

APPENDIX C

EXISTING TRAFFIC CONDITIONS INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX C-1

EXISTING TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: E Street at W Orange Show Road

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.463

Intersection Setup

Name	E Street			E Street			W Orange Show Road			W Orange Show Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	L			R			R			R		
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	1	0	1	1	0	1	1	0	1
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			Yes			Yes		

Volumes

Name	E Street			E Street			W Orange Show Road			W Orange Show Road		
	Base Volume Input [veh/h]	104	121	41	67	132	75	207	847	374	81	388
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
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	121	41	67	132	75	207	847	374	81	388	43
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
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]	31	37	12	20	40	23	63	256	113	24	117	13
Total Analysis Volume [veh/h]	126	146	50	81	160	91	250	1024	452	98	469	52
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 m	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]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	10	0	6	10	10	6	10	0	6	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	10	35	0	10	35	35	28	48	0	22	42	42
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	24	0	0	24	24	0	28	0	0	31	31
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	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	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	6	10	10	6	10	26	12	77	77	6	71	81
g / C, Green / Cycle	0.05	0.09	0.09	0.05	0.09	0.22	0.10	0.67	0.67	0.05	0.62	0.70
(v / s)_i Volume / Saturation Flow Rate	0.04	0.06	0.05	0.03	0.04	0.05	0.08	0.28	0.25	0.03	0.13	0.03
s, saturation flow rate [veh/h]	3200	1800	1800	3200	3600	1800	3200	3600	1800	3200	3600	1800
c, Capacity [veh/h]	169	164	164	157	315	402	323	2411	1206	162	2230	1266
d1, Uniform Delay [s]	53.72	50.32	50.18	53.38	50.15	36.56	50.44	8.76	8.37	53.49	9.58	5.21
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, 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
d2, Incremental Delay [s]	6.31	3.64	3.23	2.60	1.27	0.28	3.94	0.55	0.89	3.58	0.21	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.61	0.58	0.52	0.51	0.23	0.77	0.42	0.37	0.60	0.21	0.04
d, Delay for Lane Group [s/veh]	60.04	53.96	53.41	55.98	51.42	36.85	54.38	9.31	9.27	57.07	9.79	5.27
Lane Group LOS	E	D	D	E	D	D	D	A	A	E	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.94	2.95	2.79	1.20	2.26	2.14	3.68	5.65	4.91	1.47	2.56	0.37
50th-Percentile Queue Length [ft/ln]	48.62	73.73	69.69	30.00	56.40	53.39	92.06	141.16	122.66	36.72	63.99	9.34
95th-Percentile Queue Length [veh/ln]	3.50	5.31	5.02	2.16	4.06	3.84	6.63	9.54	8.54	2.64	4.61	0.67
95th-Percentile Queue Length [ft/ln]	87.52	132.71	125.45	54.01	101.53	96.11	165.71	238.58	213.47	66.10	115.18	16.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.04	53.79	53.41	55.98	51.42	36.85	54.38	9.31	9.27	57.07	9.79	5.27
Movement LOS	E	D	D	E	D	D	D	A	A	E	A	A
d_A, Approach Delay [s/veh]	56.18			48.54			15.83			16.90		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	24.00											
Intersection LOS	C											
Intersection V/C	0.463											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	47.05	47.05	47.05	47.05
I_p,int, Pedestrian LOS Score for Intersection	2.632	2.714	2.942	2.853
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	539	539	765	661
d_b, Bicycle Delay [s]	30.70	30.70	21.93	25.80
I_b,int, Bicycle LOS Score for Intersection	1.825	1.834	2.984	2.070
Bicycle LOS	A	A	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Arrowhead Avenue at W Orange Show Road

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.418

Intersection Setup

Name	Arrowhead Avenue			Arrowhead Avenue			W Orange Show Road			W Orange Show Road		
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	0	0	0	1	0	1	1	0	0	1	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			Yes			Yes		

Volumes

Name	Arrowhead Avenue			Arrowhead Avenue			W Orange Show Road			W Orange Show Road		
	1	3	2	114	2	136	172	773	2	2	270	69
Base Volume Input [veh/h]	1	3	2	114	2	136	172	773	2	2	270	69
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
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	3	2	114	2	136	172	773	2	2	270	69
Peak Hour Factor	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210
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]	0	1	1	35	1	41	52	235	1	1	82	21
Total Analysis Volume [veh/h]	1	4	2	139	2	166	210	942	2	2	329	84
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 m	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]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	6	10	0	6	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	29	0	0	29	0	28	47	0	10	29	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	7	0	0	18	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	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	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	13	13	13	16	84	84	0	68	68
g / C, Green / Cycle	0.02	0.11	0.11	0.11	0.14	0.73	0.73	0.00	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.00	0.04	0.04	0.09	0.12	0.26	0.26	0.00	0.12	0.11
s, saturation flow rate [veh/h]	1700	1700	1700	1800	1700	1800	1800	1700	1800	1800
c, Capacity [veh/h]	30	192	192	204	240	1307	1307	6	1060	1060
d1, Uniform Delay [s]	55.70	47.19	47.20	49.83	48.42	5.85	5.85	57.16	11.02	10.96
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.76	1.16	1.17	7.70	9.73	0.78	0.78	25.90	0.42	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	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	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.37	0.37	0.81	0.88	0.36	0.36	0.31	0.20	0.19
d, Delay for Lane Group [s/veh]	59.46	48.36	48.36	57.53	58.14	6.63	6.63	83.06	11.45	11.35
Lane Group LOS	E	D	D	E	E	A	A	F	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.23	1.93	1.94	5.09	6.53	4.03	4.02	0.10	2.58	2.44
50th-Percentile Queue Length [ft/ln]	5.80	48.33	48.39	127.26	163.33	100.63	100.53	2.59	64.46	61.03
95th-Percentile Queue Length [veh/ln]	0.42	3.48	3.48	8.79	10.72	7.25	7.24	0.19	4.64	4.39
95th-Percentile Queue Length [ft/ln]	10.45	87.00	87.10	219.76	268.12	181.13	180.95	4.67	116.02	109.85

Movement, Approach, & Intersection Results

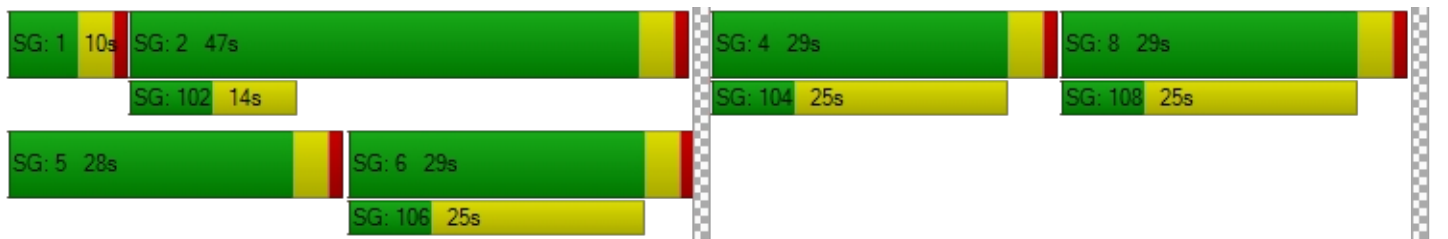
d_M, Delay for Movement [s/veh]	59.46	59.46	59.46	48.36	48.36	57.53	58.14	6.63	6.63	83.06	11.41	11.35
Movement LOS	E	E	E	D	D	E	E	A	A	F	B	B
d_A, Approach Delay [s/veh]	59.46			53.32			16.00			11.75		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	21.31											
Intersection LOS	C											
Intersection V/C	0.418											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	47.04	47.04	47.04	47.04
I_p,int, Pedestrian LOS Score for Intersection	1.733	2.290	2.633	2.604
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	435	435	748	435
d_b, Bicycle Delay [s]	35.23	35.23	22.55	35.23
I_b,int, Bicycle LOS Score for Intersection	1.571	2.066	2.512	1.902
Bicycle LOS	A	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 3: Project Dwy No. 1 at W Orange Show Road

Control Type:	Two-way stop	Delay (sec / veh):	24.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.145

Intersection Setup

Name	Project Dwy No. 1			Project Dwy No. 1			W Orange Show Road			W Orange Show Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			TTL			TTL		
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	0	0	0	0	0	0	1	0	0	1	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]	25.00			25.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Dwy No. 1			Project Dwy No. 1			W Orange Show Road			W Orange Show Road		
Base Volume Input [veh/h]	29	0	10	0	0	0	0	940	48	8	413	0
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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	0	10	0	0	0	0	940	48	8	413	0
Peak Hour Factor	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	0	3	0	0	0	0	260	13	2	114	0
Total Analysis Volume [veh/h]	32	0	11	0	0	0	0	1041	53	9	457	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.00	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	24.09	21.55	15.29	14.44	19.46	9.65	8.27	0.00	0.00	10.76	0.00	0.00
Movement LOS	C	C	C	B	C	A	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.59	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	14.77	14.77	14.77	0.00	0.00	0.00	0.00	0.00	0.00	1.08	0.00	0.00
d_A, Approach Delay [s/veh]	21.84			14.52				0.00		0.21		
Approach LOS	C			B				A		A		
d_I, Intersection Delay [s/veh]	0.65											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 1: E Street at W Orange Show Road

Control Type:	Signalized	Delay (sec / veh):	32.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.646

Intersection Setup

Name	E Street			E Street			W Orange Show Road			W Orange Show Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T			T			T			T		
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	1	0	1	1	0	1	1	0	1
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			Yes			Yes		

Volumes

Name	E Street			E Street			W Orange Show Road			W Orange Show Road		
Base Volume Input [veh/h]	293	411	126	190	204	193	255	743	213	99	779	94
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
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	293	411	126	190	204	193	255	743	213	99	779	94
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
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]	79	111	34	51	55	52	69	201	58	27	211	25
Total Analysis Volume [veh/h]	317	444	136	205	221	209	276	803	230	107	842	102
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 m	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]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	10	0	6	10	10	6	10	0	6	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	18	40	0	13	35	35	15	41	0	16	42	42
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	24	0	0	24	24	0	28	0	0	31	31
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	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	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	13	21	21	9	17	32	11	58	58	6	53	66
g / C, Green / Cycle	0.12	0.19	0.19	0.08	0.16	0.29	0.10	0.53	0.53	0.05	0.48	0.60
(v / s)_i Volume / Saturation Flow Rate	0.10	0.17	0.15	0.06	0.06	0.12	0.09	0.22	0.13	0.03	0.23	0.06
s, saturation flow rate [veh/h]	3200	1800	1800	3200	3600	1800	3200	3600	1800	3200	3600	1800
c, Capacity [veh/h]	375	348	348	262	568	530	322	1895	948	171	1725	1075
d1, Uniform Delay [s]	47.62	43.06	42.39	49.60	41.62	30.99	48.74	15.89	14.15	51.04	19.49	9.46
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, 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
d2, Incremental Delay [s]	5.25	6.64	4.27	5.12	0.44	0.48	6.59	0.70	0.61	3.75	0.99	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.87	0.80	0.78	0.39	0.39	0.86	0.42	0.24	0.63	0.49	0.09
d, Delay for Lane Group [s/veh]	52.87	49.70	46.66	54.71	42.05	31.47	55.33	16.58	14.76	54.79	20.48	9.64
Lane Group LOS	D	D	D	D	D	C	E	B	B	D	C	A
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.52	8.55	7.58	2.95	2.73	4.49	4.01	6.16	3.21	1.53	7.39	1.07
50th-Percentile Queue Length [ft/ln]	112.89	213.64	189.45	73.64	68.18	112.28	100.32	153.96	80.22	38.29	184.68	26.75
95th-Percentile Queue Length [veh/ln]	8.00	13.34	12.09	5.30	4.91	7.97	7.22	10.23	5.78	2.76	11.84	1.93
95th-Percentile Queue Length [ft/ln]	200.02	333.49	302.31	132.55	122.73	199.17	180.58	255.71	144.40	68.93	296.12	48.15

Movement, Approach, & Intersection Results

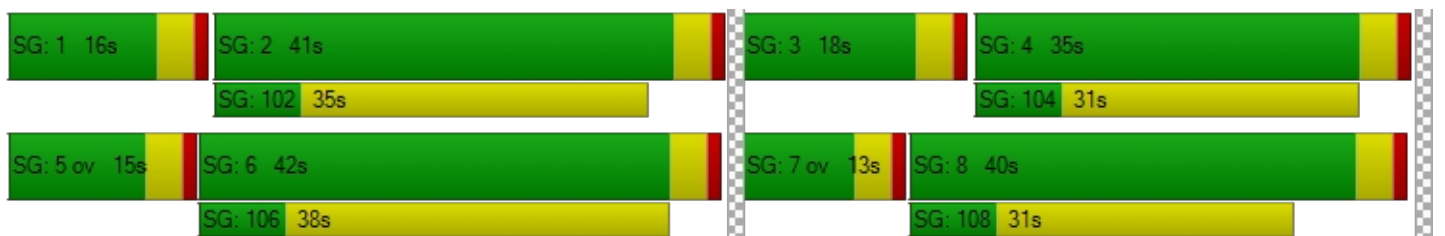
d_M, Delay for Movement [s/veh]	52.87	48.73	46.66	54.71	42.05	31.47	55.33	16.58	14.76	54.79	20.48	9.64
Movement LOS	D	D	D	D	D	C	E	B	B	D	C	A
d_A, Approach Delay [s/veh]	49.88			42.66			24.43			22.92		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	32.86											
Intersection LOS	C											
Intersection V/C	0.646											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	44.58	44.58	44.58	44.58
I_p,int, Pedestrian LOS Score for Intersection	2.699	2.806	2.976	2.909
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	654	563	672	691
d_b, Bicycle Delay [s]	24.91	28.39	24.25	23.59
I_b,int, Bicycle LOS Score for Intersection	2.300	2.083	2.640	2.427
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Arrowhead Avenue at W Orange Show Road

Control Type:	Signalized	Delay (sec / veh):	45.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.828

Intersection Setup

Name	Arrowhead Avenue			Arrowhead Avenue			W Orange Show Road			W Orange Show Road		
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	0	0	0	1	0	1	1	0	0	1	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			Yes			Yes		

Volumes

Name	Arrowhead Avenue			Arrowhead Avenue			W Orange Show Road			W Orange Show Road		
Base Volume Input [veh/h]	23	35	22	184	24	446	264	822	7	20	573	148
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
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	35	22	184	24	446	264	822	7	20	573	148
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	10	6	50	7	122	72	224	2	5	156	40
Total Analysis Volume [veh/h]	25	38	24	201	26	487	288	897	8	22	626	162
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 m	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	6	10	0	6	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	29	0	0	37	0	25	44	0	10	29	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	7	0	0	18	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	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	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	33	33	33	21	58	58	3	41	41
g / C, Green / Cycle	0.08	0.27	0.27	0.27	0.18	0.49	0.49	0.03	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.05	0.07	0.07	0.27	0.17	0.25	0.25	0.01	0.23	0.21
s, saturation flow rate [veh/h]	1700	1700	1700	1800	1700	1800	1800	1700	1800	1800
c, Capacity [veh/h]	135	467	467	495	298	874	874	46	607	607
d1, Uniform Delay [s]	53.62	33.82	33.84	43.29	49.17	21.23	21.20	57.59	34.08	33.42
k, delay calibration	0.11	0.11	0.11	0.44	0.21	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.06	0.27	0.27	34.54	26.95	2.19	2.18	7.63	5.84	4.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	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	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.24	0.24	0.98	0.97	0.52	0.52	0.48	0.67	0.63
d, Delay for Lane Group [s/veh]	58.68	34.09	34.11	77.83	76.12	23.42	23.39	65.22	39.92	38.24
Lane Group LOS	E	C	C	E	E	C	C	E	D	D
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.74	2.61	2.64	18.96	10.77	9.16	9.12	0.76	11.11	10.07
50th-Percentile Queue Length [ft/ln]	68.52	65.30	65.91	474.03	269.17	229.00	228.06	18.90	277.77	251.64
95th-Percentile Queue Length [veh/ln]	4.93	4.70	4.75	26.10	16.15	14.12	14.08	1.36	16.58	15.27
95th-Percentile Queue Length [ft/ln]	123.33	117.55	118.64	652.56	403.70	353.08	351.90	34.03	414.43	381.71

Movement, Approach, & Intersection Results

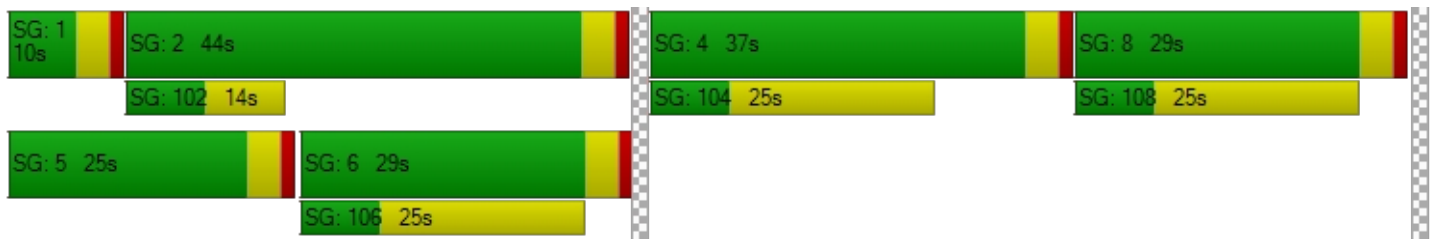
d_M, Delay for Movement [s/veh]	58.68	58.68	58.68	34.09	34.11	77.83	76.12	23.40	23.39	65.22	39.33	38.24
Movement LOS	E	E	E	C	C	E	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	58.68			63.93			36.13			39.82		
Approach LOS	E			E			D			D		
d_I, Intersection Delay [s/veh]	44.97											
Intersection LOS	D											
Intersection V/C	0.828											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	49.52	49.52	49.52	49.52
I_p,int, Pedestrian LOS Score for Intersection	1.798	2.438	2.768	2.690
Crosswalk LOS	A	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	417	550	666	417
d_b, Bicycle Delay [s]	37.62	31.55	26.68	37.62
I_b,int, Bicycle LOS Score for Intersection	1.703	2.738	2.544	2.228
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Project Dwy No. 1 at W Orange Show Road

Control Type:	Two-way stop	Delay (sec / veh):	31.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.225

Intersection Setup

Name	Project Dwy No. 1			Project Dwy No. 1			W Orange Show Road			W Orange Show Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
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	0	0	0	0	0	0	1	0	0	1	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]	25.00			25.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Dwy No. 1			Project Dwy No. 1			W Orange Show Road			W Orange Show Road		
Base Volume Input [veh/h]	39	0	77	0	0	0	0	984	88	25	988	0
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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	0	77	0	0	0	0	984	88	25	988	0
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
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]	11	0	21	0	0	0	0	268	24	7	269	0
Total Analysis Volume [veh/h]	43	0	84	0	0	0	0	1073	96	27	1077	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.23	0.00	0.18	0.00	0.00	0.00	0.00	0.01	0.00	0.05	0.01	0.00
d_M, Delay for Movement [s/veh]	31.73	32.40	20.77	25.45	26.20	12.39	10.60	0.00	0.00	11.36	0.00	0.00
Movement LOS	D	D	C	D	D	B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	1.92	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00
95th-Percentile Queue Length [ft/ln]	48.11	48.11	48.11	0.00	0.00	0.00	0.00	0.00	0.00	3.57	0.00	0.00
d_A, Approach Delay [s/veh]	24.48			21.35				0.00		0.28		
Approach LOS	C			C				A		A		
d_I, Intersection Delay [s/veh]	1.42											
Intersection LOS	D											

APPENDIX C-II

**EXISTING WITH PROJECT
TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 1: E Street at W Orange Show Road

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.473

Intersection Setup

Name	E Street			E Street			W Orange Show Road			W Orange Show Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	L			R			R			L		
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	1	0	1	1	0	1	1	0	1
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			Yes			Yes		

Volumes

Name	E Street			E Street			W Orange Show Road			W Orange Show Road		
Base Volume Input [veh/h]	104	121	43	74	132	75	207	870	374	82	400	46
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
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	121	43	74	132	75	207	870	374	82	400	46
Peak Hour Factor	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270	0.8270
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]	31	37	13	22	40	23	63	263	113	25	121	14
Total Analysis Volume [veh/h]	126	146	52	89	160	91	250	1052	452	99	484	56
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 m	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]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	10	0	6	10	10	6	10	0	6	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	10	35	0	10	35	35	28	49	0	21	42	42
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	24	0	0	24	24	0	28	0	0	31	31
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	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	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	6	10	10	6	10	26	12	77	77	6	71	81
g / C, Green / Cycle	0.05	0.09	0.09	0.05	0.09	0.22	0.10	0.67	0.67	0.05	0.62	0.70
(v / s)_i Volume / Saturation Flow Rate	0.04	0.06	0.05	0.03	0.04	0.05	0.08	0.29	0.25	0.03	0.13	0.03
s, saturation flow rate [veh/h]	3200	1800	1800	3200	3600	1800	3200	3600	1800	3200	3600	1800
c, Capacity [veh/h]	169	163	163	160	315	402	323	2411	1206	163	2230	1268
d1, Uniform Delay [s]	53.72	50.45	50.30	53.42	50.15	36.56	50.44	8.86	8.38	53.50	9.62	5.20
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, 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
d2, Incremental Delay [s]	6.31	3.87	3.41	3.01	1.27	0.28	3.94	0.58	0.89	3.65	0.22	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.62	0.59	0.56	0.51	0.23	0.77	0.44	0.37	0.61	0.22	0.04
d, Delay for Lane Group [s/veh]	60.04	54.33	53.71	56.43	51.42	36.85	54.38	9.44	9.27	57.15	9.85	5.26
Lane Group LOS	E	D	D	E	D	D	D	A	A	E	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.94	2.99	2.82	1.33	2.26	2.14	3.68	5.87	4.91	1.49	2.65	0.40
50th-Percentile Queue Length [ft/ln]	48.62	74.84	70.58	33.13	56.40	53.39	92.06	146.70	122.69	37.13	66.36	10.04
95th-Percentile Queue Length [veh/ln]	3.50	5.39	5.08	2.39	4.06	3.84	6.63	9.84	8.54	2.67	4.78	0.72
95th-Percentile Queue Length [ft/ln]	87.52	134.71	127.05	59.63	101.53	96.11	165.71	246.01	213.52	66.84	119.45	18.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.04	54.14	53.71	56.43	51.42	36.85	54.38	9.44	9.27	57.15	9.85	5.26
Movement LOS	E	D	D	E	D	D	D	A	A	E	A	A
d_A, Approach Delay [s/veh]	56.36			48.83			15.80			16.78		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	23.98											
Intersection LOS	C											
Intersection V/C	0.473											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	47.05	47.05	47.05	47.05
I_p,int, Pedestrian LOS Score for Intersection	2.633	2.716	2.948	2.861
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	539	539	782	661
d_b, Bicycle Delay [s]	30.70	30.70	21.32	25.80
I_b,int, Bicycle LOS Score for Intersection	1.827	1.840	3.007	2.087
Bicycle LOS	A	A	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Arrowhead Avenue at W Orange Show Road

Control Type:	Signalized	Delay (sec / veh):	21.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

Intersection Setup

Name	Arrowhead Avenue			Arrowhead Avenue			W Orange Show Road			W Orange Show Road		
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	0	0	0	1	0	1	1	0	0	1	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			Yes			Yes		

Volumes

Name	Arrowhead Avenue			Arrowhead Avenue			W Orange Show Road			W Orange Show Road		
	1	3	2	114	2	141	174	778	2	2	279	69
Base Volume Input [veh/h]	1	3	2	114	2	141	174	778	2	2	279	69
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
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	3	2	114	2	141	174	778	2	2	279	69
Peak Hour Factor	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210	0.8210
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]	0	1	1	35	1	43	53	237	1	1	85	21
Total Analysis Volume [veh/h]	1	4	2	139	2	172	212	948	2	2	340	84
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 m	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]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	6	10	0	6	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	29	0	0	29	0	28	47	0	10	29	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	7	0	0	18	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	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	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	13	13	13	16	83	83	0	67	67
g / C, Green / Cycle	0.02	0.12	0.12	0.12	0.14	0.72	0.72	0.00	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.00	0.04	0.04	0.10	0.12	0.26	0.26	0.00	0.12	0.11
s, saturation flow rate [veh/h]	1700	1700	1700	1800	1700	1800	1800	1700	1800	1800
c, Capacity [veh/h]	30	198	198	210	242	1301	1301	6	1052	1052
d1, Uniform Delay [s]	55.70	46.84	46.84	49.64	48.35	6.01	6.01	57.16	11.31	11.23
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.76	1.08	1.08	7.73	9.73	0.79	0.79	25.90	0.44	0.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	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	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.36	0.36	0.82	0.88	0.37	0.36	0.31	0.21	0.20
d, Delay for Lane Group [s/veh]	59.46	47.92	47.93	57.37	58.08	6.80	6.80	83.06	11.75	11.65
Lane Group LOS	E	D	D	E	E	A	A	F	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.23	1.92	1.93	5.27	6.59	4.13	4.13	0.10	2.69	2.55
50th-Percentile Queue Length [ft/ln]	5.80	48.07	48.13	131.77	164.84	103.27	103.17	2.59	67.32	63.75
95th-Percentile Queue Length [veh/ln]	0.42	3.46	3.47	9.04	10.80	7.44	7.43	0.19	4.85	4.59
95th-Percentile Queue Length [ft/ln]	10.45	86.52	86.63	225.90	270.12	185.88	185.70	4.67	121.18	114.75

Movement, Approach, & Intersection Results

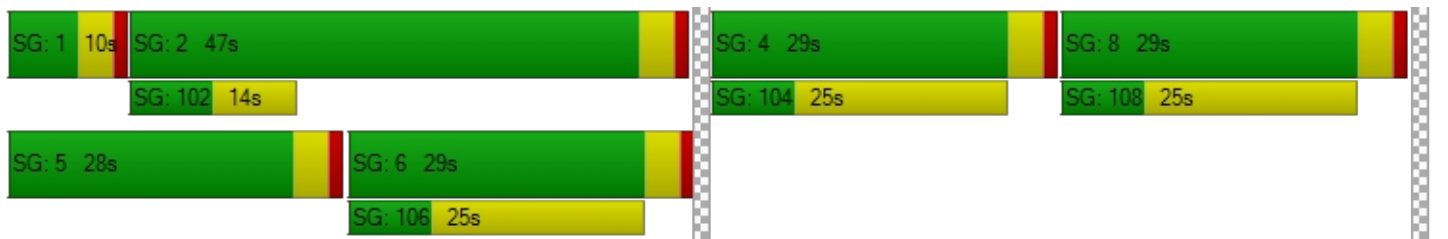
d_M, Delay for Movement [s/veh]	59.46	59.46	59.46	47.92	47.93	57.37	58.08	6.80	6.80	83.06	11.71	11.65
Movement LOS	E	E	E	D	D	E	E	A	A	F	B	B
d_A, Approach Delay [s/veh]	59.46			53.12			16.16			12.04		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	21.46											
Intersection LOS	C											
Intersection V/C	0.424											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	47.04	47.04	47.04	47.04
I_p,int, Pedestrian LOS Score for Intersection	1.733	2.292	2.638	2.607
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	435	435	748	435
d_b, Bicycle Delay [s]	35.23	35.23	22.55	35.23
I_b,int, Bicycle LOS Score for Intersection	1.571	2.076	2.518	1.911
Bicycle LOS	A	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 3: Project Dwy No. 1 at W Orange Show Road

Control Type:	Two-way stop	Delay (sec / veh):	27.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.165

Intersection Setup

Name	Project Dwy No. 1			Project Dwy No. 1			W Orange Show Road			W Orange Show Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
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	0	0	0	0	0	0	1	0	0	1	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]	25.00			25.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Dwy No. 1			Project Dwy No. 1			W Orange Show Road			W Orange Show Road		
Base Volume Input [veh/h]	29	0	10	7	0	16	32	940	48	8	413	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	0	10	7	0	16	32	940	48	8	413	13
Peak Hour Factor	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	0	3	2	0	4	9	260	13	2	114	4
Total Analysis Volume [veh/h]	32	0	11	8	0	18	35	1041	53	9	457	14
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.17	0.00	0.02	0.02	0.00	0.02	0.03	0.01	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	27.17	23.93	16.09	15.71	21.35	10.01	8.42	0.00	0.00	10.76	0.00	0.00
Movement LOS	D	C	C	C	C	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.67	0.67	0.67	0.15	0.15	0.15	0.10	0.00	0.00	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	16.86	16.86	16.86	3.66	3.66	3.66	2.49	0.00	0.00	1.08	0.00	0.00
d_A, Approach Delay [s/veh]	24.34			11.77			0.26			0.20		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	1.04											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 1: E Street at W Orange Show Road

Control Type:	Signalized	Delay (sec / veh):	32.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name	E Street			E Street			W Orange Show Road			W Orange Show Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	L			R			L			R		
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	1	0	1	1	0	1	1	0	1
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			Yes			Yes		

Volumes

Name	E Street			E Street			W Orange Show Road			W Orange Show Road		
Base Volume Input [veh/h]	293	411	128	197	204	193	255	766	213	101	804	101
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
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	293	411	128	197	204	193	255	766	213	101	804	101
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
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]	79	111	35	53	55	52	69	207	58	27	217	27
Total Analysis Volume [veh/h]	317	444	138	213	221	209	276	828	230	109	869	109
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 m	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]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	10	0	6	10	10	6	10	0	6	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	18	40	0	13	35	35	15	41	0	16	42	42
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	24	0	0	24	24	0	28	0	0	31	31
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	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	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	13	21	21	9	17	33	11	58	58	6	53	66
g / C, Green / Cycle	0.12	0.19	0.19	0.08	0.16	0.30	0.10	0.53	0.53	0.05	0.48	0.60
(v / s)_i Volume / Saturation Flow Rate	0.10	0.17	0.15	0.07	0.06	0.12	0.09	0.23	0.13	0.03	0.24	0.06
s, saturation flow rate [veh/h]	3200	1800	1800	3200	3600	1800	3200	3600	1800	3200	3600	1800
c, Capacity [veh/h]	375	349	349	264	573	533	322	1890	945	171	1720	1074
d1, Uniform Delay [s]	47.62	43.03	42.34	49.65	41.48	30.87	48.74	16.13	14.24	51.06	19.79	9.53
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, 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
d2, Incremental Delay [s]	5.25	6.64	4.24	5.77	0.43	0.47	6.59	0.74	0.61	3.90	1.06	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.87	0.80	0.81	0.39	0.39	0.86	0.44	0.24	0.64	0.51	0.10
d, Delay for Lane Group [s/veh]	52.87	49.67	46.59	55.42	41.90	31.34	55.33	16.88	14.86	54.97	20.85	9.72
Lane Group LOS	D	D	D	E	D	C	E	B	B	D	C	A
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.52	8.58	7.60	3.08	2.72	4.48	4.01	6.44	3.22	1.56	7.73	1.15
50th-Percentile Queue Length [ft/ln]	112.89	214.44	189.89	77.10	68.04	112.01	100.32	160.92	80.55	39.08	193.28	28.77
95th-Percentile Queue Length [veh/ln]	8.00	13.38	12.12	5.55	4.90	7.95	7.22	10.60	5.80	2.81	12.29	2.07
95th-Percentile Queue Length [ft/ln]	200.02	334.52	302.88	138.78	122.48	198.79	180.58	264.94	144.99	70.35	307.29	51.79

Movement, Approach, & Intersection Results

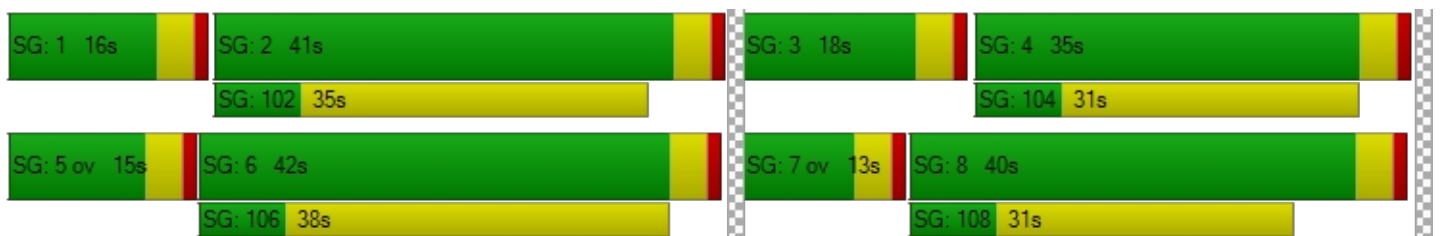
d_M, Delay for Movement [s/veh]	52.87	48.69	46.59	55.42	41.90	31.34	55.33	16.88	14.86	54.97	20.85	9.72
Movement LOS	D	D	D	E	D	C	E	B	B	D	C	A
d_A, Approach Delay [s/veh]	49.84			42.95			24.48			23.16		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	32.87											
Intersection LOS	C											
Intersection V/C	0.658											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	44.58	44.58	44.58	44.58
I_p,int, Pedestrian LOS Score for Intersection	2.700	2.809	2.984	2.919
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	654	563	672	691
d_b, Bicycle Delay [s]	24.91	28.39	24.25	23.59
I_b,int, Bicycle LOS Score for Intersection	2.301	2.090	2.660	2.456
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Arrowhead Avenue at W Orange Show Road

Control Type:	Signalized	Delay (sec / veh):	46.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.838

Intersection Setup

Name	Arrowhead Avenue			Arrowhead Avenue			W Orange Show Road			W Orange Show Road		
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	0	0	0	1	0	1	1	0	0	1	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			Yes			Yes		

Volumes

Name	Arrowhead Avenue			Arrowhead Avenue			W Orange Show Road			W Orange Show Road		
Base Volume Input [veh/h]	23	35	22	184	24	451	269	832	7	20	582	148
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
Proportion of CAVs [%]	0.00											
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	35	22	184	24	451	269	832	7	20	582	148
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	10	6	50	7	123	73	227	2	5	159	40
Total Analysis Volume [veh/h]	25	38	24	201	26	492	294	908	8	22	635	162
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 m	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	6	10	0	6	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	29	0	0	37	0	25	44	0	10	29	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	7	0	0	18	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	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	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	33	33	33	21	58	58	3	41	41
g / C, Green / Cycle	0.08	0.27	0.27	0.27	0.18	0.49	0.49	0.03	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.05	0.07	0.07	0.27	0.17	0.25	0.25	0.01	0.23	0.21
s, saturation flow rate [veh/h]	1700	1700	1700	1800	1700	1800	1800	1700	1800	1800
c, Capacity [veh/h]	135	467	467	495	298	874	874	46	607	607
d1, Uniform Delay [s]	53.62	33.82	33.84	43.45	49.38	21.31	21.29	57.59	34.19	33.52
k, delay calibration	0.11	0.11	0.11	0.45	0.22	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.06	0.27	0.27	37.19	31.95	2.25	2.24	7.63	6.02	4.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	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	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.24	0.24	0.99	0.99	0.52	0.52	0.48	0.68	0.63
d, Delay for Lane Group [s/veh]	58.68	34.09	34.11	80.64	81.33	23.56	23.53	65.22	40.22	38.49
Lane Group LOS	E	C	C	F	F	C	C	E	D	D
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.74	2.61	2.64	19.53	11.40	9.31	9.28	0.76	11.29	10.23
50th-Percentile Queue Length [ft/ln]	68.52	65.31	65.91	488.14	284.88	232.84	231.91	18.90	282.23	255.71
95th-Percentile Queue Length [veh/ln]	4.93	4.70	4.75	26.77	16.93	14.32	14.27	1.36	16.80	15.47
95th-Percentile Queue Length [ft/ln]	123.33	117.55	118.63	669.32	423.29	357.96	356.78	34.03	419.98	386.83

Movement, Approach, & Intersection Results

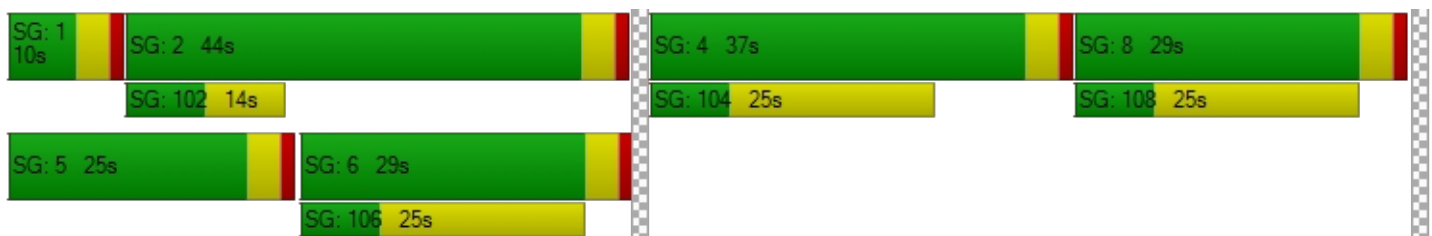
d_M, Delay for Movement [s/veh]	58.68	58.68	58.68	34.09	34.11	80.64	81.33	23.55	23.53	65.22	39.61	38.49
Movement LOS	E	E	E	C	C	F	F	C	C	E	D	D
d_A, Approach Delay [s/veh]	58.68			65.95			37.59			40.08		
Approach LOS	E			E			D			D		
d_I, Intersection Delay [s/veh]	46.15											
Intersection LOS	D											
Intersection V/C	0.838											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	49.52	49.52	49.52	49.52
I_p,int, Pedestrian LOS Score for Intersection	1.798	2.441	2.774	2.694
Crosswalk LOS	A	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	417	550	666	417
d_b, Bicycle Delay [s]	37.62	31.55	26.68	37.62
I_b,int, Bicycle LOS Score for Intersection	1.703	2.746	2.558	2.235
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Project Dwy No. 1 at W Orange Show Road

Control Type:	Two-way stop	Delay (sec / veh):	37.3
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.266

Intersection Setup

Name	Project Dwy No. 1			Project Dwy No. 1			W Orange Show Road			W Orange Show Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
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	0	0	0	0	0	0	1	0	0	1	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]	25.00			25.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Dwy No. 1			Project Dwy No. 1			W Orange Show Road			W Orange Show Road		
Base Volume Input [veh/h]	39	0	77	15	0	34	32	984	88	25	988	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	0	77	15	0	34	32	984	88	25	988	13
Peak Hour Factor	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170	0.9170
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]	11	0	21	4	0	9	9	268	24	7	269	4
Total Analysis Volume [veh/h]	43	0	84	16	0	37	35	1073	96	27	1077	14
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.27	0.00	0.18	0.10	0.00	0.08	0.06	0.01	0.00	0.05	0.01	0.00
d_M, Delay for Movement [s/veh]	37.29	37.76	22.97	29.06	30.79	14.91	11.00	0.00	0.00	11.36	0.00	0.00
Movement LOS	E	E	C	D	D	B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	2.21	2.21	2.21	0.62	0.62	0.62	0.17	0.00	0.00	0.14	0.00	0.00
95th-Percentile Queue Length [ft/ln]	55.18	55.18	55.18	15.38	15.38	15.38	4.36	0.00	0.00	3.57	0.00	0.00
d_A, Approach Delay [s/veh]	27.82			19.18			0.32			0.27		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	2.09											
Intersection LOS	E											