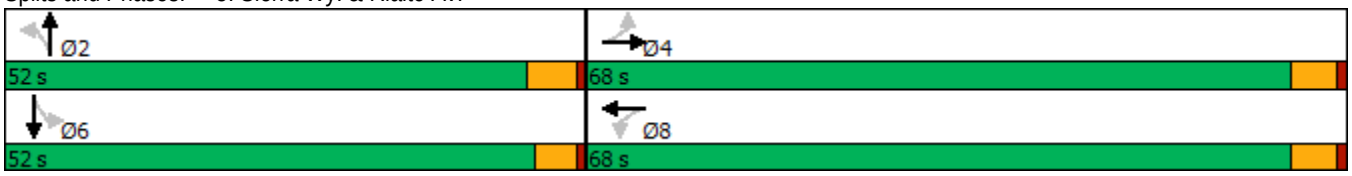
Cycle (sec):	100	Critical Vol./Cap.(X):	0.348
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	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 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	23	122	32	88	187	84	60	511	42	23	386	37
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	122	32	88	187	84	60	511	42	23	386	37
User Adj:	1.00	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:	23	122	32	88	187	84	60	511	42	23	386	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	122	32	88	187	84	60	511	42	23	386	37
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	23	122	32	88	187	84	60	511	42	23	386	37
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.58	0.42	1.00	1.38	0.62	1.00	1.85	0.15	1.00	1.83	0.17
Final Sat.:	1805	3010	790	1805	2622	1178	1805	3511	289	1805	3468	332
Capacity Analysis Module:												
Vol/Sat:	0.01	0.04	0.04	0.05	0.07	0.07	0.03	0.15	0.15	0.01	0.11	0.11
Crit Moves:		****			****			****			****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	60	510	23	386	23	122	88	187
Future Volume (vph)	60	510	23	386	23	122	88	187
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	68.0	68.0	68.0	68.0	52.0	52.0	52.0	52.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	12.3	12.3	12.3	12.3	10.4	10.4	11.2	11.2
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.31	0.31	0.34	0.34
v/c Ratio	0.20	0.45	0.09	0.35	0.08	0.15	0.25	0.25
Control Delay	8.7	8.9	7.5	8.1	10.0	8.0	10.9	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.7	8.9	7.5	8.1	10.0	8.0	10.9	7.2
LOS	A	A	A	A	B	A	B	A
Approach Delay		8.9		8.0		8.3		8.1
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 33.3	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 57.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Sierra Wy. & Rialto Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	510	40	23	386	37	23	122	32	88	187	84
Future Volume (veh/h)	60	510	40	23	386	37	23	122	32	88	187	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	65	554	39	25	420	28	25	133	26	96	203	69
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	474	1189	84	414	1194	79	522	964	184	586	848	279
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	957	3421	240	837	3436	228	1125	3023	577	1246	2659	875
Grp Volume(v), veh/h	65	292	301	25	220	228	25	78	81	96	136	136
Grp Sat Flow(s),veh/h/ln	957	1805	1856	837	1805	1859	1125	1805	1795	1246	1805	1729
Q Serve(g_s), s	1.7	4.0	4.0	0.8	2.9	2.9	0.5	1.0	1.0	1.9	1.7	1.8
Cycle Q Clear(g_c), s	4.6	4.0	4.0	4.7	2.9	2.9	2.4	1.0	1.0	2.9	1.7	1.8
Prop In Lane	1.00		0.13	1.00		0.12	1.00		0.32	1.00		0.51
Lane Grp Cap(c), veh/h	474	627	645	414	627	646	522	576	573	586	576	551
V/C Ratio(X)	0.14	0.47	0.47	0.06	0.35	0.35	0.05	0.14	0.14	0.16	0.24	0.25
Avail Cap(c_a), veh/h	2053	3606	3708	1794	3606	3714	1828	2671	2657	2064	2717	2603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.3	8.0	8.0	9.8	7.6	7.6	8.8	7.6	7.6	8.7	7.9	7.9
Incr Delay (d2), s/veh	0.1	0.5	0.5	0.1	0.3	0.3	0.0	0.1	0.1	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	1.0	0.1	0.7	0.7	0.1	0.2	0.2	0.4	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	8.5	8.5	9.9	8.0	8.0	8.8	7.7	7.8	8.8	8.1	8.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		658			473			184			368	
Approach Delay, s/veh		8.6			8.1			7.9			8.3	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		16.0		15.4		16.0				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		46.6		62.9		* 47		62.9				
Max Q Clear Time (g_c+I1), s		4.4		6.6		4.9		6.7				
Green Ext Time (p_c), s		1.0		4.3		2.2		3.0				

Intersection Summary		
HCM 6th Ctrl Delay	8.3	
HCM 6th LOS	A	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	175	0	5	245
Future Vol, veh/h	2	2	175	0	5	245
Conflicting Peds, #/hr	0	0	0	3	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	2	190	0	5	266

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	336	98	0	0	193	0
Stage 1	193	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	639	945	-	-	1392	-
Stage 1	827	-	-	-	-	-
Stage 2	875	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	635	942	-	-	1388	-
Mov Cap-2 Maneuver	676	-	-	-	-	-
Stage 1	825	-	-	-	-	-
Stage 2	872	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	787	1388	-
HCM Lane V/C Ratio	-	-	0.006	0.004	-
HCM Control Delay (s)	-	-	9.6	7.6	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

S. Arrowhead Warehouse TA (JN:14660)
Horizon Year (2040) Without Project
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Arrowhead & Rialto

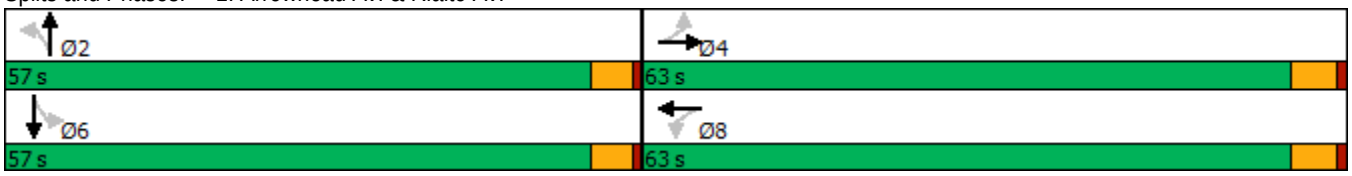
Cycle (sec):	100	Critical Vol./Cap.(X):	0.424
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	30	Level Of Service:	A

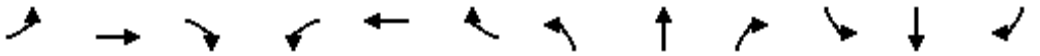
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	114	274	141	82	227	37	59	368	98	86	483	36
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	114	274	141	82	227	37	59	368	98	86	483	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	114	274	141	82	227	37	59	368	98	86	483	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	114	274	141	82	227	37	59	368	98	86	483	36
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:	114	274	141	82	227	37	59	368	98	86	483	36
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.32	0.68	1.00	1.72	0.28	1.00	1.58	0.42	1.00	1.86	0.14
Final Sat.:	1805	2509	1291	1805	3267	533	1805	3001	799	1805	3536	264
Capacity Analysis Module:												
Vol/Sat:	0.06	0.11	0.11	0.05	0.07	0.07	0.03	0.12	0.12	0.05	0.14	0.14
Crit Moves:		****			****			****			****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	52	299	67	409	49	200	73	212
Future Volume (vph)	52	299	67	409	49	200	73	212
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	11.0	11.0	11.0	11.0	10.4	10.4	10.4	10.4
Actuated g/C Ratio	0.35	0.35	0.35	0.35	0.33	0.33	0.33	0.33
v/c Ratio	0.19	0.31	0.22	0.38	0.15	0.25	0.23	0.22
Control Delay	8.8	7.6	9.1	8.4	9.0	7.0	9.9	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.8	7.6	9.1	8.4	9.0	7.0	9.9	7.8
LOS	A	A	A	A	A	A	A	A
Approach Delay		7.7		8.5		7.3		8.3
Approach LOS		A		A		A		A

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 31.1		
Natural Cycle: 50		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.38		
Intersection Signal Delay: 8.0	Intersection LOS: A	
Intersection Capacity Utilization 54.3%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 1: Arrowhead Av. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	299	63	67	409	32	49	200	71	73	212	33
Future Volume (veh/h)	52	299	63	67	409	32	49	200	71	73	212	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	57	325	61	73	445	31	53	217	65	79	230	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	467	1040	193	506	1174	82	562	918	268	546	1089	126
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	931	3032	562	1012	3423	238	1140	2748	800	1114	3258	378
Grp Volume(v), veh/h	57	192	194	73	234	242	53	140	142	79	126	131
Grp Sat Flow(s),veh/h/ln	931	1805	1789	1012	1805	1856	1140	1805	1743	1114	1805	1832
Q Serve(g_s), s	1.5	2.3	2.4	1.7	2.9	3.0	1.0	1.7	1.8	1.7	1.5	1.5
Cycle Q Clear(g_c), s	4.4	2.3	2.4	4.1	2.9	3.0	2.6	1.7	1.8	3.4	1.5	1.5
Prop In Lane	1.00		0.31	1.00		0.13	1.00		0.46	1.00		0.21
Lane Grp Cap(c), veh/h	467	619	613	506	619	636	562	603	582	546	603	612
V/C Ratio(X)	0.12	0.31	0.32	0.14	0.38	0.38	0.09	0.23	0.24	0.14	0.21	0.21
Avail Cap(c_a), veh/h	1942	3479	3448	2109	3479	3578	2171	3149	3041	2117	3149	3196
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.1	7.3	7.3	8.8	7.5	7.5	8.1	7.2	7.2	8.5	7.2	7.2
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.1	0.4	0.4	0.1	0.2	0.2	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.6	0.3	0.7	0.7	0.2	0.5	0.5	0.3	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.3	7.5	7.6	8.9	7.8	7.8	8.2	7.4	7.5	8.6	7.3	7.3
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		443			549			335			336	
Approach Delay, s/veh		7.8			8.0			7.6			7.6	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		15.4		14.6		15.4				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		52.4		57.9		52.4		57.9				
Max Q Clear Time (g_c+I1), s		4.6		6.4		5.4		6.1				
Green Ext Time (p_c), s		2.1		2.7		2.0		3.4				

Intersection Summary	
HCM 6th Ctrl Delay	7.8
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	426	495	4	2	16
Future Vol, veh/h	11	426	495	4	2	16
Conflicting Peds, #/hr	0	0	0	1	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	200
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	463	538	4	2	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	543	0	-	0	797	274
Stage 1	-	-	-	-	541	-
Stage 2	-	-	-	-	256	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1036	-	-	-	328	730
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	769	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1035	-	-	-	323	728
Mov Cap-2 Maneuver	-	-	-	-	430	-
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	768	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1035	-	-	-	430	728
HCM Lane V/C Ratio	0.012	-	-	-	0.005	0.024
HCM Control Delay (s)	8.5	-	-	-	13.4	10.1
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1

S. Arrowhead Warehouse TA (JN:14660)
Horizon Year (2040) Without Project
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Sierra & Rialto

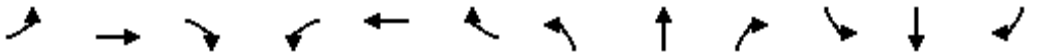
Cycle (sec):	100	Critical Vol./Cap.(X):	0.377
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	39	160	30	32	140	107	108	427	22	8	469	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	39	160	30	32	140	107	108	427	22	8	469	29
User Adj:	1.00	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:	39	160	30	32	140	107	108	427	22	8	469	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	160	30	32	140	107	108	427	22	8	469	29
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	39	160	30	32	140	107	108	427	22	8	469	29
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.68	0.32	1.00	1.13	0.87	1.00	1.90	0.10	1.00	1.88	0.12
Final Sat.:	1805	3200	600	1805	2154	1646	1805	3614	186	1805	3579	221
Capacity Analysis Module:												
Vol/Sat:	0.02	0.05	0.05	0.02	0.07	0.06	0.06	0.12	0.12	0.00	0.13	0.13
Crit Moves:	****				****		****				****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	98	312	6	378	29	122	24	120
Future Volume (vph)	98	312	6	378	29	122	24	120
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	77.0	77.0	77.0	77.0	43.0	43.0	43.0	43.0
Total Split (%)	64.2%	64.2%	64.2%	64.2%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	10.7	10.7	10.7	10.7	10.0	10.0	10.8	10.8
Actuated g/C Ratio	0.34	0.34	0.34	0.34	0.32	0.32	0.35	0.35
v/c Ratio	0.35	0.29	0.02	0.35	0.09	0.14	0.06	0.19
Control Delay	11.2	8.0	6.8	8.4	8.7	7.5	7.8	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	8.0	6.8	8.4	8.7	7.5	7.8	4.9
LOS	B	A	A	A	A	A	A	A
Approach Delay		8.7		8.4		7.7		5.2
Approach LOS		A		A		A		A

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 31.2			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.35			
Intersection Signal Delay: 7.8		Intersection LOS: A	
Intersection Capacity Utilization 54.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Sierra Wy. & Rialto Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	312	19	6	378	21	29	122	21	24	120	94
Future Volume (veh/h)	98	312	19	6	378	21	29	122	21	24	120	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	107	339	11	7	411	16	32	133	18	26	130	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	474	1208	39	510	1200	47	567	1049	140	602	736	405
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	975	3568	116	1045	3542	138	1192	3200	426	1251	2245	1234
Grp Volume(v), veh/h	107	171	179	7	209	218	32	74	77	26	103	103
Grp Sat Flow(s),veh/h/ln	975	1805	1879	1045	1805	1875	1192	1805	1821	1251	1805	1674
Q Serve(g_s), s	2.9	2.2	2.2	0.2	2.7	2.7	0.6	0.9	0.9	0.5	1.3	1.4
Cycle Q Clear(g_c), s	5.6	2.2	2.2	2.3	2.7	2.7	2.0	0.9	0.9	1.4	1.3	1.4
Prop In Lane	1.00		0.06	1.00		0.07	1.00		0.23	1.00		0.74
Lane Grp Cap(c), veh/h	474	611	636	510	611	635	567	592	597	602	592	549
V/C Ratio(X)	0.23	0.28	0.28	0.01	0.34	0.34	0.06	0.13	0.13	0.04	0.17	0.19
Avail Cap(c_a), veh/h	2370	4123	4292	2543	4123	4283	1601	2156	2175	1719	2202	2042
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.9	7.6	7.6	8.5	7.8	7.8	8.3	7.4	7.4	7.9	7.5	7.6
Incr Delay (d2), s/veh	0.2	0.2	0.2	0.0	0.3	0.3	0.0	0.1	0.1	0.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.6	0.6	0.0	0.7	0.7	0.1	0.2	0.2	0.1	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.1	7.9	7.8	8.5	8.1	8.1	8.3	7.5	7.5	7.9	7.7	7.7
LnGrp LOS	B	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		457			434			183			232	
Approach Delay, s/veh		8.4			8.1			7.7			7.7	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.7		15.8		15.7		15.8				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		37.6		71.9		* 38		71.9				
Max Q Clear Time (g_c+I1), s		4.0		7.6		3.4		4.7				
Green Ext Time (p_c), s		0.9		2.7		1.4		2.7				

Intersection Summary												
HCM 6th Ctrl Delay			8.1									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	170	0	0	144
Future Vol, veh/h	0	2	170	0	0	144
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	2	185	0	0	157

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	265	94	0	0	186	0
Stage 1	186	-	-	-	-	-
Stage 2	79	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	707	951	-	-	1401	-
Stage 1	833	-	-	-	-	-
Stage 2	941	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	706	950	-	-	1400	-
Mov Cap-2 Maneuver	719	-	-	-	-	-
Stage 1	832	-	-	-	-	-
Stage 2	941	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	950	1400	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	-	-	8.8	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

APPENDIX 7.2: HORIZON YEAR (2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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S. Arrowhead Warehouse TA (JN:14660)
Horizon Year (2040) With Project Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Arrowhead & Rialto

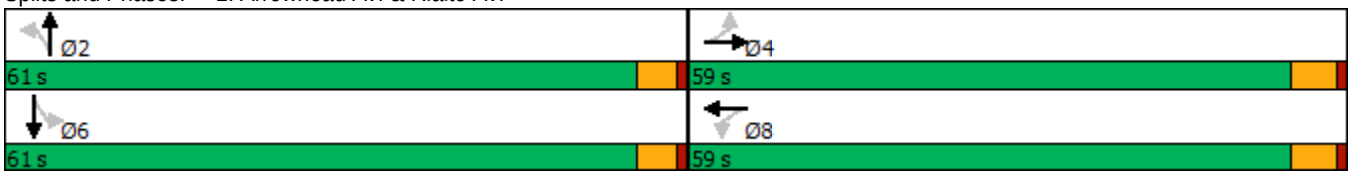
Cycle (sec):	100	Critical Vol./Cap.(X):	0.427
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	30	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		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 1	1	0	1	0 1	1	0	1	0 1	1	0	1	0 1	1	0
Volume Module:																
Base Vol:	54	163	59		121	216	21		47	427	141		78	383	36	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	54	163	59		121	216	21		47	427	141		78	383	36	
Added Vol:	0	2	6		3	9	0		0	9	0		5	2	1	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	54	165	65		124	225	21		47	436	141		83	385	37	
User Adj:	1.00	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:	54	165	65		124	225	21		47	436	141		83	385	37	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	54	165	65		124	225	21		47	436	141		83	385	37	
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:	54	165	65		124	225	21		47	436	141		83	385	37	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00	
Lanes:	1.00	1.43	0.57		1.00	1.83	0.17		1.00	1.51	0.49		1.00	1.82	0.18	
Final Sat.:	1805	2726	1074		1805	3476	324		1805	2871	929		1805	3467	333	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.06	0.06		0.07	0.06	0.06		0.03	0.15	0.15		0.05	0.11	0.11	
Crit Moves:		****				****				****				****		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	47	436	83	385	54	165	124	225
Future Volume (vph)	47	436	83	385	54	165	124	225
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	59.0	59.0	59.0	59.0	61.0	61.0	61.0	61.0
Total Split (%)	49.2%	49.2%	49.2%	49.2%	50.8%	50.8%	50.8%	50.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	13.3	13.3	13.3	13.3	12.2	12.2	12.2	12.2
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.34	0.34	0.34	0.34
v/c Ratio	0.16	0.47	0.32	0.34	0.16	0.20	0.37	0.22
Control Delay	9.3	9.3	12.2	8.8	10.3	7.0	13.0	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	9.3	12.2	8.8	10.3	7.0	13.0	8.9
LOS	A	A	B	A	B	A	B	A
Approach Delay		9.3		9.3		7.6		10.3
Approach LOS		A		A		A		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 35.6	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 9.2	Intersection LOS: A
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Arrowhead Av. & Rialto Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	436	141	83	385	37	54	165	65	124	225	21
Future Volume (veh/h)	47	436	141	83	385	37	54	165	65	124	225	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	51	474	136	90	418	32	59	179	53	135	245	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	513	1081	308	440	1324	101	516	857	246	527	1079	57
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	955	2771	790	823	3396	259	1139	2766	796	1167	3485	184
Grp Volume(v), veh/h	51	308	302	90	221	229	59	115	117	135	126	132
Grp Sat Flow(s),veh/h/ln	955	1805	1756	823	1805	1850	1139	1805	1757	1167	1805	1864
Q Serve(g_s), s	1.3	4.0	4.1	2.9	2.8	2.8	1.3	1.5	1.6	3.1	1.7	1.7
Cycle Q Clear(g_c), s	4.0	4.0	4.1	7.0	2.8	2.8	3.0	1.5	1.6	4.7	1.7	1.7
Prop In Lane	1.00		0.45	1.00		0.14	1.00		0.45	1.00		0.10
Lane Grp Cap(c), veh/h	513	704	685	440	704	721	516	559	544	527	559	577
V/C Ratio(X)	0.10	0.44	0.44	0.20	0.31	0.32	0.11	0.21	0.22	0.26	0.23	0.23
Avail Cap(c_a), veh/h	1735	3013	2931	1493	3013	3087	2153	3153	3068	2203	3153	3256
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.3	7.2	7.3	9.8	6.8	6.9	9.4	8.2	8.2	10.0	8.3	8.3
Incr Delay (d2), s/veh	0.1	0.4	0.4	0.2	0.3	0.3	0.1	0.2	0.2	0.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.0	0.9	0.4	0.6	0.7	0.3	0.5	0.5	0.6	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	7.7	7.7	10.1	7.1	7.1	9.5	8.4	8.4	10.2	8.5	8.5
LnGrp LOS	A	A	A	B	A	A	A	A	A	B	A	A
Approach Vol, veh/h		661			540			291			393	
Approach Delay, s/veh		7.7			7.6			8.6			9.1	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.6		17.7		14.6		17.7				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		56.4		53.9		56.4		53.9				
Max Q Clear Time (g_c+I1), s		5.0		6.1		6.7		9.0				
Green Ext Time (p_c), s		1.8		4.4		2.3		3.5				

Intersection Summary												
HCM 6th Ctrl Delay			8.1									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	2	270	8	9	355
Future Vol, veh/h	4	2	270	8	9	355
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	2	293	9	10	386

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	511	151	0	0	302	0
Stage 1	298	-	-	-	-	-
Stage 2	213	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	497	875	-	-	1270	-
Stage 1	733	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	493	875	-	-	1270	-
Mov Cap-2 Maneuver	573	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	802	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	647	1270	-
HCM Lane V/C Ratio	-	-	0.01	0.008	-
HCM Control Delay (s)	-	-	10.6	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	596	5	3	491	4	3	2	1	6	9	14
Future Vol, veh/h	26	596	5	3	491	4	3	2	1	6	9	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	28	648	5	3	534	4	3	2	1	7	10	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	538	0	0	653	0	0	985	1251	327	923	1251	269
Stage 1	-	-	-	-	-	-	707	707	-	542	542	-
Stage 2	-	-	-	-	-	-	278	544	-	381	709	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1040	-	-	943	-	-	205	174	675	228	174	735
Stage 1	-	-	-	-	-	-	397	441	-	497	523	-
Stage 2	-	-	-	-	-	-	711	522	-	619	440	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1040	-	-	943	-	-	191	169	675	221	169	735
Mov Cap-2 Maneuver	-	-	-	-	-	-	300	286	-	343	290	-
Stage 1	-	-	-	-	-	-	386	429	-	484	521	-
Stage 2	-	-	-	-	-	-	681	520	-	598	428	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	16.3	13.8
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	325	1040	-	-	943	-	-	309	735
HCM Lane V/C Ratio	0.02	0.027	-	-	0.003	-	-	0.053	0.021
HCM Control Delay (s)	16.3	8.6	-	-	8.8	-	-	17.3	10
HCM Lane LOS	C	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	590	7	6	471	5	2
Future Vol, veh/h	590	7	6	471	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	641	8	7	512	5	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	649	0	915	325
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	270	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	947	-	276	677
Stage 1	-	-	-	-	490	-
Stage 2	-	-	-	-	757	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	947	-	274	677
Mov Cap-2 Maneuver	-	-	-	-	386	-
Stage 1	-	-	-	-	490	-
Stage 2	-	-	-	-	752	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	440	-	-	947	-
HCM Lane V/C Ratio	0.017	-	-	0.007	-
HCM Control Delay (s)	13.3	-	-	8.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

S. Arrowhead Warehouse TA (JN:14660)
Horizon Year (2040) With Project Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Sierra & Rialto

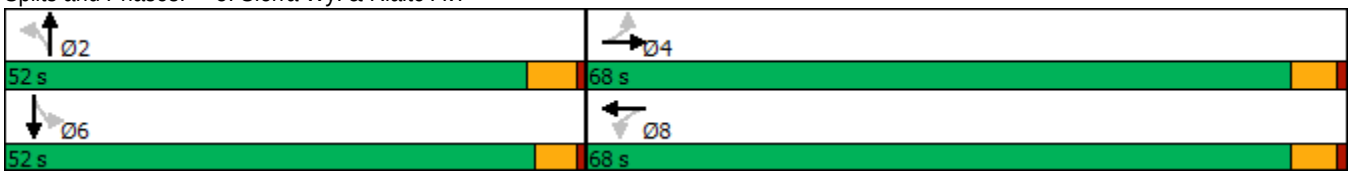
Cycle (sec):	100	Critical Vol./Cap.(X):	0.350
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	23	122	32	88	187	84	60	511	42	23	386	37
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	122	32	88	187	84	60	511	42	23	386	37
Added Vol:	1	2	0	0	9	0	0	2	5	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	24	124	32	88	196	84	60	513	47	23	395	37
User Adj:	1.00	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:	24	124	32	88	196	84	60	513	47	23	395	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	124	32	88	196	84	60	513	47	23	395	37
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:	24	124	32	88	196	84	60	513	47	23	395	37
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.59	0.41	1.00	1.40	0.60	1.00	1.83	0.17	1.00	1.83	0.17
Final Sat.:	1805	3021	779	1805	2660	1140	1805	3481	319	1805	3475	325
Capacity Analysis Module:												
Vol/Sat:	0.01	0.04	0.04	0.05	0.07	0.07	0.03	0.15	0.15	0.01	0.11	0.11
Crit Moves:		****		****				****		****		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	60	512	23	395	24	124	88	196
Future Volume (vph)	60	512	23	395	24	124	88	196
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	68.0	68.0	68.0	68.0	52.0	52.0	52.0	52.0
Total Split (%)	56.7%	56.7%	56.7%	56.7%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	12.4	12.4	12.4	12.4	10.6	10.6	11.4	11.4
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.32	0.32	0.34	0.34
v/c Ratio	0.20	0.46	0.09	0.35	0.08	0.15	0.24	0.25
Control Delay	9.0	9.1	7.7	8.3	10.0	8.0	10.9	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	9.1	7.7	8.3	10.0	8.0	10.9	7.5
LOS	A	A	A	A	B	A	B	A
Approach Delay		9.1		8.2		8.3		8.3
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 33.6	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Sierra Wy. & Rialto Av.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	512	45	23	395	37	24	124	32	88	196	84
Future Volume (veh/h)	60	512	45	23	395	37	24	124	32	88	196	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	65	557	45	25	429	28	26	135	26	96	213	69
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	473	1188	96	412	1208	79	513	961	181	581	854	269
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	949	3383	273	830	3441	224	1115	3031	571	1244	2693	847
Grp Volume(v), veh/h	65	297	305	25	224	233	26	79	82	96	141	141
Grp Sat Flow(s),veh/h/ln	949	1805	1850	830	1805	1860	1115	1805	1797	1244	1805	1735
Q Serve(g_s), s	1.7	4.0	4.1	0.8	2.9	2.9	0.6	1.0	1.0	1.9	1.8	1.9
Cycle Q Clear(g_c), s	4.7	4.0	4.1	4.8	2.9	2.9	2.5	1.0	1.0	2.9	1.8	1.9
Prop In Lane	1.00		0.15	1.00		0.12	1.00		0.32	1.00		0.49
Lane Grp Cap(c), veh/h	473	634	650	412	634	653	513	573	570	581	573	550
V/C Ratio(X)	0.14	0.47	0.47	0.06	0.35	0.36	0.05	0.14	0.14	0.17	0.25	0.26
Avail Cap(c_a), veh/h	2026	3587	3677	1770	3587	3695	1801	2657	2645	2049	2703	2598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.3	8.0	8.0	9.9	7.6	7.6	9.0	7.7	7.7	8.8	8.0	8.0
Incr Delay (d2), s/veh	0.1	0.5	0.5	0.1	0.3	0.3	0.0	0.1	0.1	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	1.0	0.1	0.7	0.8	0.1	0.2	0.2	0.4	0.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	8.5	8.5	9.9	7.9	7.9	9.0	7.8	7.8	8.9	8.2	8.3
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		667			482			187			378	
Approach Delay, s/veh		8.6			8.0			8.0			8.4	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		16.2		15.4		16.2				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		46.6		62.9		* 47		62.9				
Max Q Clear Time (g_c+I1), s		4.5		6.7		4.9		6.8				
Green Ext Time (p_c), s		1.0		4.4		2.3		3.0				

Intersection Summary												
HCM 6th Ctrl Delay			8.3									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	0	1	2	0	2	6	175	0	5	250	9
Future Vol, veh/h	3	0	1	2	0	2	6	175	0	5	250	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	0	1	2	0	2	7	190	0	5	272	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	396	494	141	353	499	98	282	0	0	193	0	0
Stage 1	287	287	-	207	207	-	-	-	-	-	-	-
Stage 2	109	207	-	146	292	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	543	479	888	582	476	945	1292	-	-	1392	-	-
Stage 1	702	678	-	781	734	-	-	-	-	-	-	-
Stage 2	890	734	-	848	675	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	538	473	888	576	470	942	1292	-	-	1388	-	-
Mov Cap-2 Maneuver	590	534	-	629	530	-	-	-	-	-	-	-
Stage 1	698	675	-	775	728	-	-	-	-	-	-	-
Stage 2	883	728	-	844	672	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	9.8	0.3	0.1
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1292	-	-	644	754	1388	-	-
HCM Lane V/C Ratio	0.005	-	-	0.007	0.006	0.004	-	-
HCM Control Delay (s)	7.8	-	-	10.6	9.8	7.6	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	0	185	213	5
Future Vol, veh/h	0	1	0	185	213	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	0	201	232	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	119	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	917	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	917	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	917	-	-
HCM Lane V/C Ratio	-	0.001	-	-
HCM Control Delay (s)	-	8.9	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

S. Arrowhead Warehouse TA (JN:14660)
Horizon Year (2040) With Project Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Arrowhead & Rialto

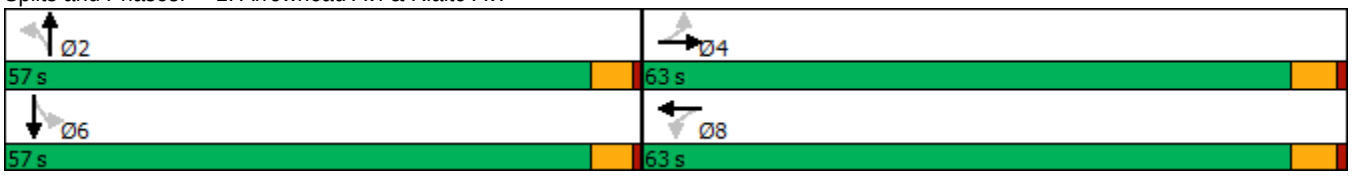
Cycle (sec):	100	Critical Vol./Cap.(X):	0.431
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	30	Level Of Service:	A

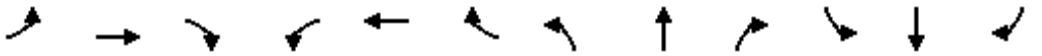
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	114	274	141	82	227	37	59	368	98	86	483	36
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	114	274	141	82	227	37	59	368	98	86	483	36
Added Vol:	0	8	6	1	3	0	0	3	0	8	8	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	114	282	147	83	230	37	59	371	98	94	491	39
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	114	282	147	83	230	37	59	371	98	94	491	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	114	282	147	83	230	37	59	371	98	94	491	39
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:	114	282	147	83	230	37	59	371	98	94	491	39
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	1.00	1.31	0.69	1.00	1.72	0.28	1.00	1.58	0.42	1.00	1.85	0.15
Final Sat.:	1805	2498	1302	1805	3273	527	1805	3006	794	1805	3520	280
Capacity Analysis Module:												
Vol/Sat:	0.06	0.11	0.11	0.05	0.07	0.07	0.03	0.12	0.12	0.05	0.14	0.14
Crit Moves:	****			****			****				****	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	59	371	94	491	114	282	83	230
Future Volume (vph)	59	371	94	491	114	282	83	230
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	23.6	23.6	23.6	23.6
Total Split (s)	63.0	63.0	63.0	63.0	57.0	57.0	57.0	57.0
Total Split (%)	52.5%	52.5%	52.5%	52.5%	47.5%	47.5%	47.5%	47.5%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.6	4.6	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	13.3	13.3	13.3	13.3	12.7	12.7	12.7	12.7
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.35	0.35	0.35	0.35
v/c Ratio	0.22	0.39	0.33	0.44	0.34	0.37	0.29	0.23
Control Delay	10.7	8.9	12.2	9.8	12.5	8.0	12.3	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.7	8.9	12.2	9.8	12.5	8.0	12.3	8.6
LOS	B	A	B	A	B	A	B	A
Approach Delay		9.1		10.2		9.0		9.5
Approach LOS		A		B		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 36	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 60.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Arrowhead Av. & Rialto Av.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	371	98	94	491	39	114	282	147	83	230	37
Future Volume (veh/h)	59	371	98	94	491	39	114	282	147	83	230	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	64	403	100	102	534	38	124	307	148	90	250	31
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	447	1112	273	474	1327	94	512	770	362	423	1051	129
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	852	2863	703	909	3418	243	1116	2371	1115	951	3236	397
Grp Volume(v), veh/h	64	252	251	102	282	290	124	232	223	90	138	143
Grp Sat Flow(s),veh/h/ln	852	1805	1761	909	1805	1855	1116	1805	1681	951	1805	1829
Q Serve(g_s), s	2.0	3.4	3.4	3.0	3.8	3.8	3.1	3.4	3.5	2.8	1.9	1.9
Cycle Q Clear(g_c), s	5.8	3.4	3.4	6.5	3.8	3.8	5.0	3.4	3.5	6.2	1.9	1.9
Prop In Lane	1.00		0.40	1.00		0.13	1.00		0.66	1.00		0.22
Lane Grp Cap(c), veh/h	447	701	684	474	701	720	512	586	546	423	586	594
V/C Ratio(X)	0.14	0.36	0.37	0.22	0.40	0.40	0.24	0.40	0.41	0.21	0.24	0.24
Avail Cap(c_a), veh/h	1577	3093	3018	1678	3093	3179	1879	2799	2607	1589	2799	2836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.6	7.4	7.4	9.7	7.5	7.5	10.2	8.8	8.9	11.3	8.3	8.4
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.2	0.4	0.4	0.2	0.4	0.5	0.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.8	0.8	0.4	0.9	1.0	0.6	1.0	1.0	0.5	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.8	7.7	7.7	9.9	7.9	7.9	10.4	9.3	9.4	11.6	8.5	8.6
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		567			674			579			371	
Approach Delay, s/veh		7.9			8.2			9.6			9.3	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.6		18.2		15.6		18.2				
Change Period (Y+Rc), s		4.6		5.1		4.6		5.1				
Max Green Setting (Gmax), s		52.4		57.9		52.4		57.9				
Max Q Clear Time (g_c+I1), s		7.0		7.8		8.2		8.5				
Green Ext Time (p_c), s		3.9		3.7		2.4		4.4				

Intersection Summary												
HCM 6th Ctrl Delay			8.7									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	8	378	5	3	403
Future Vol, veh/h	9	8	378	5	3	403
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	10	9	411	5	3	438

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	639	208	0	0	416	0
Stage 1	414	-	-	-	-	-
Stage 2	225	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	413	804	-	-	1154	-
Stage 1	641	-	-	-	-	-
Stage 2	797	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	412	804	-	-	1154	-
Mov Cap-2 Maneuver	507	-	-	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	795	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	614	1154	-
HCM Lane V/C Ratio	-	-	0.03	0.003	-
HCM Control Delay (s)	-	-	11	8.1	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	555	3	1	585	7	5	8	3	2	3	18
Future Vol, veh/h	23	555	3	1	585	7	5	8	3	2	3	18
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	25	603	3	1	636	8	5	9	3	2	3	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	645	0	0	606	0	0	979	1302	303	999	1299	325
Stage 1	-	-	-	-	-	-	655	655	-	643	643	-
Stage 2	-	-	-	-	-	-	324	647	-	356	656	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	950	-	-	982	-	-	207	162	699	201	163	677
Stage 1	-	-	-	-	-	-	426	466	-	433	472	-
Stage 2	-	-	-	-	-	-	668	470	-	640	465	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	949	-	-	982	-	-	195	157	699	191	158	675
Mov Cap-2 Maneuver	-	-	-	-	-	-	310	277	-	310	283	-
Stage 1	-	-	-	-	-	-	415	454	-	421	471	-
Stage 2	-	-	-	-	-	-	642	469	-	608	453	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	16.7	12
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	325	949	-	-	982	-	-	293	675
HCM Lane V/C Ratio	0.054	0.026	-	-	0.001	-	-	0.019	0.029
HCM Control Delay (s)	16.7	8.9	-	-	8.7	-	-	17.5	10.5
HCM Lane LOS	C	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.1	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	502	4	2	588	10	5
Future Vol, veh/h	502	4	2	588	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	546	4	2	639	11	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	550	0	872	275
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	324	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1030	-	294	729
Stage 1	-	-	-	-	549	-
Stage 2	-	-	-	-	711	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1030	-	293	729
Mov Cap-2 Maneuver	-	-	-	-	412	-
Stage 1	-	-	-	-	549	-
Stage 2	-	-	-	-	710	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	482	-	-	1030	-
HCM Lane V/C Ratio	0.034	-	-	0.002	-
HCM Control Delay (s)	12.7	-	-	8.5	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

S. Arrowhead Warehouse TA (JN:14660)
Horizon Year (2040) With Project Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Sierra & Rialto

Cycle (sec):	100	Critical Vol./Cap.(X):	0.381
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		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	1	1	0	1	0	1	1	0	1	0	1	0	1	1	0
Volume Module:																
Base Vol:	39	160	30		32	140	107		108	427	22		8	469	29	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	39	160	30		32	140	107		108	427	22		8	469	29	
Added Vol:	3	8	0		0	3	0		0	8	3		0	3	0	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	42	168	30		32	143	107		108	435	25		8	472	29	
User Adj:	1.00	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:	42	168	30		32	143	107		108	435	25		8	472	29	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	42	168	30		32	143	107		108	435	25		8	472	29	
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:	42	168	30		32	143	107		108	435	25		8	472	29	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00	
Lanes:	1.00	1.70	0.30		1.00	1.14	0.86		1.00	1.89	0.11		1.00	1.88	0.12	
Final Sat.:	1805	3224	576		1805	2174	1626		1805	3593	207		1805	3580	220	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.05	0.05		0.02	0.07	0.07		0.06	0.12	0.12		0.00	0.13	0.13	
Crit Moves:	****					****			****					****		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	108	435	8	472	42	168	32	143
Future Volume (vph)	108	435	8	472	42	168	32	143
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.1	24.1	24.1	24.1	24.4	24.4	23.6	23.6
Total Split (s)	77.0	77.0	77.0	77.0	43.0	43.0	43.0	43.0
Total Split (%)	64.2%	64.2%	64.2%	64.2%	35.8%	35.8%	35.8%	35.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.4	5.4	4.6	4.6
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	12.2	12.2	12.2	12.2	10.1	10.1	10.9	10.9
Actuated g/C Ratio	0.37	0.37	0.37	0.37	0.31	0.31	0.33	0.33
v/c Ratio	0.39	0.37	0.03	0.41	0.14	0.20	0.10	0.23
Control Delay	11.6	8.1	6.2	8.3	11.0	9.1	9.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	8.1	6.2	8.3	11.0	9.1	9.8	6.0
LOS	B	A	A	A	B	A	A	A
Approach Delay		8.7		8.3		9.4		6.4
Approach LOS		A		A		A		A

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 32.9			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.41			
Intersection Signal Delay: 8.3		Intersection LOS: A	
Intersection Capacity Utilization 57.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: Sierra Wy. & Rialto Av.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	435	25	8	472	29	42	168	30	32	143	107
Future Volume (veh/h)	108	435	25	8	472	29	42	168	30	32	143	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	117	473	17	9	513	25	46	183	28	35	155	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	463	1395	50	485	1375	67	493	948	143	515	677	372
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	880	3554	128	919	3503	170	1151	3144	473	1185	2245	1234
Grp Volume(v), veh/h	117	240	250	9	264	274	46	104	107	35	123	122
Grp Sat Flow(s),veh/h/ln	880	1805	1876	919	1805	1869	1151	1805	1812	1185	1805	1674
Q Serve(g_s), s	3.7	3.2	3.2	0.2	3.6	3.6	1.1	1.5	1.5	0.8	1.8	1.9
Cycle Q Clear(g_c), s	7.3	3.2	3.2	3.4	3.6	3.6	3.0	1.5	1.5	2.3	1.8	1.9
Prop In Lane	1.00		0.07	1.00		0.09	1.00		0.26	1.00		0.74
Lane Grp Cap(c), veh/h	463	708	736	485	708	733	493	544	546	515	544	505
V/C Ratio(X)	0.25	0.34	0.34	0.02	0.37	0.37	0.09	0.19	0.20	0.07	0.23	0.24
Avail Cap(c_a), veh/h	1962	3783	3932	2050	3783	3916	1408	1978	1986	1484	2020	1873
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.0	7.3	7.3	8.5	7.4	7.4	10.1	8.9	8.9	9.7	9.0	9.0
Incr Delay (d2), s/veh	0.3	0.3	0.3	0.0	0.3	0.3	0.1	0.2	0.2	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.8	0.8	0.0	0.9	0.9	0.2	0.4	0.4	0.2	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.3	7.6	7.6	8.5	7.7	7.7	10.2	9.0	9.1	9.8	9.2	9.3
LnGrp LOS	B	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		607			547			257			280	
Approach Delay, s/veh		8.1			7.8			9.3			9.3	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.7		18.6		15.7		18.6				
Change Period (Y+Rc), s		5.4		5.1		* 5.4		5.1				
Max Green Setting (Gmax), s		37.6		71.9		* 38		71.9				
Max Q Clear Time (g_c+I1), s		5.0		9.3		4.3		5.6				
Green Ext Time (p_c), s		1.3		3.9		1.8		3.5				

Intersection Summary												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱		↰	↑↑↱	
Traffic Vol, veh/h	11	0	3	0	0	2	2	226	0	0	174	3
Future Vol, veh/h	11	0	3	0	0	2	2	226	0	0	174	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	0	3	0	0	2	2	246	0	0	189	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	318	442	96	346	443	124	192	0	0	247	0	0
Stage 1	191	191	-	251	251	-	-	-	-	-	-	-
Stage 2	127	251	-	95	192	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	616	513	948	589	512	910	1394	-	-	1331	-	-
Stage 1	798	746	-	737	703	-	-	-	-	-	-	-
Stage 2	869	703	-	907	745	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	614	512	948	586	511	909	1394	-	-	1330	-	-
Mov Cap-2 Maneuver	657	563	-	628	562	-	-	-	-	-	-	-
Stage 1	797	746	-	736	702	-	-	-	-	-	-	-
Stage 2	866	702	-	904	745	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	9	0.1	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1394	-	-	703	909	1330	-	-
HCM Lane V/C Ratio	0.002	-	-	0.022	0.002	-	-	-
HCM Control Delay (s)	7.6	-	-	10.2	9	0	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	197	175	3
Future Vol, veh/h	0	3	0	197	175	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	0	214	190	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	97	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	947	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	947	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	947	-	-
HCM Lane V/C Ratio	-	0.003	-	-
HCM Control Delay (s)	-	8.8	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

APPENDIX 7.3: HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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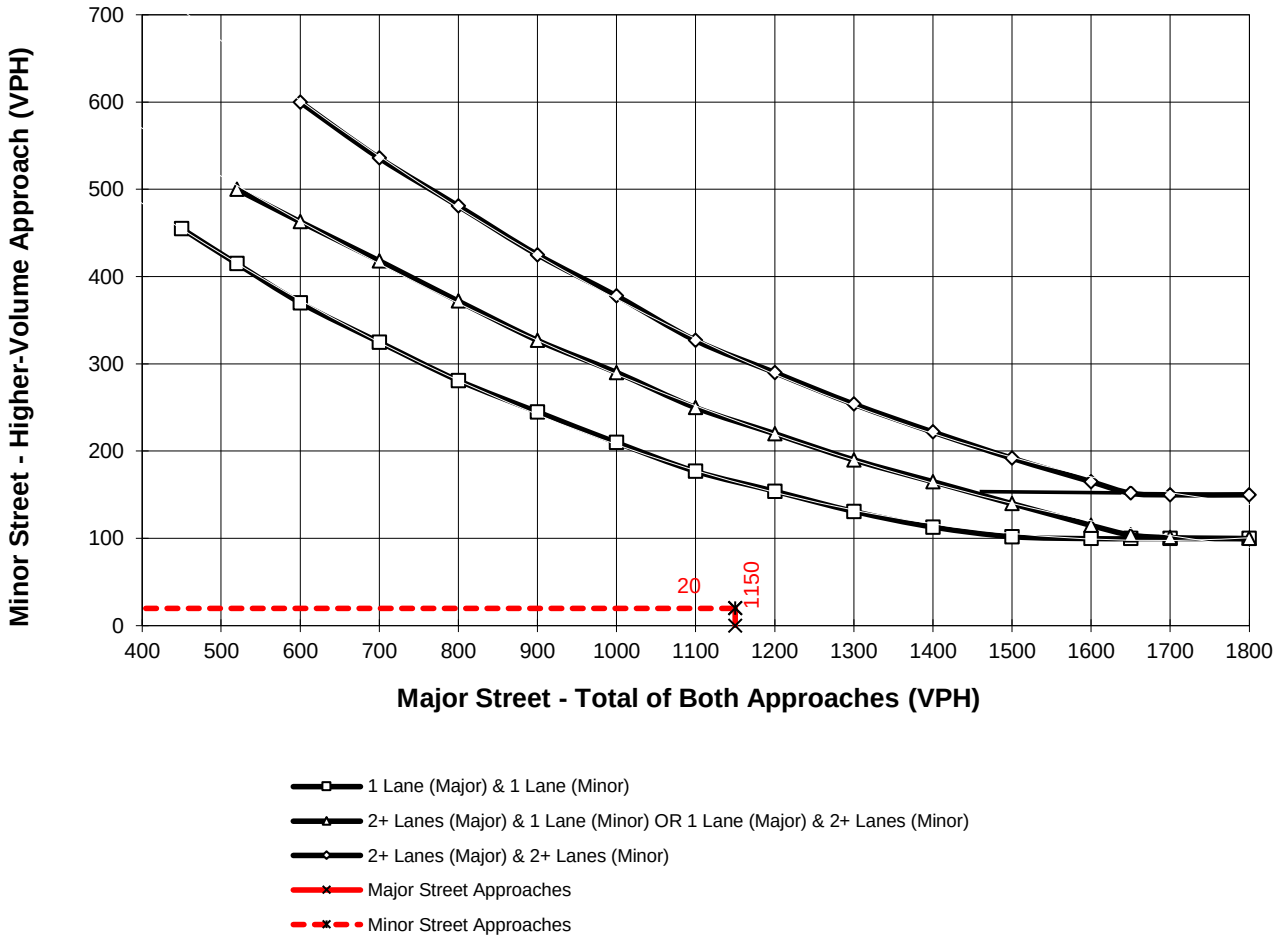
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **Horizon Year (2040) Without Project Conditions - Weekday PM Peak Hour**

Major Street Name = **Mountain View Av.**
Total of Both Approaches (VPH) = **1150**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Rialto Av.**
High Volume Approach (VPH) = **20**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **Horizon Year (2040) Without Project Conditions - Weekday AM Peak Hour**

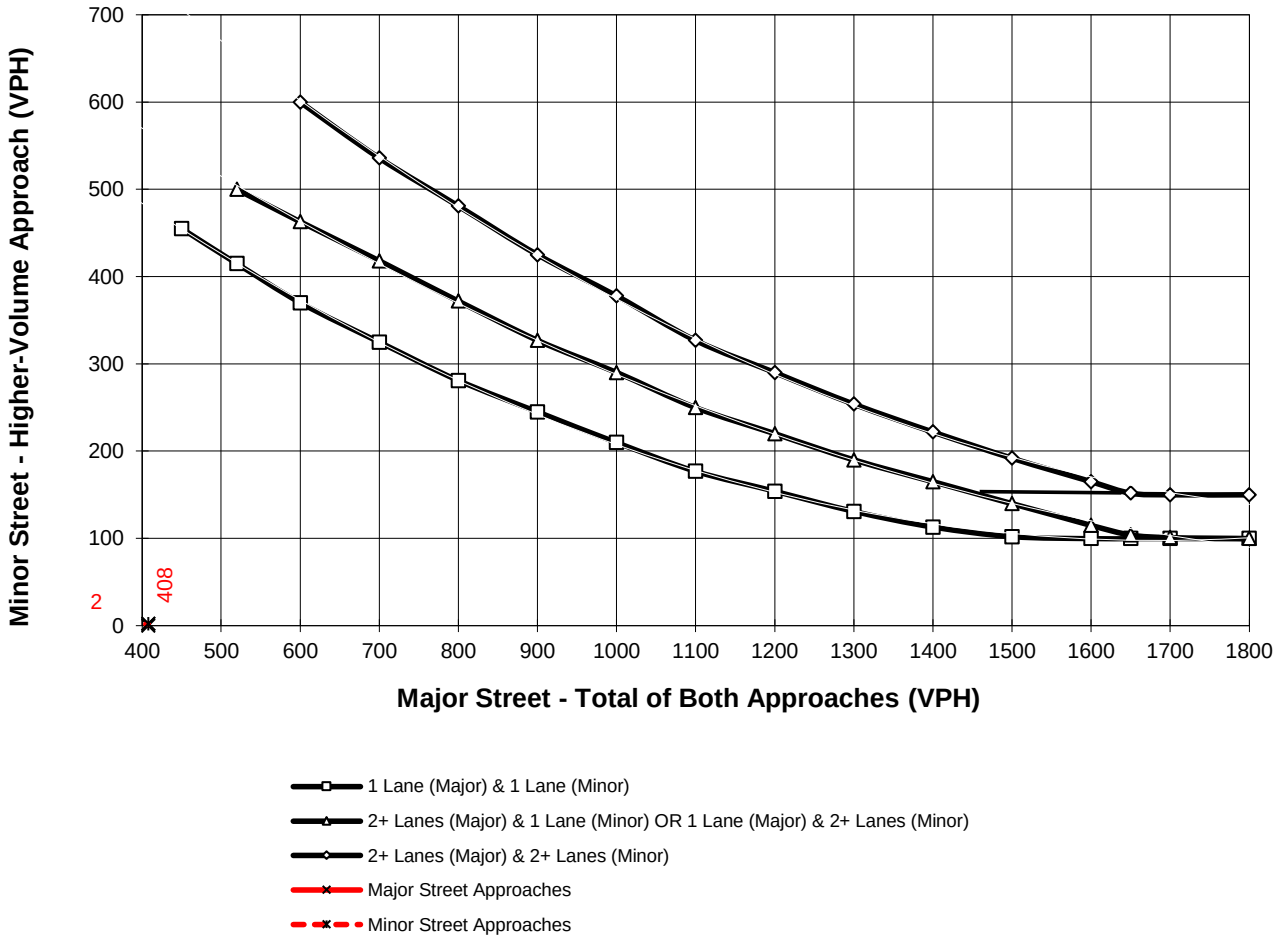
Major Street Name = **Sierra Wy.**

Total of Both Approaches (VPH) = **408**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Private Dwy.**

High Volume Approach (VPH) = **2**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

APPENDIX 7.4: HORIZON YEAR (2040) WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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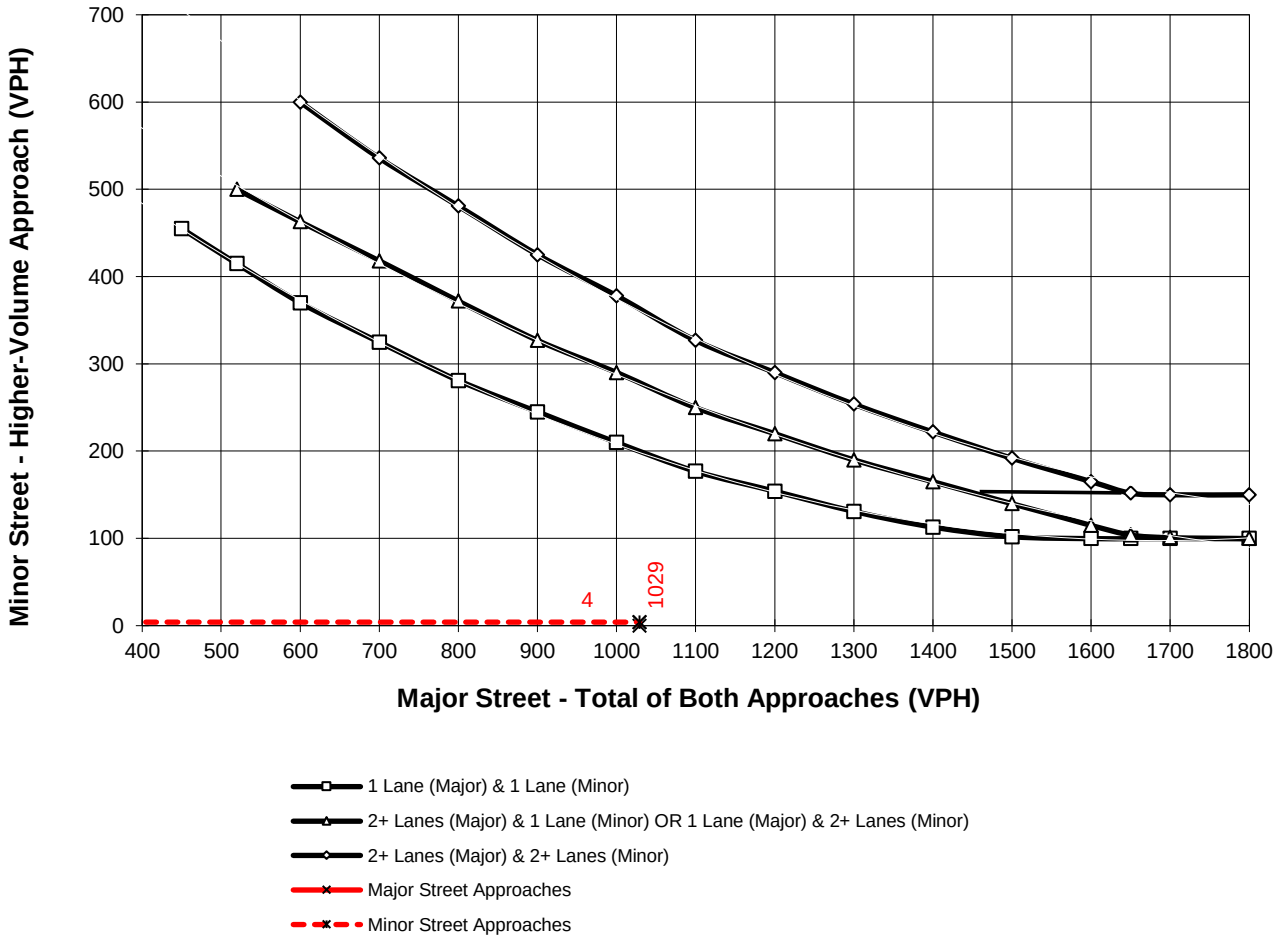
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **Horizon Year (2040) With Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Mountain View Av.**
Total of Both Approaches (VPH) = **1029**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Rialto Av.**
High Volume Approach (VPH) = **4**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM		TRAFFIC CONDITIONS		Year (2040) With
				CALC	CP	DATE	04/29/22
Jurisdiction:	City of San Bernardino			CHK	CP	DATE	04/29/22
Major Street:	Arrowhead Av.				Critical Approach Speed (Major)		35 mph
Minor Street:	Driveway 1				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane

Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **7,487** vpd

Minor Street Future ADT = **87** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……..

or

In built up area of isolated community of < 10,000 population ……

URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **7,487**	*1* **87**	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **7,487**	*1* **87**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 4% **B** 7%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		ı Year (2040) With
				CALC CP	DATE	04/29/22
Jurisdiction: **City of San Bernardino**				CHK CP	DATE	04/29/22
Major Street: **Rialto Av.**				Critical Approach Speed (Major)		40 mph
Minor Street: **Driveway 4**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **10,559** vpd Minor Street Future ADT = **76** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. [ ]

or **RURAL (R)**

In built up area of isolated community of < 10,000 population …… [ ]

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **10,559**	*1* **76**	9,600 *	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic					
Satisfied	Not Satisfied	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **10,559**	*1* **76**	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 3% **B** 6%		2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		ı Year (2040) With
				CALC CP	DATE	04/29/22
Jurisdiction: **City of San Bernardino**				CHK CP	DATE	04/29/22
Major Street: **Rialto Av.**				Critical Approach Speed (Major)		40 mph
Minor Street: **Driveway 5**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **3,721** vpd Minor Street Future ADT = **67** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. [ ]

or **RURAL (R)**

In built up area of isolated community of < 10,000 population …… [ ]

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied: XX / Not Satisfied: XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach				
Major Street: 1 / Minor Street: 1	8,000	5,600	2,400	1,680
Major Street: 2 + **3,721** / Minor Street: 1 **67**	9,600	6,720	2,400	1,680
Major Street: 2 + / Minor Street: 2 +	9,600	6,720	3,200	2,240
Major Street: 1 / Minor Street: 2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach				
Major Street: 1 / Minor Street: 1	12,000	8,400	1,200	850
Major Street: 2 + **3,721** / Minor Street: 1 **67**	14,400	10,080	1,200	850
Major Street: 2 + / Minor Street: 2 +	14,400	10,080	1,600	1,120
Major Street: 1 / Minor Street: 2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 3% B: 6%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.