

Appendix FEIR-10
Supplemental Letter Memorandum

Responses to Traffic Comments

To: City of Jurupa Valley

From: Jason Melchor, PE

Date: August 16, 2023

Subject: Response to Traffic Comment A-31 – Districts at Jurupa Valley Project
Jurupa Valley, CA

Kimley-Horn is pleased to submit the following responses based on the DEIR Public Comments from the City of Riverside received on July 31, 2023 for the Districts at Jurupa Valley project (the Project).

- Comment No. A-31, "Please also include the intersection of Mission Inn Boulevard and Redwood Drive as one of the study area intersections in the traffic study." EIR Section Appendix D20.1 Traffic Impact Analysis from City of Riverside.

Response: The intersection of Mission Inn Avenue at Redwood Drive was analyzed under Opening Year 2026 and Opening Year 2026 Plus Project – Option 3 conditions. Currently there are sign restrictions that limit eastbound and westbound left turns from Mission Inn Avenue onto Redwood Drive during the PM peak hour, which has been reflected in the analysis. Results of the analysis are shown on Table 1. As shown on Table 1, the intersection would operate at an acceptable Level of Service (LOS). The increase in delay with the project would be 9.9 seconds.

Based on the City of Riverside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (July 2020), intersection improvements are required when the addition of project traffic causes an intersection operating at LOS D to increase by 5 seconds.

Considering striping an exclusive eastbound right-turn lane or providing a 19' shared through/right-turn lane that provides enough room for right-turners to proceed while through traffic can queue (i.e., defacto right-turn) would allow for operations to return to pre-project conditions. LOS results with this improvement are shown on Table 1 (previously mentioned).

TABLE 1
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2026 CUMULATIVE PLUS PROJECT OPTION 3 (HALL AVE/MARKET ST/RUBIDOUX BLVD)

Int. #	Intersection	Traffic Control	AM Peak Hour						PM Peak Hour					
			Without Project		With Project		With Improvements		Without Project		With Project		With Improvements	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
#	Redwood Drive at Mission Inn Avenue	S	22.1	C	23.2	C	21.7	C	44.4	D	54.3	D	33.0	C

Notes:

- **Bold** values indicate intersections operating at an unacceptable Level of Service
- Intersection operation is based on average intersection delay for signalized intersections.
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

Districts at Jurupa Valley

Vistro File: K:\...\Rubidoux_AM (Phase 1 + 2).vistro

Scenario 9 OY 2026 AM

Report File: K:\...\11. OY 2026 AM - Mission Inn.pdf

8/14/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
100	Mission Inn Avenue at Redwood Drive	Signalized	HCM 6th Edition	EB Right	0.541	22.1	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report**Intersection 100: Mission Inn Avenue at Redwood Drive**

Control Type:	Signalized	Delay (sec / veh):	22.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.541

Intersection Setup

Name	Redwood Dr			Redwood Dr			Mission Inn Ave			Mission Inn Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Redwood Dr			Redwood Dr			Mission Inn Ave			Mission Inn Ave		
Base Volume Input [veh/h]	321	18	1	3	58	29	16	381	488	14	246	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	114	0	0	90	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	353	20	1	3	64	32	18	533	537	15	361	7
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	5	0	1	17	8	5	140	141	4	95	2
Total Analysis Volume [veh/h]	372	21	1	3	67	34	19	561	565	16	380	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	10	30	0	10	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	23	0	9	14	0	0	58	0	0	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	0	10	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	43	39	39	39	39
g / C, Green / Cycle	0.48	0.48	0.48	0.44	0.44	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.12	0.18	0.06	0.31	0.39	0.16	0.16
s, saturation flow rate [veh/h]	1293	1373	1768	1845	1446	840	1694
c, Capacity [veh/h]	658	805	924	846	631	411	739
d1, Uniform Delay [s]	14.10	14.46	13.17	20.75	23.49	18.00	16.99
k, delay calibration	0.22	0.50	0.50	0.11	0.21	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.36	0.97	0.25	1.04	8.63	0.47	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.30	0.11	0.69	0.90	0.33	0.36
d, Delay for Lane Group [s/veh]	14.46	15.44	13.42	21.79	32.12	18.47	17.28
Lane Group LOS	B	B	B	C	C	B	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.80	3.15	1.19	9.67	11.91	1.70	3.61
50th-Percentile Queue Length [ft/ln]	45.05	78.72	29.86	241.86	297.81	42.60	90.25
95th-Percentile Queue Length [veh/ln]	3.24	5.67	2.15	14.78	17.57	3.07	6.50
95th-Percentile Queue Length [ft/ln]	81.09	141.70	53.76	369.38	439.32	76.69	162.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.04	15.44	15.44	13.42	13.42	13.42	21.79	21.79	32.12	18.47	17.66	17.28
Movement LOS	B	B	B	B	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	15.07			13.42			26.89			17.68		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	22.11											
Intersection LOS	C											
Intersection V/C	0.541											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			0.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	36.45			36.45			0.00			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.303			1.817			0.000			2.516		
Crosswalk LOS	B			A			F			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	622			622			1200			1200		
d_b, Bicycle Delay [s]	21.36			21.36			7.20			7.20		
I_b,int, Bicycle LOS Score for Intersection	2.210			1.731			2.504			1.892		
Bicycle LOS	B			A			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Districts at Jurupa Valley

Vistro File: K:\...\Rubidoux_PM (Phase 1 + 2).vistro

Scenario 8 OY 2026 PM

Report File: K:\...\11. OY 2026 PM - Mission Inn.pdf

8/14/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
100	Mission Inn Avenue at Redwood Drive	Signalized	HCM 6th Edition	NB Thru	1.050	44.4	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report**Intersection 100: Mission Inn Avenue at Redwood Drive**

Control Type:	Signalized	Delay (sec / veh):	44.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.050

Intersection Setup

Name	Redwood Dr			Redwood Dr			Mission Inn Ave			Mission Inn Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Redwood Dr			Redwood Dr			Mission Inn Ave			Mission Inn Ave		
Base Volume Input [veh/h]	503	20	7	6	107	33	33	919	758	29	396	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	101	0	0	125	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	-36	36	0	-32	32	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	553	22	8	7	118	36	0	1148	834	0	593	13
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	146	6	2	2	31	9	0	302	219	0	156	3
Total Analysis Volume [veh/h]	582	23	8	7	124	38	0	1208	878	0	624	14
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	10	30	0	10	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	22	0	9	17	0	0	59	0	0	59	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	10	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	27	27	27	55	55	55	55
g / C, Green / Cycle	0.30	0.30	0.30	0.61	0.61	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.10	0.50	0.09	0.56	0.64	0.17	0.17
s, saturation flow rate [veh/h]	1224	974	1805	1870	1628	1870	1856
c, Capacity [veh/h]	287	447	625	1143	995	1143	1134
d1, Uniform Delay [s]	26.63	36.60	24.34	15.39	17.50	8.21	8.22
k, delay calibration	0.30	0.50	0.50	0.41	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.75	72.03	1.06	10.55	42.03	0.13	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	1.10	0.27	0.91	1.05	0.28	0.28
d, Delay for Lane Group [s/veh]	29.38	108.63	25.40	25.94	59.53	8.34	8.35
Lane Group LOS	C	F	C	C	F	A	A
Critical Lane Group	No	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.35	17.19	2.91	19.48	29.11	2.67	2.68
50th-Percentile Queue Length [ft/ln]	58.78	429.81	72.77	486.92	727.79	66.79	66.91
95th-Percentile Queue Length [veh/ln]	4.23	25.39	5.24	26.71	39.50	4.81	4.82
95th-Percentile Queue Length [ft/ln]	105.80	634.76	130.99	667.86	987.47	120.23	120.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	91.50	108.63	108.63	25.40	25.40	25.40	0.00	30.53	59.53	0.00	8.34	8.35
Movement LOS	F	F	F	C	C	C		C	E		A	A
d_A, Approach Delay [s/veh]	92.89			25.40			42.74			8.34		
Approach LOS	F			C			D			A		
d_I, Intersection Delay [s/veh]	44.41											
Intersection LOS	D											
Intersection V/C	1.050											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	0.00	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.467	1.817	0.000	2.827
Crosswalk LOS	B	A	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	600	1222	1222
d_b, Bicycle Delay [s]	22.05	22.05	6.81	6.81
I_b,int, Bicycle LOS Score for Intersection	2.571	1.838	3.281	2.086
Bicycle LOS	B	A	C	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Districts at Jurupa Valley

Vistro File: K:\...\Rubidoux_AM (Phase 1 + 2).vistro

Scenario 4 OY 2026 WP AM - OP 3

Report File: K:\...\10. OY 2026 WP AM - Mission Inn.pdf

8/14/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
100	Mission Inn Avenue at Redwood Drive	Signalized	HCM 6th Edition	EB Right	0.598	23.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report**Intersection 100: Mission Inn Avenue at Redwood Drive**

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.598

Intersection Setup

Name	Redwood Dr			Redwood Dr			Mission Inn Ave			Mission Inn Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Redwood Dr			Redwood Dr			Mission Inn Ave			Mission Inn Ave		
Base Volume Input [veh/h]	321	18	1	3	58	29	16	381	488	14	246	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	114	0	0	90	0
Site-Generated Trips [veh/h]	16	0	0	0	0	16	9	23	9	0	17	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	369	20	1	3	64	48	27	556	546	15	378	7
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	97	5	0	1	17	13	7	146	144	4	99	2
Total Analysis Volume [veh/h]	388	21	1	3	67	51	28	585	575	16	398	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	10	30	0	10	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	23	0	9	14	0	0	58	0	0	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	0	10	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	43	39	39	39	39
g / C, Green / Cycle	0.48	0.48	0.48	0.43	0.43	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.11	0.23	0.07	0.34	0.40	0.15	0.14
s, saturation flow rate [veh/h]	1274	1214	1752	1829	1446	1249	1693
c, Capacity [veh/h]	568	732	917	836	628	586	736
d1, Uniform Delay [s]	15.29	16.39	13.25	21.45	23.89	16.71	16.77
k, delay calibration	0.19	0.50	0.50	0.14	0.22	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	1.46	0.30	1.61	10.50	0.30	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.24	0.37	0.13	0.73	0.92	0.31	0.33
d, Delay for Lane Group [s/veh]	15.66	17.86	13.54	23.06	34.39	17.01	17.02
Lane Group LOS	B	B	B	C	C	B	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.75	4.00	1.40	10.68	12.59	2.31	3.20
50th-Percentile Queue Length [ft/ln]	43.65	100.00	34.99	266.97	314.82	57.80	80.00
95th-Percentile Queue Length [veh/ln]	3.14	7.20	2.52	16.04	18.41	4.16	5.76
95th-Percentile Queue Length [ft/ln]	78.58	180.00	62.98	400.95	460.32	104.04	144.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.07	17.86	17.86	13.54	13.54	13.54	23.06	23.06	34.39	17.01	17.02	17.02
Movement LOS	B	B	B	B	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	17.13			13.54			28.54			17.02		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	23.24											
Intersection LOS	C											
Intersection V/C	0.598											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			0.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	36.45			36.45			0.00			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.312			1.842			0.000			2.551		
Crosswalk LOS	B			A			F			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	622			622			1200			1200		
d_b, Bicycle Delay [s]	21.36			21.36			7.20			7.20		
I_b,int, Bicycle LOS Score for Intersection	2.236			1.759			2.540			1.907		
Bicycle LOS	B			A			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Districts at Jurupa Valley

Vistro File: K:\...\Rubidoux_PM (Phase 1 + 2).vistro

Scenario 4 OY 2026 WP PM - OP 3

Report File: K:\...\10. OY 2026 WP PM - Mission Inn.pdf

8/14/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
100	Mission Inn Avenue at Redwood Drive	Signalized	HCM 6th Edition	NB Thru	1.129	54.3	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report**Intersection 100: Mission Inn Avenue at Redwood Drive**

Control Type:	Signalized	Delay (sec / veh):	54.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.129

Intersection Setup

Name	Redwood Dr			Redwood Dr			Mission Inn Ave			Mission Inn Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Redwood Dr			Redwood Dr			Mission Inn Ave			Mission Inn Ave		
Base Volume Input [veh/h]	503	20	7	6	107	33	33	919	758	29	396	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	101	0	0	125	0
Site-Generated Trips [veh/h]	19	0	0	0	0	19	22	25	22	0	30	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	22	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	-22	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	-36	36	0	-32	32	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	572	22	8	7	118	55	0	1195	856	0	623	13
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	151	6	2	2	31	14	0	314	225	0	164	3
Total Analysis Volume [veh/h]	602	23	8	7	124	58	0	1258	901	0	656	14
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	10	30	0	10	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	22	0	9	17	0	0	59	0	0	59	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	10	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	0.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	27	27	27	55	55	55	55
g / C, Green / Cycle	0.30	0.30	0.30	0.61	0.61	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.10	0.55	0.11	0.58	0.66	0.18	0.18
s, saturation flow rate [veh/h]	1202	932	1785	1870	1630	1870	1856
c, Capacity [veh/h]	275	435	619	1143	996	1143	1134
d1, Uniform Delay [s]	26.69	37.83	24.68	16.10	17.50	8.29	8.30
k, delay calibration	0.29	0.50	0.50	0.43	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.75	105.33	1.28	14.60	54.01	0.14	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	1.19	0.31	0.94	1.08	0.29	0.30
d, Delay for Lane Group [s/veh]	29.44	143.16	25.95	30.70	71.51	8.43	8.45
Lane Group LOS	C	F	C	C	F	A	A
Critical Lane Group	No	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.26	20.68	3.31	22.10	32.46	2.84	2.84
50th-Percentile Queue Length [ft/ln]	56.39	516.97	82.77	552.38	811.48	70.89	71.01
95th-Percentile Queue Length [veh/ln]	4.06	31.07	5.96	29.80	44.68	5.10	5.11
95th-Percentile Queue Length [ft/ln]	101.50	776.78	148.99	745.11	1116.96	127.60	127.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	120.34	143.16	143.16	25.95	25.95	25.95	0.00	36.49	71.51	0.00	8.44	8.45
Movement LOS	F	F	F	C	C	C		D	E		A	A
d_A, Approach Delay [s/veh]	122.16			25.95			51.10			8.44		
Approach LOS	F			C			D			A		
d_I, Intersection Delay [s/veh]	54.29											
Intersection LOS	D											
Intersection V/C	1.129											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	0.00	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.481	1.827	0.000	2.875
Crosswalk LOS	B	A	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	600	1222	1222
d_b, Bicycle Delay [s]	22.05	22.05	6.81	6.81
I_b,int, Bicycle LOS Score for Intersection	2.604	1.871	3.341	2.112
Bicycle LOS	B	A	C	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Option 1: Copy of Mission Inn Avenue at Redwood Drive

Number	100											
Intersection	Mission Inn Avenue at Redwood Drive											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name	Redwood Dr			Redwood Dr			Mission Inn Ave			Mission Inn Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	321	18	1	3	58	29	16	381	488	14	246	6
Total Analysis Volume [veh/h]	388	21	1	3	67	51	28	585	575	16	398	7

Intersection Settings

Cycle Length [s]	90											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	10	30	0	10	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	17	23	0	9	15	0	0	58	0	0	58	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	0	10	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.51	0.51	0.51	0.40	0.40	0.40	0.40	0.40
(v / s) / Volume / Saturation Flow Rate	0.11	0.20	0.07	0.18	0.17	0.36	0.13	0.12
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3	3	3	3	3	3	3	3
s, saturation flow rate [veh/h]	1274	1289	1748	1793	1702	1589	1712	1692
c, Capacity [veh/h]	647	813	976	760	680	635	727	676
X, volume / capacity	0.23	0.33	0.12	0.42	0.44	0.91	0.30	0.31
d, Delay for Lane Group [s/veh]	13.39	14.66	11.81	19.87	20.09	33.25	18.54	18.72
Lane Group LOS	B	B	B	B	C	C	B	B

Critical Lane Group	NO	YES	YES	NO	NO	YES	NO	NO
50th-Percentile Queue Length [veh/ln]	1.71	3.35	1.28	4.68	4.46	12.31	2.99	2.90
50th-Percentile Queue Length [ft/ln]	42.67	83.86	32.07	117.09	111.39	307.85	74.71	72.44
95th-Percentile Queue Length [veh/ln]	3.07	6.04	2.31	8.23	7.92	18.07	5.38	5.22
95th-Percentile Queue Length [ft/ln]	76.81	150.95	57.73	205.82	197.94	451.72	134.48	130.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.17	14.66	14.66	11.81	11.81	11.81	19.87	19.98	33.25	18.54	18.63	18.72
Movement LOS	B	B	B	B	B	B	B	B	C	B	B	B
Critical Movement	No	No	No	No	No	No	No	No	Yes	No	No	No
d_A, Approach Delay [s/veh]	14.21			11.81			26.40			18.63		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	21.71											
Intersection LOS	C											
Intersection V/C	0.535											

Option 1: EB Defacto/RT Lane

Number	100											
Intersection	Mission Inn Avenue at Redwood Drive											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name	Redwood Dr			Redwood Dr			Mission Inn Ave			Mission Inn Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	503	20	7	6	107	33	33	919	758	29	396	12
Total Analysis Volume [veh/h]	602	23	8	7	124	58	0	1258	901	0	656	14

Intersection Settings

Cycle Length [s]	90											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	8	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	10	0	10	0
Maximum Green [s]	10	30	0	10	30	0	0	30	30	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	14	27	0	9	22	0	0	54	54	0	54	0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	0	10	10	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	Yes	No		Yes	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.36	0.36	0.36	0.56	0.56	0.56	0.56
(v / s) Volume / Saturation Flow Rate	0.12	0.52	0.11	0.35	0.57	0.18	0.18
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3	3		3	
s, saturation flow rate [veh/h]	1202	949	1785	3560	1589	1870	1856
c, Capacity [veh/h]	331	492	718	1978	883	1039	1031
X, volume / capacity	0.42	1.00	0.26	0.64	1.02	0.32	0.32
d, Delay for Lane Group [s/veh]	26.33	77.08	21.81	14.09	55.06	11.01	11.03
Lane Group LOS	C	F	C	B	F	B	B

Critical Lane Group	NO	YES	YES	NO	YES	NO	NO
50th-Percentile Queue Length [veh/ln]	2.55	14.87	2.98	8.10	24.94	3.41	3.41
50th-Percentile Queue Length [ft/ln]	63.64	371.67	74.41	202.41	623.61	85.22	85.37
95th-Percentile Queue Length [veh/ln]	4.58	21.21	5.36	12.76	33.69	6.14	6.15
95th-Percentile Queue Length [ft/ln]	114.55	530.18	133.93	319.07	842.22	153.40	153.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.93	77.08	77.08	21.81	21.81	21.81	0.00	14.09	55.06	0.00	11.02	11.03
Movement LOS	E	E	E	C	C	C		B	F		B	B
Critical Movement	No	Yes	No	No	No	No		No	No		No	No
d_A, Approach Delay [s/veh]	65.85			21.81			31.19			11.02		
Approach LOS	E			C			C			B		
d_I, Intersection Delay [s/veh]	33.01											
Intersection LOS	C											
Intersection V/C	0.996											