City of Arlington

Draft

Transportation 2035 Plan

2016 Update

Prepared by:

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CONSULTING SERVICES

and

City of Arlington

Public Works Department

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Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	660	20	55	460	20	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	5	5	8	8	0	0
Mvmt Flow	695	21	58	484	21	68

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	716	0	1305	705
Stage 1	-	-	-	-	705	-
Stage 2	-	-	-	-	600	-
Critical Hdwy	-	-	4.18	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.272	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	858	-	178	440
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	552	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	858	-	166	440
Mov Cap-2 Maneuver	-	-	-	-	306	-
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	515	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	16.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	399	-	-	858	-
HCM Lane V/C Ratio	0.224	-	-	0.067	-
HCM Control Delay (s)	16.6	-	-	9.5	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.8	-	-	0.2	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	285	115	710	325	70	335
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1900	1827	1827	1863	1863
Adj Flow Rate, veh/h	300	96	747	150	74	353
Adj No. of Lanes	0	0	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	4	4	2	2
Cap, veh/h	338	108	852	724	278	1095
Arrive On Green	0.27	0.27	0.47	0.47	0.05	0.59
Sat Flow, veh/h	1266	405	1827	1553	1774	1863
Grp Volume(v), veh/h	397	0	747	150	74	353
Grp Sat Flow(s),veh/h/ln	1675	0	1827	1553	1774	1863
Q Serve(g_s), s	12.6	0.0	20.4	3.2	1.1	5.3
Cycle Q Clear(g_c), s	12.6	0.0	20.4	3.2	1.1	5.3
Prop In Lane	0.76	0.24		1.00	1.00	
Lane Grp Cap(c), veh/h	448	0	852	724	278	1095
V/C Ratio(X)	0.89	0.00	0.88	0.21	0.27	0.32
Avail Cap(c_a), veh/h	485	0	927	788	319	1215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	0.0	13.3	8.7	10.9	5.8
Incr Delay (d2), s/veh	16.9	0.0	9.0	0.1	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	0.0	12.3	1.4	0.6	2.7
LnGrp Delay(d),s/veh	36.4	0.0	22.3	8.8	11.5	6.0
LnGrp LOS	D		C	A	B	A
Approach Vol, veh/h	397		897			427
Approach Delay, s/veh	36.4		20.1			6.9
Approach LOS	D		C			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.7	29.7				36.5		18.8
Change Period (Y+Rc), s	4.0	4.0				4.0		4.0
Max Green Setting (Gmax), s	4.0	28.0				36.0		16.0
Max Q Clear Time (g_c+I1), s	3.1	22.4				7.3		14.6
Green Ext Time (p_c), s	0.0	3.4				8.8		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	0	265	70	0	95	220	0	110	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	1	1	2	1	1	2	0	0
Mvmt Flow	0	279	74	0	100	232	0	116	126
Number of Lanes	0	1	0	0	0	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	12.4	12.6	10.3
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	30%
Vol Thru, %	0%	0%	79%	70%
Vol Right, %	0%	100%	21%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	120	335	315
LT Vol	110	0	0	95
Through Vol	0	0	265	220
RT Vol	0	120	70	0
Lane Flow Rate	116	126	353	332
Geometry Grp	7	7	2	2
Degree of Util (X)	0.216	0.193	0.477	0.466
Departure Headway (Hd)	6.706	5.488	4.971	5.17
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	538	658	730	703
Service Time	4.406	3.188	2.971	3.17
HCM Lane V/C Ratio	0.216	0.191	0.484	0.472
HCM Control Delay	11.2	9.5	12.4	12.6
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	0.8	0.7	2.6	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	370	275	195	80	205	200	170	485	50	85	320	230
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1881	1881	1881	1881	1881	1881	1881	1881	1881
Adj Flow Rate, veh/h	389	289	54	84	216	34	179	511	17	89	337	66
Adj No. of Lanes	2	1	1	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	1	1	1
Cap, veh/h	472	426	362	108	285	242	214	965	821	439	822	699
Arrive On Green	0.14	0.23	0.23	0.06	0.15	0.15	0.12	0.51	0.51	0.04	0.44	0.44
Sat Flow, veh/h	3442	1863	1583	1792	1881	1599	1792	1881	1599	1792	1881	1599
Grp Volume(v), veh/h	389	289	54	84	216	34	179	511	17	89	337	66
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1792	1881	1599	1792	1881	1599	1792	1881	1599
Q Serve(g_s), s	11.4	14.6	2.8	4.8	11.4	1.9	10.1	18.8	0.5	2.8	12.7	2.5
Cycle Q Clear(g_c), s	11.4	14.6	2.8	4.8	11.4	1.9	10.1	18.8	0.5	2.8	12.7	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	472	426	362	108	285	242	214	965	821	439	822	699
V/C Ratio(X)	0.82	0.68	0.15	0.78	0.76	0.14	0.84	0.53	0.02	0.20	0.41	0.09
Avail Cap(c_a), veh/h	700	595	506	208	437	372	364	965	821	466	822	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	36.4	31.8	47.8	42.0	38.0	44.5	16.8	12.4	15.3	19.9	17.1
Incr Delay (d2), s/veh	5.1	1.9	0.2	11.3	4.1	0.3	8.4	2.1	0.0	0.2	1.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	7.8	1.2	2.7	6.2	0.9	5.5	10.2	0.2	1.4	6.9	1.2
LnGrp Delay(d),s/veh	48.4	38.3	32.0	59.1	46.1	38.2	52.9	18.9	12.4	15.6	21.5	17.3
LnGrp LOS	D	D	C	E	D	D	D	B	B	B	C	B
Approach Vol, veh/h		732			334			707			492	
Approach Delay, s/veh		43.2			48.6			27.3			19.8	
Approach LOS		D			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	57.0	10.2	27.6	16.3	49.1	18.2	19.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.3	53.0	12.0	33.0	21.0	38.0	21.0	24.0
Max Q Clear Time (g_c+I1), s	4.8	20.8	6.8	16.6	12.1	14.7	13.4	13.4
Green Ext Time (p_c), s	0.0	5.9	0.1	2.8	0.3	5.5	0.8	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	34.0
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	160	5	110	0	5	5	5	0	90	115	5	0	5	110	165
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0
Mvmt Flow	0	168	5	116	0	5	5	5	0	95	121	5	0	5	116	174
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.4	8.7	10.5	10.5
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	43%	58%	33%	2%
Vol Thru, %	55%	2%	33%	39%
Vol Right, %	2%	40%	33%	59%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	210	275	15	280
LT Vol	90	160	5	5
Through Vol	115	5	5	110
RT Vol	5	110	5	165
Lane Flow Rate	221	289	16	295
Geometry Grp	1	1	1	1
Degree of Util (X)	0.313	0.401	0.024	0.378
Departure Headway (Hd)	5.096	4.988	5.537	4.613
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	696	712	650	772
Service Time	3.187	3.077	3.537	2.694
HCM Lane V/C Ratio	0.318	0.406	0.025	0.382
HCM Control Delay	10.5	11.4	8.7	10.5
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	1.3	1.9	0.1	1.8

Intersection	
Intersection Delay, s/veh	38.8
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	5	5	5	0	235	5	20	0	5	470	245	0	25	305	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	25	25	25	2	0	0	0	2	2	2	2	2	1	1	1
Mvmt Flow	0	5	5	5	0	247	5	21	0	5	495	258	0	26	321	5
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.1	16.3	57.7	17
HCM LOS	B	C	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	33%	90%	7%
Vol Thru, %	65%	33%	2%	91%
Vol Right, %	34%	33%	8%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	720	15	260	335
LT Vol	5	5	235	25
Through Vol	470	5	5	305
RT Vol	245	5	20	5
Lane Flow Rate	758	16	274	353
Geometry Grp	1	1	1	1
Degree of Util (X)	1	0.034	0.502	0.584
Departure Headway (Hd)	5.385	7.781	6.606	5.959
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	675	462	542	610
Service Time	3.4	5.804	4.698	3.962
HCM Lane V/C Ratio	1.123	0.035	0.506	0.579
HCM Control Delay	57.7	11.1	16.3	17
HCM Lane LOS	F	B	C	C
HCM 95th-tile Q	15.8	0.1	2.8	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	165	170	20	95	10	115	100	20	105	145	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1881	1900	1845	1845	1900	1900	1881	1900
Adj Flow Rate, veh/h	58	174	114	21	100	4	121	105	12	111	153	64
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	1	1	1	3	3	3	1	1	1
Cap, veh/h	142	250	147	131	437	16	758	899	103	272	352	126
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.07	0.55	0.55	0.40	0.40	0.40
Sat Flow, veh/h	181	925	544	139	1614	58	1757	1626	186	420	891	318
Grp Volume(v), veh/h	346	0	0	125	0	0	121	0	117	328	0	0
Grp Sat Flow(s),veh/h/ln	1650	0	0	1811	0	0	1757	0	1812	1629	0	0
Q Serve(g_s), s	4.6	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.4	2.6	0.0	0.0
Cycle Q Clear(g_c), s	8.7	0.0	0.0	2.4	0.0	0.0	1.6	0.0	1.4	6.4	0.0	0.0
Prop In Lane	0.17		0.33	0.17		0.03	1.00		0.10	0.34		0.20
Lane Grp Cap(c), veh/h	539	0	0	583	0	0	758	0	1001	750	0	0
V/C Ratio(X)	0.64	0.00	0.00	0.21	0.00	0.00	0.16	0.00	0.12	0.44	0.00	0.00
Avail Cap(c_a), veh/h	709	0	0	759	0	0	792	0	1001	750	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.1	0.0	0.0	12.9	0.0	0.0	5.9	0.0	4.8	10.1	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.2	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	0.0	1.2	0.0	0.0	0.8	0.0	0.7	3.4	0.0	0.0
LnGrp Delay(d),s/veh	16.4	0.0	0.0	13.1	0.0	0.0	6.0	0.0	5.1	12.0	0.0	0.0
LnGrp LOS	B			B			A		A	B		
Approach Vol, veh/h		346			125			238			328	
Approach Delay, s/veh		16.4			13.1			5.5			12.0	
Approach LOS		B			B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		29.0		16.2	7.1	21.9		16.2
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s		25.0		17.0	4.0	17.0		17.0
Max Q Clear Time (g_c+I1), s		3.4		10.7	3.6	8.4		4.4
Green Ext Time (p_c), s		2.9		1.6	0.0	1.8		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	60	185	145	550	385	95
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1643	1643	1827	1827	1759	1900
Adj Flow Rate, veh/h	63	17	153	579	405	86
Adj No. of Lanes	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	7	4	4	8	8
Cap, veh/h	101	90	246	1226	560	119
Arrive On Green	0.06	0.06	0.14	0.67	0.40	0.40
Sat Flow, veh/h	1564	1396	1740	1827	1408	299
Grp Volume(v), veh/h	63	17	153	579	0	491
Grp Sat Flow(s),veh/h/ln	1564	1396	1740	1827	0	1707
Q Serve(g_s), s	1.2	0.3	2.5	4.6	0.0	7.4
Cycle Q Clear(g_c), s	1.2	0.3	2.5	4.6	0.0	7.4
Prop In Lane	1.00	1.00	1.00			0.18
Lane Grp Cap(c), veh/h	101	90	246	1226	0	679
V/C Ratio(X)	0.62	0.19	0.62	0.47	0.00	0.72
Avail Cap(c_a), veh/h	827	738	460	2172	0	1352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	13.4	12.2	2.4	0.0	7.7
Incr Delay (d2), s/veh	6.1	1.0	2.6	0.3	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	1.4	2.3	0.0	3.7
LnGrp Delay(d),s/veh	19.9	14.4	14.8	2.7	0.0	9.2
LnGrp LOS	B	B	B	A		A
Approach Vol, veh/h	80			732	491	
Approach Delay, s/veh	18.7			5.2	9.2	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		24.3		6.0	8.3	16.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		36.0		16.0	8.0	24.0		
Max Q Clear Time (g_c+I1), s		6.6		3.2	4.5	9.4		
Green Ext Time (p_c), s		4.5		0.1	1.4	2.7		

Intersection Summary	
HCM 2010 Ctrl Delay	7.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	220	415	270	150	320	175	105	310	105	95	310	195
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1881	1881	1900	1792	1792	1792
Adj Flow Rate, veh/h	232	437	70	158	337	42	111	326	89	100	326	49
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	6	6	6
Cap, veh/h	287	508	432	200	417	354	355	401	110	290	505	429
Arrive On Green	0.16	0.27	0.27	0.11	0.22	0.22	0.06	0.28	0.28	0.06	0.28	0.28
Sat Flow, veh/h	1810	1900	1615	1810	1900	1615	1792	1424	389	1707	1792	1524
Grp Volume(v), veh/h	232	437	70	158	337	42	111	0	415	100	326	49
Grp Sat Flow(s),veh/h/ln	1810	1900	1615	1810	1900	1615	1792	0	1813	1707	1792	1524
Q Serve(g_s), s	7.0	12.4	1.9	4.8	9.6	1.2	0.0	0.0	12.1	0.0	9.1	1.4
Cycle Q Clear(g_c), s	7.0	12.4	1.9	4.8	9.6	1.2	0.0	0.0	12.1	0.0	9.1	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	287	508	432	200	417	354	355	0	511	290	505	429
V/C Ratio(X)	0.81	0.86	0.16	0.79	0.81	0.12	0.31	0.00	0.81	0.34	0.65	0.11
Avail Cap(c_a), veh/h	287	569	484	223	536	455	377	0	511	311	505	429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	19.8	15.9	24.6	21.0	17.8	21.4	0.0	19.0	23.9	17.9	15.1
Incr Delay (d2), s/veh	15.6	11.7	0.2	15.7	7.1	0.1	0.5	0.0	13.2	0.7	6.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	8.1	0.8	3.3	5.8	0.5	1.7	0.0	7.9	1.5	5.3	0.6
LnGrp Delay(d),s/veh	38.6	31.4	16.1	40.3	28.1	17.9	21.9	0.0	32.2	24.6	24.1	15.7
LnGrp LOS	D	C	B	D	C	B	C		C	C	C	B
Approach Vol, veh/h		739			537			526			475	
Approach Delay, s/veh		32.2			30.9			30.0			23.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	20.0	10.3	19.2	7.3	20.0	13.0	16.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	7.0	17.0	4.0	16.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	2.0	14.1	6.8	14.4	2.0	11.1	9.0	11.6
Green Ext Time (p_c), s	0.1	0.4	0.0	0.8	0.1	0.8	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	295	15	165	195	135	30	460	85	145	270	175
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1845	1845	1900	1863	1863	1863	1743	1743	1900
Adj Flow Rate, veh/h	189	311	11	174	205	95	32	484	5	153	284	147
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	3	3	3	2	2	2	9	9	9
Cap, veh/h	351	400	14	345	275	127	307	586	499	271	360	186
Arrive On Green	0.09	0.23	0.23	0.09	0.23	0.23	0.07	0.31	0.31	0.09	0.33	0.33
Sat Flow, veh/h	1723	1737	61	1757	1194	553	1774	1863	1583	1660	1083	561
Grp Volume(v), veh/h	189	0	322	174	0	300	32	484	5	153	0	431
Grp Sat Flow(s),veh/h/ln	1723	0	1799	1757	0	1747	1774	1863	1583	1660	0	1644
Q Serve(g_s), s	4.8	0.0	9.6	4.3	0.0	9.1	0.0	13.7	0.1	4.1	0.0	13.6
Cycle Q Clear(g_c), s	4.8	0.0	9.6	4.3	0.0	9.1	0.0	13.7	0.1	4.1	0.0	13.6
Prop In Lane	1.00		0.03	1.00		0.32	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	351	0	414	345	0	402	307	586	499	271	0	546
V/C Ratio(X)	0.54	0.00	0.78	0.50	0.00	0.75	0.10	0.83	0.01	0.56	0.00	0.79
Avail Cap(c_a), veh/h	351	0	503	345	0	489	307	586	499	271	0	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.8	0.0	20.6	15.7	0.0	20.4	22.4	18.1	13.5	16.8	0.0	17.3
Incr Delay (d2), s/veh	1.7	0.0	6.2	1.2	0.0	4.9	0.1	12.5	0.0	2.7	0.0	11.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	5.5	2.1	0.0	4.9	0.5	9.0	0.1	2.0	0.0	7.8
LnGrp Delay(d),s/veh	17.5	0.0	26.8	16.9	0.0	25.4	22.5	30.6	13.5	19.5	0.0	28.3
LnGrp LOS	B		C	B		C	C	C	B	B		C
Approach Vol, veh/h		511			474			521			584	
Approach Delay, s/veh		23.4			22.3			30.0			26.0	
Approach LOS		C			C			C			C	

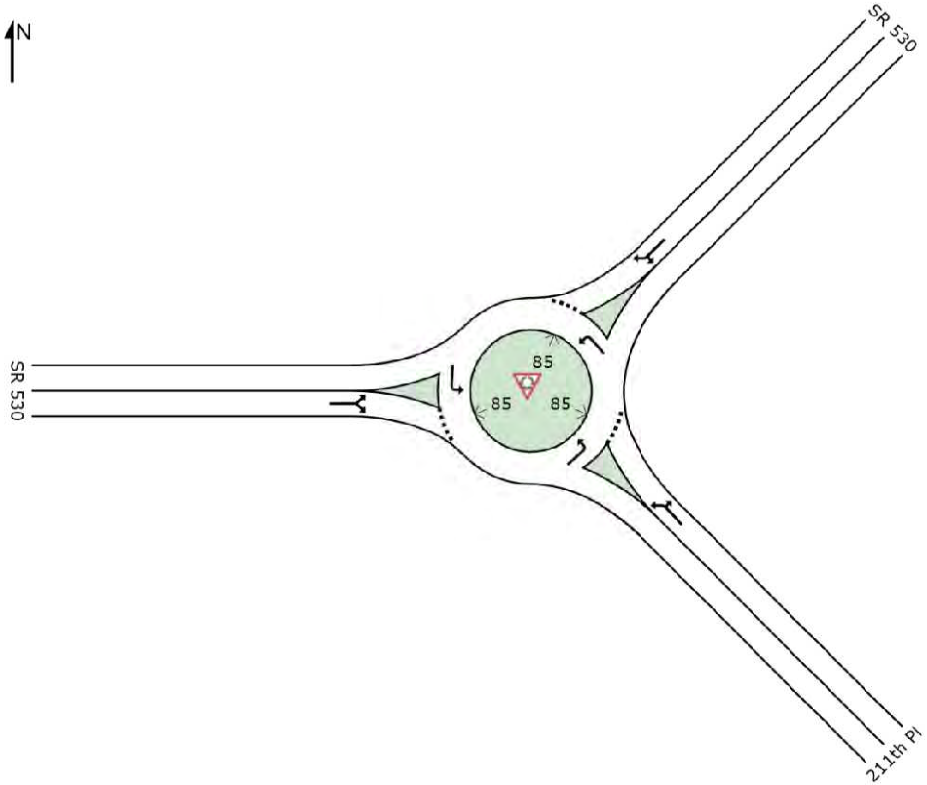
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	22.0	9.0	17.2	8.0	23.0	9.0	17.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	18.0	5.0	16.0	4.0	19.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	6.8	15.7	6.3	11.6	2.0	15.6	6.8	11.1
Green Ext Time (p_c), s	0.0	0.7	0.0	1.6	0.6	0.9	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	25.5
HCM 2010 LOS	C

SITE LAYOUT

Site: 211th Pl at SR 530

Projected 2035 with Improvements
Roundabout



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SIDRA INTERSECTION 6

MOVEMENT SUMMARY

Site: 211th Pl at SR 530

Projected 2035 with Improvements
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
SouthEast: 211th Pl											
3ax	L1	234	3.0	0.451	17.3	LOS B	3.4	86.4	0.88	1.00	30.9
18x	R2	27	3.0	0.451	12.9	LOS B	3.4	86.4	0.88	1.00	30.5
Approach		261	3.0	0.451	16.8	LOS B	3.4	86.4	0.88	1.00	30.9
NorthEast: SR 530											
1x	L2	11	3.0	0.640	12.8	LOS B	6.6	169.6	0.77	0.70	35.3
16ax	R1	609	3.0	0.640	7.0	LOS A	6.6	169.6	0.77	0.70	35.1
Approach		620	3.0	0.640	7.1	LOS A	6.6	169.6	0.77	0.70	35.1
West: SR 530											
5a	L1	788	5.0	0.823	8.8	LOS A	20.3	528.7	0.37	0.48	34.5
12a	R1	207	5.0	0.823	4.1	LOS A	20.3	528.7	0.37	0.48	34.6
Approach		995	5.0	0.823	7.8	LOS A	20.3	528.7	0.37	0.48	34.5
All Vehicles		1875	4.1	0.823	8.8	LOS A	20.3	528.7	0.57	0.63	34.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	85	435	0	0	735	685	105	5	635	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1792	1792	0	0	1863	1863	1900	1810	1810			
Adj Flow Rate, veh/h	89	458	0	0	774	450	111	5	308			
Adj No. of Lanes	1	1	0	0	1	1	0	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	6	6	0	0	2	2	5	5	5			
Cap, veh/h	208	991	0	0	836	710	550	25	512			
Arrive On Green	0.02	0.18	0.00	0.00	0.45	0.45	0.33	0.33	0.33			
Sat Flow, veh/h	1707	1792	0	0	1863	1583	1652	74	1538			
Grp Volume(v), veh/h	89	458	0	0	774	450	116	0	308			
Grp Sat Flow(s),veh/h/ln	1707	1792	0	0	1863	1583	1727	0	1538			
Q Serve(g_s), s	1.8	16.0	0.0	0.0	27.4	15.3	3.4	0.0	11.7			
Cycle Q Clear(g_c), s	1.8	16.0	0.0	0.0	27.4	15.3	3.4	0.0	11.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.96		1.00			
Lane Grp Cap(c), veh/h	208	991	0	0	836	710	575	0	512			
V/C Ratio(X)	0.43	0.46	0.00	0.00	0.93	0.63	0.20	0.00	0.60			
Avail Cap(c_a), veh/h	225	1024	0	0	852	724	575	0	512			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.77	0.77	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	16.3	19.3	0.0	0.0	18.2	14.9	16.7	0.0	19.5			
Incr Delay (d2), s/veh	1.1	0.3	0.0	0.0	15.7	1.8	0.8	0.0	5.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	8.0	0.0	0.0	17.6	7.0	1.7	0.0	5.7			
LnGrp Delay(d),s/veh	17.4	19.6	0.0	0.0	34.0	16.6	17.5	0.0	24.6			
LnGrp LOS	B	B			C	B	B		C			
Approach Vol, veh/h		547			1224			424				
Approach Delay, s/veh		19.2			27.6			22.7				
Approach LOS		B			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		27.3		42.7			7.3	35.4
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		22.0		40.0			4.0	32.0
Max Q Clear Time (g_c+I1), s		13.7		18.0			3.8	29.4
Green Ext Time (p_c), s		1.2		10.1			0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	165	170	440	415	0	0	0	0	405	1	65
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1681	1681	1827	1827	0				1900	1792	1900
Adj Flow Rate, veh/h	0	174	179	463	437	0				426	1	68
Adj No. of Lanes	0	1	1	1	1	0				0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	13	13	4	4	0				0	6	0
Cap, veh/h	0	297	253	583	845	0				612	1	98
Arrive On Green	0.00	0.18	0.18	0.23	0.46	0.00				0.42	0.42	0.42
Sat Flow, veh/h	0	1681	1429	1740	1827	0				1445	3	231
Grp Volume(v), veh/h	0	174	179	463	437	0				495	0	0
Grp Sat Flow(s),veh/h/ln	0	1681	1429	1740	1827	0				1679	0	0
Q Serve(g_s), s	0.0	6.7	8.2	14.4	11.8	0.0				16.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.7	8.2	14.4	11.8	0.0				16.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.86		0.14
Lane Grp Cap(c), veh/h	0	297	253	583	845	0				711	0	0
V/C Ratio(X)	0.00	0.59	0.71	0.79	0.52	0.00				0.70	0.00	0.00
Avail Cap(c_a), veh/h	0	384	327	583	940	0				711	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.25	0.25	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	26.5	27.1	16.2	13.3	0.0				16.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.8	4.9	2.0	0.1	0.0				5.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.2	3.6	7.0	6.0	0.0				8.8	0.0	0.0
LnGrp Delay(d),s/veh	0.0	28.3	32.0	18.2	13.4	0.0				22.1	0.0	0.0
LnGrp LOS		C	C	B	B					C		
Approach Vol, veh/h		353			900						495	
Approach Delay, s/veh		30.1			15.9						22.1	
Approach LOS		C			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			20.0	16.4		33.6		36.4
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			16.0	16.0		26.0		36.0
Max Q Clear Time (g_c+I1), s			16.4	10.2		18.9		13.8
Green Ext Time (p_c), s			0.0	2.1		1.9		4.3

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	25	110	100	20	115	50	350	175	115	615	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1827	1827	1827	1845	1845	1845
Adj Flow Rate, veh/h	53	26	19	105	21	12	53	368	75	121	647	47
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	4	4	4	3	3	3
Cap, veh/h	330	72	52	347	112	64	437	781	664	154	1109	942
Arrive On Green	0.04	0.07	0.07	0.07	0.10	0.10	0.43	0.43	0.43	0.09	0.60	0.60
Sat Flow, veh/h	1810	1022	747	1810	1136	649	733	1827	1553	1757	1845	1568
Grp Volume(v), veh/h	53	0	45	105	0	33	53	368	75	121	647	47
Grp Sat Flow(s),veh/h/ln	1810	0	1768	1810	0	1785	733	1827	1553	1757	1845	1568
Q Serve(g_s), s	1.2	0.0	1.1	2.5	0.0	0.8	2.2	6.7	1.4	3.1	10.0	0.6
Cycle Q Clear(g_c), s	1.2	0.0	1.1	2.5	0.0	0.8	4.2	6.7	1.4	3.1	10.0	0.6
Prop In Lane	1.00		0.42	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	330	0	124	347	0	176	437	781	664	154	1109	942
V/C Ratio(X)	0.16	0.00	0.36	0.30	0.00	0.19	0.12	0.47	0.11	0.79	0.58	0.05
Avail Cap(c_a), veh/h	408	0	607	373	0	613	437	781	664	226	1109	942
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	0.0	20.7	18.2	0.0	19.3	9.5	9.6	8.0	20.8	5.7	3.8
Incr Delay (d2), s/veh	0.2	0.0	1.8	0.5	0.0	0.5	0.6	2.0	0.3	10.4	2.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.6	1.2	0.0	0.4	0.5	3.8	0.6	2.0	5.7	0.3
LnGrp Delay(d),s/veh	19.1	0.0	22.4	18.7	0.0	19.8	10.0	11.6	8.4	31.3	8.0	3.9
LnGrp LOS	B		C	B		B	B	B	A	C	A	A
Approach Vol, veh/h		98			138			496			815	
Approach Delay, s/veh		20.6			19.0			10.9			11.2	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	8.1	23.9	7.3	7.3		32.0	6.0	8.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	4.1	18.0	4.0	16.0		28.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	5.1	8.7	4.5	3.1		12.0	3.2	2.8
Green Ext Time (p_c), s	0.0	4.3	0.0	0.2		5.9	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	505	10	240	15	5	5	25	315	15	5	345	345
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1900	1900	1743	1743	1900	1863	1863	1863
Adj Flow Rate, veh/h	532	11	179	16	5	0	26	332	11	5	363	95
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	0	0	9	9	9	2	2	2
Cap, veh/h	619	48	788	266	160	0	271	493	16	288	547	465
Arrive On Green	0.35	0.52	0.52	0.08	0.08	0.00	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	92	1505	1212	1900	0	870	1678	56	1033	1863	1583
Grp Volume(v), veh/h	532	0	190	16	5	0	26	0	343	5	363	95
Grp Sat Flow(s),veh/h/ln	1774	0	1597	1212	1900	0	870	0	1733	1033	1863	1583
Q Serve(g_s), s	12.2	0.0	2.8	0.5	0.1	0.0	1.2	0.0	7.6	0.2	7.5	2.0
Cycle Q Clear(g_c), s	12.2	0.0	2.8	0.5	0.1	0.0	8.7	0.0	7.6	7.8	7.5	2.0
Prop In Lane	1.00		0.94	1.00		0.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	619	0	837	266	160	0	271	0	509	288	547	465
V/C Ratio(X)	0.86	0.00	0.23	0.06	0.03	0.00	0.10	0.00	0.67	0.02	0.66	0.20
Avail Cap(c_a), veh/h	849	0	1492	606	693	0	333	0	632	361	679	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	0.0	5.6	18.6	18.4	0.0	17.4	0.0	13.6	17.1	13.6	11.6
Incr Delay (d2), s/veh	6.7	0.0	0.1	0.1	0.1	0.0	0.2	0.0	2.0	0.0	1.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	1.2	0.2	0.1	0.0	0.3	0.0	3.9	0.1	4.1	0.9
LnGrp Delay(d),s/veh	20.0	0.0	5.8	18.7	18.5	0.0	17.6	0.0	15.7	17.1	15.3	11.9
LnGrp LOS	C		A	B	B		B		B	B	B	B
Approach Vol, veh/h		722			21			369			463	
Approach Delay, s/veh		16.3			18.7			15.8			14.6	
Approach LOS		B			B			B			B	

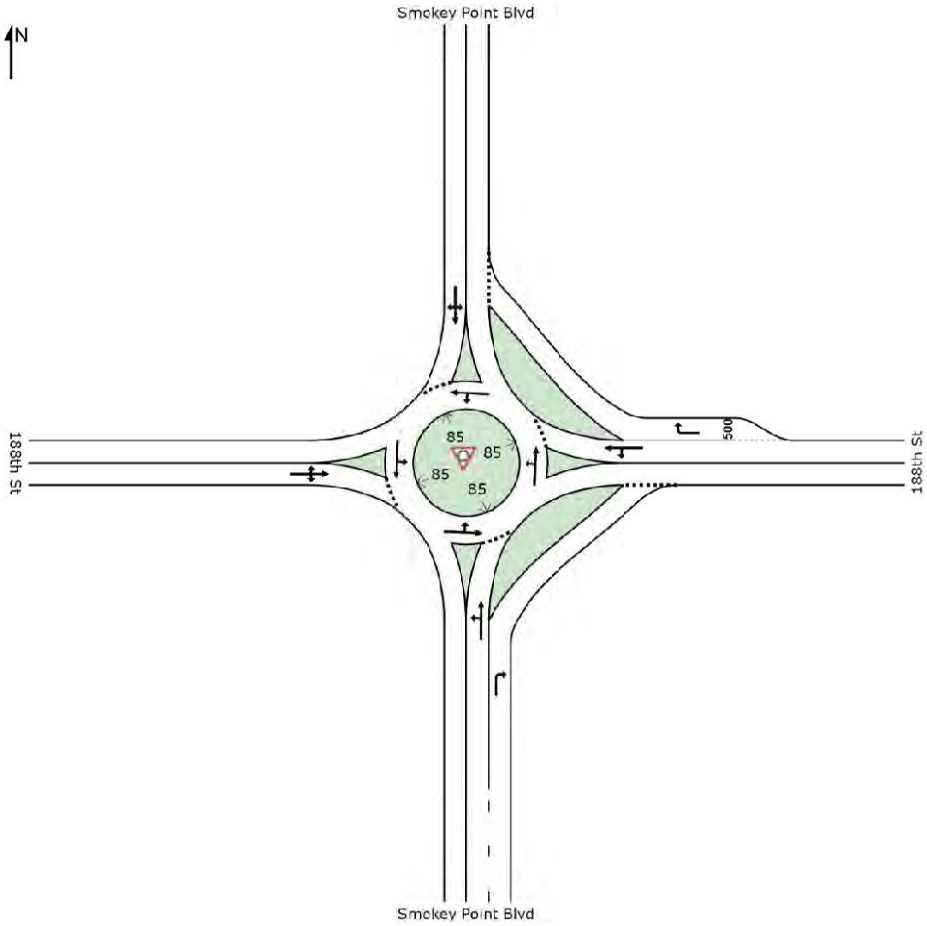
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		16.9		27.0		16.9	19.3	7.7
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0		41.0		16.0	21.0	16.0
Max Q Clear Time (g_c+I1), s		10.7		4.8		9.8	14.2	2.5
Green Ext Time (p_c), s		2.2		1.3		2.5	1.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

SITE LAYOUT

Site: Smokey Point Blvd at 188th St

Projected 2035 with Improvements
Roundabout



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MOVEMENT SUMMARY

Site: Smokey Point Blvd at 188th St

Projected 2035 with Improvements
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Smokey Point Blvd											
3	L2	190	2.0	0.582	12.3	LOS B	5.2	131.2	0.72	0.72	34.6
8	T1	462	2.0	0.582	6.8	LOS A	5.2	131.2	0.72	0.72	34.6
18	R2	174	2.0	0.153	5.4	LOS A	0.9	22.5	0.49	0.57	35.5
Approach		826	2.0	0.582	7.8	LOS A	5.2	131.2	0.67	0.69	34.8
East: 188th St											
1	L2	277	2.0	0.920	34.6	LOS C	20.7	525.7	1.00	1.48	26.1
6	T1	440	2.0	0.920	29.2	LOS C	20.7	525.7	1.00	1.48	26.1
16	R2	386	2.0	0.405	6.9	LOS A	3.0	76.0	0.75	0.75	34.9
Approach		1103	2.0	0.920	22.7	LOS C	20.7	525.7	0.91	1.22	28.5
North: Smokey Point Blvd											
7	L2	168	2.0	1.186	130.0	LOS F	42.2	1072.9	1.00	2.34	12.5
4	T1	304	2.0	1.186	124.6	LOS F	42.2	1072.9	1.00	2.34	12.5
14	R2	33	2.0	1.186	124.5	LOS F	42.2	1072.9	1.00	2.34	12.4
Approach		505	2.0	1.186	126.4	LOS F	42.2	1072.9	1.00	2.34	12.5
West: 188th St											
5	L2	21	2.0	0.430	15.9	LOS B	3.1	78.9	0.85	0.91	33.9
2	T1	158	2.0	0.430	10.5	LOS B	3.1	78.9	0.85	0.91	33.9
12	R2	89	2.0	0.430	10.4	LOS B	3.1	78.9	0.85	0.91	33.0
Approach		268	2.0	0.430	10.9	LOS B	3.1	78.9	0.85	0.91	33.6
All Vehicles		2703	2.0	1.186	36.4	LOS D	42.2	1072.9	0.85	1.24	24.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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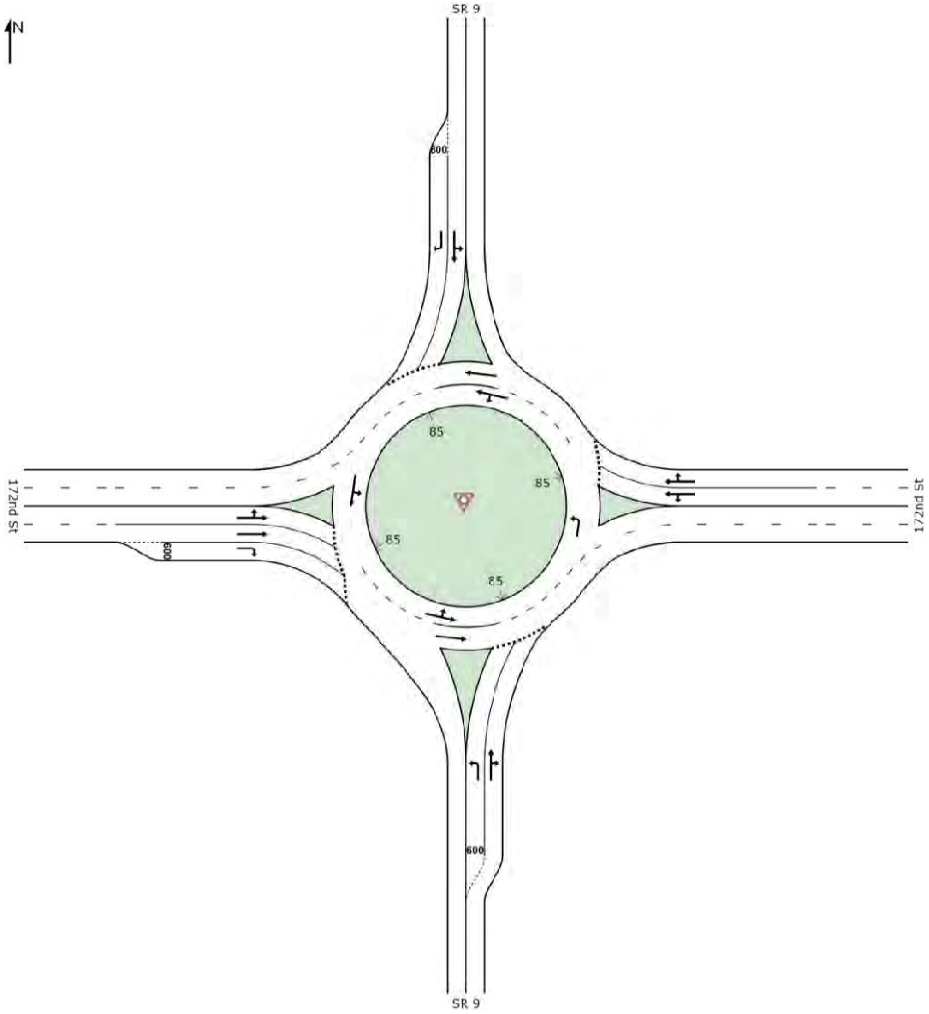
SITE LAYOUT

Site: SR 9 at 172nd St IMP

Projected 2035 With Improvements
Roundabout



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SIDRA INTERSECTION 6

MOVEMENT SUMMARY

Site: SR 9 at 172nd St IMP

Projected 2035 With Improvements
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: SR 9											
3	L2	185	10.0	0.494	17.7	LOS B	2.5	68.1	0.81	0.99	31.2
8	T1	196	10.0	0.781	14.1	LOS B	6.1	165.2	0.92	1.11	32.5
18	R2	217	10.0	0.781	14.3	LOS B	6.1	165.2	0.92	1.11	31.5
Approach		598	10.0	0.781	15.3	LOS B	6.1	165.2	0.89	1.07	31.7
East: 172nd St											
1	L2	22	8.0	0.487	16.3	LOS B	3.8	100.9	0.84	0.91	34.2
6	T1	598	8.0	0.487	9.9	LOS A	4.0	105.9	0.83	0.89	34.5
16	R2	125	8.0	0.487	9.3	LOS A	4.0	105.9	0.83	0.86	33.7
Approach		745	8.0	0.487	9.9	LOS A	4.0	105.9	0.83	0.88	34.4
North: SR 9											
7	L2	109	6.0	0.883	23.5	LOS C	11.0	287.8	0.97	1.28	30.7
4	T1	522	6.0	0.883	17.7	LOS B	11.0	287.8	0.97	1.28	30.7
14	R2	147	6.0	0.374	11.5	LOS B	1.7	45.0	0.73	0.89	32.8
Approach		777	6.0	0.883	17.3	LOS B	11.0	287.8	0.93	1.21	31.0
West: 172nd St											
5	L2	211	3.0	0.744	23.4	LOS C	9.2	236.6	1.00	1.19	30.2
2	T1	805	3.0	0.744	16.1	LOS B	10.1	259.7	1.00	1.15	31.4
12	R2	500	3.0	0.802	20.8	LOS C	11.4	291.2	1.00	1.25	28.7
Approach		1516	3.0	0.802	18.7	LOS B	11.4	291.2	1.00	1.19	30.3
All Vehicles		3635	5.8	0.883	16.0	LOS B	11.4	291.2	0.93	1.11	31.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SIDRA INTERSECTION 6

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	195	1575	795	35	5	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	205	1658	837	37	5	121

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	874	0	-	0	2923	855
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	2068	-
Critical Hdwy	4.12	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.218	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	772	-	-	-	17	361
Stage 1	-	-	-	-	420	-
Stage 2	-	-	-	-	107	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	772	-	-	-	12	361
Mov Cap-2 Maneuver	-	-	-	-	12	-
Stage 1	-	-	-	-	420	-
Stage 2	-	-	-	-	79	-

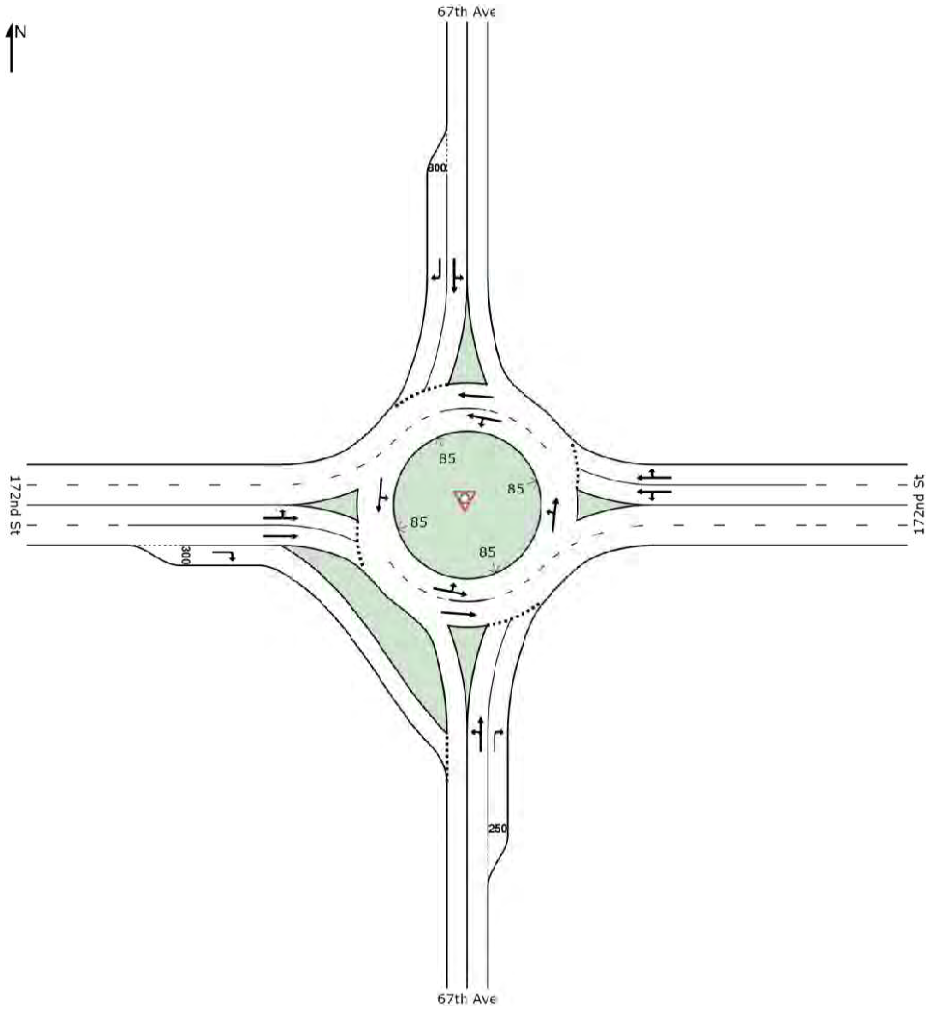
Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	77.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	772	-	-	-	163
HCM Lane V/C Ratio	0.266	-	-	-	0.775
HCM Control Delay (s)	11.3	-	-	-	77.8
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	1.1	-	-	-	5

SITE LAYOUT

Site: 67th Ave at 172nd St (SR 531)

Projected 2035 With Improvements
Roundabout



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SIDRA INTERSECTION 6

MOVEMENT SUMMARY

Site: 67th Ave at 172nd St (SR 531)

Projected 2035 With Improvements
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: 67th Ave											
3	L2	147	6.0	0.998	49.5	LOS D	13.5	353.0	1.00	1.55	22.6
8	T1	255	6.0	0.998	43.6	LOS D	13.5	353.0	1.00	1.55	22.5
18	R2	304	6.0	0.701	15.0	LOS B	4.9	129.0	0.93	1.08	31.2
Approach		707	6.0	0.998	32.5	LOS C	13.5	353.0	0.97	1.35	25.5
East: 172nd St											
1	L2	120	8.0	0.718	20.5	LOS C	8.5	226.1	0.97	1.12	31.7
6	T1	935	8.0	0.718	13.7	LOS B	9.1	242.2	0.97	1.09	32.5
16	R2	49	8.0	0.718	13.1	LOS B	9.1	242.2	0.98	1.07	32.0
Approach		1103	8.0	0.718	14.4	LOS B	9.1	242.2	0.97	1.09	32.4
North: 67th Ave											
7	L2	109	4.0	0.961	35.4	LOS D	13.0	334.8	1.00	1.47	26.5
4	T1	402	4.0	0.961	29.5	LOS C	13.0	334.8	1.00	1.47	26.4
14	R2	147	4.0	0.463	13.2	LOS B	2.3	58.2	0.84	0.96	32.0
Approach		658	4.0	0.961	26.9	LOS C	13.0	334.8	0.96	1.36	27.5
West: 172nd St											
5	L2	174	3.0	1.158	104.6	LOS F	54.1	1386.1	1.00	2.56	14.7
2	T1	1532	3.0	1.158	96.9	LOS F	63.4	1623.1	1.00	2.64	14.9
12	R2	337	3.0	0.367	7.1	LOS A	2.7	69.9	0.77	0.76	34.8
Approach		2042	3.0	1.158	82.8	LOS F	63.4	1623.1	0.96	2.33	16.4
All Vehicles		4509	4.8	1.158	50.0	LOS D	63.4	1623.1	0.97	1.73	21.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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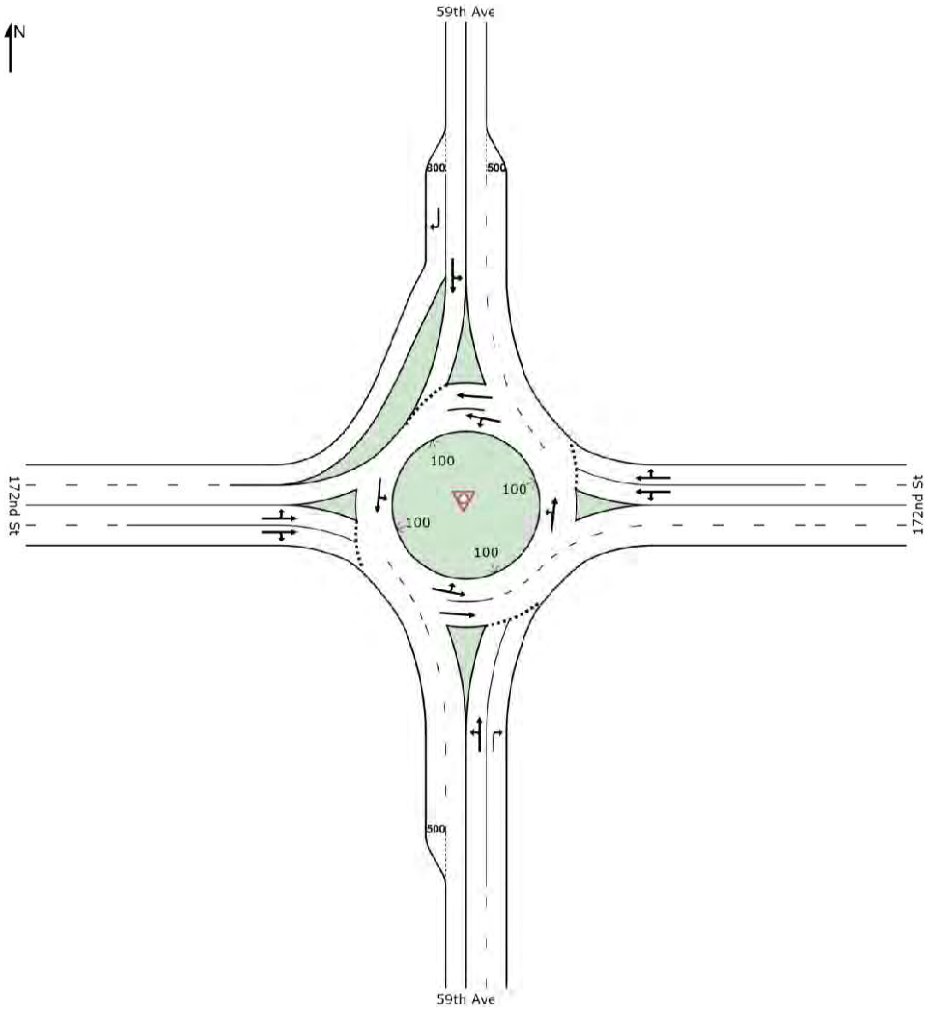
SIDRA INTERSECTION 6

SITE LAYOUT

Site: 59th Ave at 172nd St (SR 531)

Projected 2035 with Improvements
Roundabout



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SIDRA INTERSECTION 6

MOVEMENT SUMMARY

Site: 59th Ave at 172nd St (SR 531)

Projected 2035 with Improvements
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: 59th Ave											
3	L2	27	7.0	1.243	155.8	LOS F	22.8	602.5	1.00	1.96	11.1
8	T1	217	7.0	1.243	149.9	LOS F	22.8	602.5	1.00	1.96	11.1
18	R2	375	7.0	1.342	184.5	LOS F	39.4	1040.2	1.00	2.50	9.2
Approach		620	7.0	1.342	171.1	LOS F	39.4	1040.2	1.00	2.29	9.9
East: 172nd St											
1	L2	120	4.0	0.878	29.8	LOS C	16.0	413.3	1.00	1.36	28.3
6	T1	1239	4.0	0.878	22.4	LOS C	17.5	451.8	1.00	1.33	29.0
16	R2	38	4.0	0.878	21.4	LOS C	17.5	451.8	1.00	1.31	28.7
Approach		1397	4.0	0.878	23.0	LOS C	17.5	451.8	1.00	1.33	28.9
North: 59th Ave											
7	L2	27	7.0	0.560	17.9	LOS B	3.4	89.8	0.89	1.00	33.4
4	T1	217	7.0	0.560	12.0	LOS B	3.4	89.8	0.89	1.00	33.3
14	R2	402	7.0	0.257	3.7	LOS A	0.0	0.0	0.00	0.43	37.2
Approach		647	7.0	0.560	7.0	LOS A	3.4	89.8	0.34	0.65	35.6
West: 172nd St											
5	L2	405	5.0	1.063	59.9	LOS F	47.1	1224.0	1.00	1.93	20.4
2	T1	1679	5.0	1.063	52.3	LOS F	51.4	1336.5	1.00	1.93	21.0
12	R2	16	5.0	1.063	51.5	LOS F	51.4	1336.5	1.00	1.93	20.8
Approach		2100	5.0	1.063	53.7	LOS D	51.4	1336.5	1.00	1.93	20.9
All Vehicles		4763	5.2	1.342	53.6	LOS D	51.4	1336.5	0.91	1.63	20.8

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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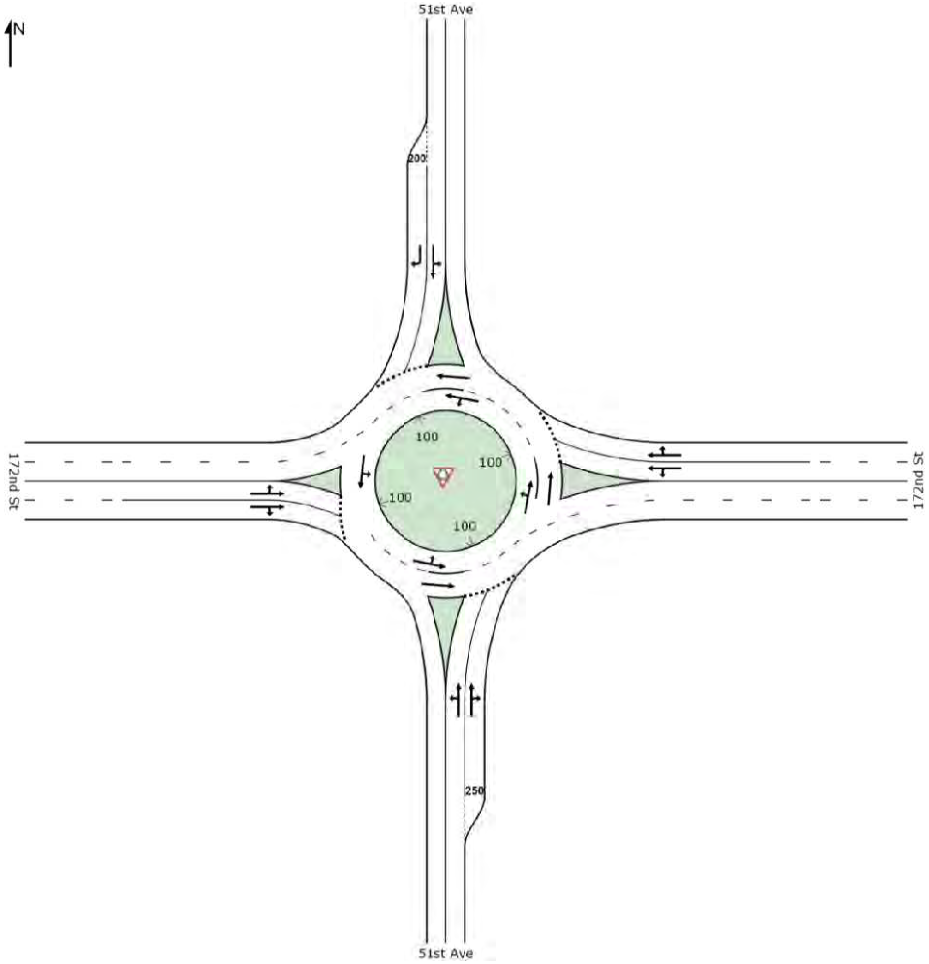
SIDRA INTERSECTION 6

SITE LAYOUT

Site: 51st Ave at 172nd St (SR 531)

Projected 2035 with Improvements
Roundabout



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SIDRA INTERSECTION 6

MOVEMENT SUMMARY

Site: 51st Ave at 172nd St (SR 531)

Projected 2035 with Improvements
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: 51st Ave											
3	L2	147	8.0	1.068	67.1	LOS F	21.3	565.5	1.00	1.89	19.3
8	T1	326	8.0	1.068	61.3	LOS F	21.3	565.5	1.00	1.89	19.3
18	R2	408	8.0	1.143	91.9	LOS F	25.5	679.5	1.00	2.11	15.0
Approach		880	8.0	1.143	76.5	LOS E	25.5	679.5	1.00	1.99	17.1
East: 172nd St											
1	L2	272	3.0	1.041	50.0	LOS F	34.3	878.8	1.00	1.84	22.5
6	T1	1103	3.0	1.041	43.8	LOS F	35.7	912.8	1.00	1.84	22.7
16	R2	364	3.0	1.041	43.3	LOS F	35.7	912.8	1.00	1.83	22.5
Approach		1739	3.0	1.041	44.7	LOS D	35.7	912.8	1.00	1.84	22.6
North: 51st Ave											
7	L2	163	5.0	0.925	39.7	LOS D	10.7	277.6	1.00	1.39	24.9
4	T1	217	5.0	0.925	33.8	LOS C	10.7	277.6	1.00	1.39	24.9
14	R2	38	5.0	0.161	13.1	LOS B	0.7	18.3	0.83	0.91	32.0
Approach		418	5.0	0.925	34.3	LOS C	10.7	277.6	0.98	1.35	25.4
West: 172nd St											
5	L2	16	3.0	0.851	29.2	LOS C	14.1	362.2	1.00	1.34	28.9
2	T1	1237	3.0	0.851	21.9	LOS C	15.6	398.8	1.00	1.31	29.3
12	R2	53	3.0	0.851	20.8	LOS C	15.6	398.8	1.00	1.29	29.0
Approach		1305	3.0	0.851	21.9	LOS C	15.6	398.8	1.00	1.31	29.3
All Vehicles		4343	4.2	1.143	43.3	LOS D	35.7	912.8	1.00	1.66	22.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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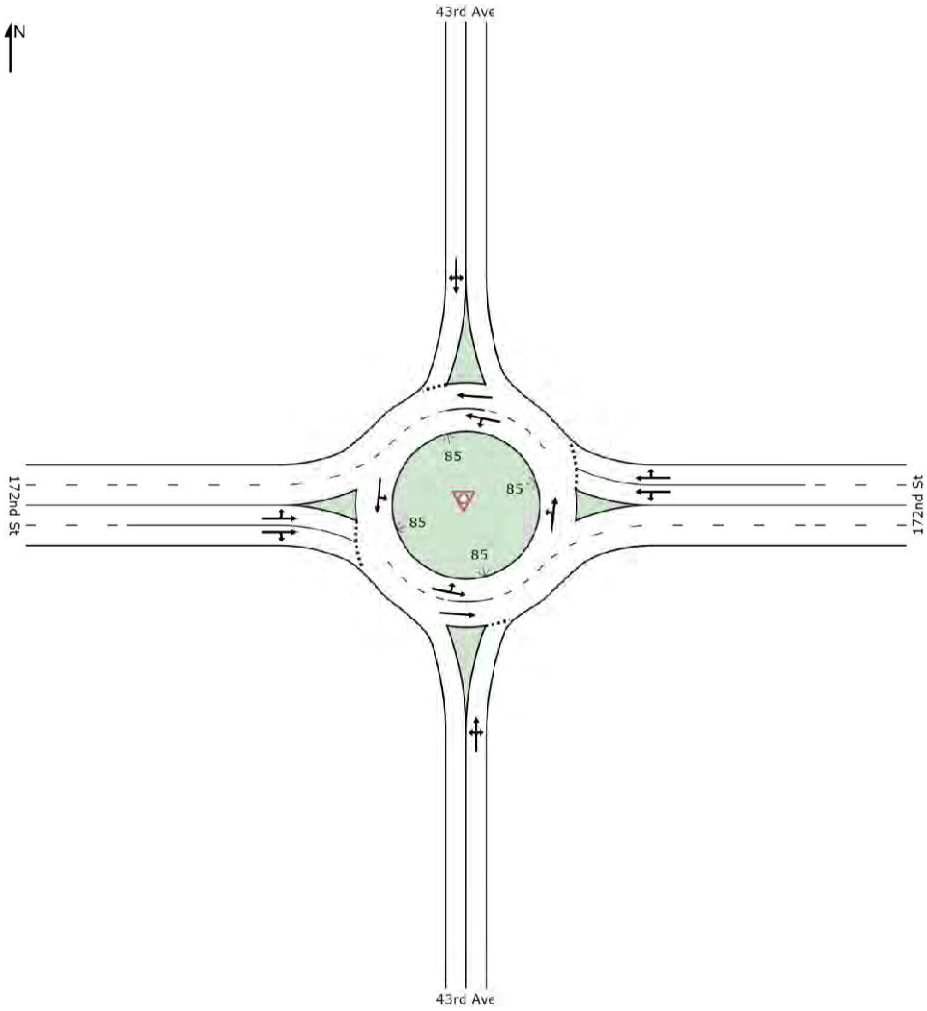
SIDRA INTERSECTION 6

SITE LAYOUT

Site: 43rd Ave at 172nd St (SR 531)

Projected 2035 with Improvements
Roundabout



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SIDRA INTERSECTION 6

MOVEMENT SUMMARY

Site: 43rd Ave at 172nd St (SR 531)

Projected 2035 with Improvements
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: 43rd Ave											
3	L2	82	28.0	0.754	26.0	LOS C	4.9	150.7	0.88	1.13	28.6
8	T1	163	28.0	0.754	20.5	LOS C	4.9	150.7	0.88	1.13	28.9
18	R2	43	28.0	0.754	20.4	LOS C	4.9	150.7	0.88	1.13	28.2
Approach		288	28.0	0.754	22.1	LOS C	4.9	150.7	0.88	1.13	28.7
East: 172nd St											
1	L2	49	5.0	0.631	16.0	LOS B	6.4	166.0	0.86	0.92	33.7
6	T1	1060	5.0	0.631	10.1	LOS B	6.6	171.6	0.86	0.90	34.2
16	R2	11	5.0	0.631	9.7	LOS A	6.6	171.6	0.85	0.88	33.5
Approach		1120	5.0	0.631	10.4	LOS B	6.6	171.6	0.86	0.90	34.2
North: 43rd Ave											
7	L2	5	8.0	0.251	15.1	LOS B	1.1	28.8	0.76	0.87	34.3
4	T1	43	8.0	0.251	9.7	LOS A	1.1	28.8	0.76	0.87	34.3
14	R2	49	8.0	0.251	9.6	LOS A	1.1	28.8	0.76	0.87	33.4
Approach		98	8.0	0.251	9.9	LOS A	1.1	28.8	0.76	0.87	33.9
West: 172nd St											
5	L2	153	5.0	0.446	10.4	LOS B	3.5	89.9	0.40	0.52	35.5
2	T1	884	5.0	0.446	5.0	LOS A	3.5	90.7	0.39	0.49	35.9
12	R2	84	5.0	0.446	5.0	LOS A	3.5	90.7	0.39	0.46	35.1
Approach		1121	5.0	0.446	5.8	LOS A	3.5	90.7	0.39	0.49	35.8
All Vehicles		2626	7.6	0.754	9.7	LOS A	6.6	171.6	0.66	0.75	34.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: N:\Projects\0698 City of Arlington\0698.01 Transportation Plan Update\Phase 05 - Updated Analysis \Operations\Sidra\22 - 43rd at 172nd.sip6
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SIDRA INTERSECTION 6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	370	980	380	65	1145	225	800	525	25	275	230	505
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	389	1032	147	68	1205	42	842	553	5	289	242	190
Adj No. of Lanes	1	2	1	1	3	1	2	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	387	1403	628	87	1156	360	813	819	366	315	611	273
Arrive On Green	0.44	0.79	0.79	0.05	0.23	0.23	0.24	0.23	0.23	0.30	0.29	0.29
Sat Flow, veh/h	1774	3539	1583	1774	5085	1583	3442	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	389	1032	147	68	1205	42	842	553	5	289	242	190
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1695	1583	1721	1770	1583	1774	1770	1583
Q Serve(g_s), s	24.0	16.0	1.3	4.2	25.0	1.6	26.0	15.7	0.3	17.3	6.0	11.7
Cycle Q Clear(g_c), s	24.0	16.0	1.3	4.2	25.0	1.6	26.0	15.7	0.3	17.3	6.0	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	387	1403	628	87	1156	360	813	819	366	315	611	273
V/C Ratio(X)	1.01	0.74	0.23	0.78	1.04	0.12	1.04	0.68	0.01	0.92	0.40	0.69
Avail Cap(c_a), veh/h	387	1403	628	113	1156	360	813	819	366	355	611	273
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	31.0	8.5	1.7	51.7	42.5	15.4	42.0	38.5	32.6	37.9	34.5	36.6
Incr Delay (d2), s/veh	44.8	1.9	0.2	22.5	38.3	0.1	40.9	4.4	0.1	26.0	1.9	13.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.4	7.8	0.6	2.6	15.8	0.7	16.9	8.2	0.1	10.7	3.1	6.1
LnGrp Delay(d),s/veh	75.8	10.4	1.9	74.2	80.8	15.6	82.9	42.9	32.7	63.9	36.4	50.0
LnGrp LOS	F	B	A	E	F	B	F	D	C	E	D	D
Approach Vol, veh/h		1568			1315			1400			721	
Approach Delay, s/veh		25.8			78.3			67.0			51.0	
Approach LOS		C			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.5	29.5	9.4	47.6	30.0	23.0	28.0	29.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.5	23.0	7.0	42.0	26.0	19.0	24.0	25.0
Max Q Clear Time (g_c+I1), s	19.3	17.7	6.2	18.0	28.0	13.7	26.0	27.0
Green Ext Time (p_c), s	0.2	3.1	0.0	10.0	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	5	95	5	5	10	90	655	15	5	500	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1810	1900	1900	1900	1900	1863	1863	1900	1845	1845	1900
Adj Flow Rate, veh/h	58	5	21	5	5	0	95	689	16	5	526	27
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	0	0	0	2	2	2	3	3	3
Cap, veh/h	186	7	27	141	95	0	759	2753	64	701	2642	135
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.00	1.00	1.00	1.00	0.78	0.78	0.78
Sat Flow, veh/h	999	86	362	560	1251	0	852	3536	82	732	3393	174
Grp Volume(v), veh/h	84	0	0	10	0	0	95	345	360	5	271	282
Grp Sat Flow(s),veh/h/ln	1447	0	0	1811	0	0	852	1770	1848	732	1752	1814
Q Serve(g_s), s	2.8	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	2.2	2.2
Cycle Q Clear(g_c), s	3.1	0.0	0.0	0.3	0.0	0.0	2.6	0.0	0.0	0.1	2.2	2.2
Prop In Lane	0.69		0.25	0.50		0.00	1.00		0.04	1.00		0.10
Lane Grp Cap(c), veh/h	220	0	0	235	0	0	759	1378	1439	701	1365	1413
V/C Ratio(X)	0.38	0.00	0.00	0.04	0.00	0.00	0.13	0.25	0.25	0.01	0.20	0.20
Avail Cap(c_a), veh/h	631	0	0	701	0	0	759	1378	1439	701	1365	1413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.58	0.58	0.58	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	0.0	0.0	23.6	0.0	0.0	0.1	0.0	0.0	1.4	1.6	1.6
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.1	0.0	0.0	0.2	0.3	0.2	0.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	1.2	1.2
LnGrp Delay(d),s/veh	26.0	0.0	0.0	23.7	0.0	0.0	0.3	0.3	0.2	1.4	1.9	1.9
LnGrp LOS	C			C			A	A	A	A	A	A
Approach Vol, veh/h		84			10			800			558	
Approach Delay, s/veh		26.0			23.7			0.2			1.9	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		46.8		8.2		46.8		8.2
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		27.0		20.0		27.0		20.0
Max Q Clear Time (g_c+I1), s		4.6		5.1		4.2		2.3
Green Ext Time (p_c), s		8.4		0.4		8.5		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	2.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	370	995	0	0	2035	540	680	0	695	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1881	1881	0	0	1881	1881	1881	0	1881			
Adj Flow Rate, veh/h	389	1047	0	0	2142	0	716	0	0			
Adj No. of Lanes	1	2	0	0	3	1	2	0	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	1	1	0	0	1	1	1	0	1			
Cap, veh/h	407	2534	0	0	2288	712	758	0	349			
Arrive On Green	0.45	1.00	0.00	0.00	0.45	0.00	0.22	0.00	0.00			
Sat Flow, veh/h	1792	3668	0	0	5305	1599	3476	0	1599			
Grp Volume(v), veh/h	389	1047	0	0	2142	0	716	0	0			
Grp Sat Flow(s),veh/h/ln	1792	1787	0	0	1712	1599	1738	0	1599			
Q Serve(g_s), s	23.0	0.0	0.0	0.0	43.6	0.0	22.3	0.0	0.0			
Cycle Q Clear(g_c), s	23.0	0.0	0.0	0.0	43.6	0.0	22.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	407	2534	0	0	2288	712	758	0	349			
V/C Ratio(X)	0.96	0.41	0.00	0.00	0.94	0.00	0.94	0.00	0.00			
Avail Cap(c_a), veh/h	407	2534	0	0	2288	712	758	0	349			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.28	0.28	0.00	0.00	0.09	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	29.5	0.0	0.0	0.0	29.0	0.0	42.3	0.0	0.0			
Incr Delay (d2), s/veh	14.3	0.1	0.0	0.0	1.0	0.0	20.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.9	0.0	0.0	0.0	20.6	0.0	12.9	0.0	0.0			
LnGrp Delay(d),s/veh	43.7	0.1	0.0	0.0	30.0	0.0	62.6	0.0	0.0			
LnGrp LOS	D	A			C		E					
Approach Vol, veh/h		1436			2142			716				
Approach Delay, s/veh		11.9			30.0			62.6				
Approach LOS		B			C			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		82.0			29.0	53.0		28.0
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		78.0			25.0	49.0		24.0
Max Q Clear Time (g_c+I1), s		2.0			25.0	45.6		24.3
Green Ext Time (p_c), s		11.9			0.0	3.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1205	655	0	1720	995	0	0	0	160	1	445
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	0	1845	1845				1900	1810	1810
Adj Flow Rate, veh/h	0	1268	0	0	1811	642				168	1	452
Adj No. of Lanes	0	2	0	0	2	1				0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	0	3	3				5	5	5
Cap, veh/h	0	2186	0	0	2165	969				530	3	476
Arrive On Green	0.00	0.62	0.00	0.00	0.82	0.82				0.31	0.31	0.31
Sat Flow, veh/h	0	3725	0	0	3597	1568				1714	10	1538
Grp Volume(v), veh/h	0	1268	0	0	1811	642				169	0	452
Grp Sat Flow(s),veh/h/ln	0	1770	0	0	1752	1568				1724	0	1538
Q Serve(g_s), s	0.0	23.5	0.0	0.0	32.4	17.6				8.3	0.0	31.6
Cycle Q Clear(g_c), s	0.0	23.5	0.0	0.0	32.4	17.6				8.3	0.0	31.6
Prop In Lane	0.00		0.00	0.00		1.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	2186	0	0	2165	969				534	0	476
V/C Ratio(X)	0.00	0.58	0.00	0.00	0.84	0.66				0.32	0.00	0.95
Avail Cap(c_a), veh/h	0	2186	0	0	2165	969				548	0	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.33				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	0.23	0.23				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.5	0.0	0.0	6.6	5.3				29.1	0.0	37.1
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.0	1.0	0.8				0.3	0.0	28.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.8	0.0	0.0	15.2	7.5				4.0	0.0	17.1
LnGrp Delay(d),s/veh	0.0	13.7	0.0	0.0	7.6	6.2				29.4	0.0	65.1
LnGrp LOS		B			A	A				C		E
Approach Vol, veh/h		1268			2453						621	
Approach Delay, s/veh		13.7			7.2						55.4	
Approach LOS		B			A						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		71.9		38.1		71.9		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		67.0		35.0		67.0		
Max Q Clear Time (g_c+I1), s		25.5		33.6		34.4		
Green Ext Time (p_c), s		37.6		0.4		30.1		

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	75	50	70	730	340	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	53	74	768	358	126

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1274	358	358	0	-	0
Stage 1	358	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	184	686	1201	-	-	-
Stage 1	707	-	-	-	-	-
Stage 2	390	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	173	686	1201	-	-	-
Mov Cap-2 Maneuver	173	-	-	-	-	-
Stage 1	707	-	-	-	-	-
Stage 2	366	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	35.1	0.7	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1201	-	247	-	-
HCM Lane V/C Ratio	0.061	-	0.533	-	-
HCM Control Delay (s)	8.2	-	35.1	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0.2	-	2.9	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	70	5	30	170	25	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	74	5	32	179	26	53

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	79	0	318	76
Stage 1	-	-	-	-	76	-
Stage 2	-	-	-	-	242	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1519	-	675	985
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	798	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1519	-	659	985
Mov Cap-2 Maneuver	-	-	-	-	659	-
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	780	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	846	-	-	1519	-
HCM Lane V/C Ratio	0.093	-	-	0.021	-
HCM Control Delay (s)	9.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Vol, veh/h	655	330	0	1290	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	689	347	0	1358	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	689	0	2047	689
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	1358	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	905	-	61	446
Stage 1	-	0	-	-	498	-
Stage 2	-	0	-	-	239	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	905	-	61	446
Mov Cap-2 Maneuver	-	-	-	-	61	-
Stage 1	-	-	-	-	498	-
Stage 2	-	-	-	-	239	-

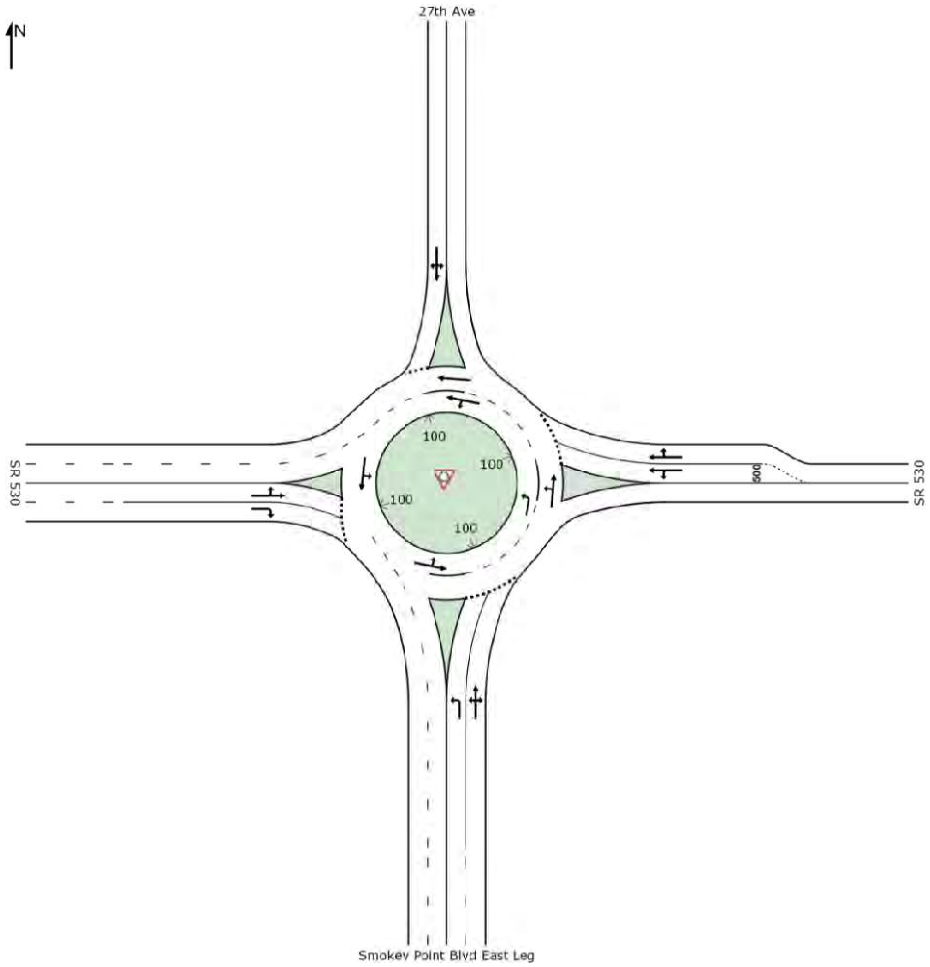
Approach	EB	WB	NW
HCM Control Delay, s	0	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NWLn1	EBT	WBL	WBT
Capacity (veh/h)	446	-	905	-
HCM Lane V/C Ratio	0.012	-	-	-
HCM Control Delay (s)	13.2	-	0	-
HCM Lane LOS	B	-	A	-
HCM 95th %tile Q(veh)	0	-	0	-

SITE LAYOUT

Site: SR 530 at Smokey Point Blvd East Leg

Projected 2035 With Improvements
Roundabout



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SIDRA INTERSECTION 6

MOVEMENT SUMMARY

Site: SR 530 at Smokey Point Blvd East Leg

Projected 2035 With Improvements
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Smokey Point Blvd East Leg											
3	L2	605	2.0	0.757	22.5	LOS C	9.3	236.1	0.99	1.19	29.8
8	T1	16	2.0	0.757	16.0	LOS B	9.3	236.1	1.00	1.19	31.2
18	R2	400	2.0	0.757	16.0	LOS B	9.3	236.1	1.00	1.19	30.3
Approach		1021	2.0	0.757	19.9	LOS B	9.3	236.1	0.99	1.19	30.0
East: SR 530											
1	L2	232	2.0	0.614	14.9	LOS B	4.8	120.9	0.82	0.97	33.8
6	T1	726	2.0	0.614	8.8	LOS A	4.9	124.1	0.82	0.91	34.6
16	R2	5	2.0	0.614	8.7	LOS A	4.9	124.1	0.82	0.88	34.0
Approach		963	2.0	0.614	10.3	LOS B	4.9	124.1	0.82	0.92	34.4
North: 27th Ave											
7	L2	11	2.0	0.103	16.5	LOS B	0.4	11.4	0.75	0.88	33.8
4	T1	16	2.0	0.103	10.6	LOS B	0.4	11.4	0.75	0.88	33.7
14	R2	16	2.0	0.103	10.5	LOS B	0.4	11.4	0.75	0.88	32.8
Approach		42	2.0	0.103	12.0	LOS B	0.4	11.4	0.75	0.88	33.3
West: SR 530											
5	L2	16	2.0	0.588	11.7	LOS B	5.4	137.1	0.70	0.56	35.6
2	T1	689	2.0	0.588	5.8	LOS A	5.4	137.1	0.70	0.56	35.5
12	R2	53	2.0	0.070	6.1	LOS A	0.4	9.2	0.50	0.57	35.4
Approach		758	2.0	0.588	6.0	LOS A	5.4	137.1	0.68	0.56	35.5
All Vehicles		2784	2.0	0.757	12.6	LOS B	9.3	236.1	0.84	0.92	32.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SIDRA INTERSECTION 6

Intersection	
Int Delay, s/veh	2.8

Movement	NBL	NBT	SBT	SBR	SEL	SER
Vol, veh/h	10	970	235	0	0	330
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	1021	247	0	0	347

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	247	0	-	0	1289	247
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	1042	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1319	-	-	-	181	792
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	340	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1319	-	-	-	178	792
Mov Cap-2 Maneuver	-	-	-	-	178	-
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	334	-

Approach	NB	SB	SE
HCM Control Delay, s	0.1	0	13
HCM LOS			B

Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	1319	-	792	-	-
HCM Lane V/C Ratio	0.008	-	0.439	-	-
HCM Control Delay (s)	7.8	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	2.3	-	-

G Transportation Model Post-Process Calculations

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SCJ ALLIANCE
ENGINEERING AND PLANNING SERVICES

Arlington Transportation Plan

PM Peak Hour Volumes

Intersection	Movement		EXISTING 2010 VOLUMES	EXISTING MODEL VOLUMES	2035 Base Model: 2035 BASE MODEL VOLUMES	2035 Base Model: BASE MODEL GROWTH	2035 Base Model: BASE MODEL ADJ	2035 Base Model: PROJECTED 2035 VOLUMES	2035 Model With Improvements: 2035 PLANNED MODEL VOLUMES	2035 Model With Improvements: 2035 PLANNED MODEL GROWTH	2035 Model With Improvements: PLANNED MODEL ADJ	2035 Model With Improvements: PROJECTED 2035 VOLUMES
		L	0	-	-	-		**0**	-	-		**0**
	EB	T	687	563	532	-31		**656**	534	-29		**658**
		R	13	12	17	5		**18**	17	5		**18**
1		L	20	37	73	36		**56**	71	34		**54**
E Burke Ave	WB	T	398	383	443	60		**458**	445	62		**460**
N Manhattan Ave		R	0	-	-	-		**0**	-	-		**0**
		L	6	17	34	17		**23**	33	16		**22**
	NB	T	0	-	-	-		**0**	-	-		**0**
TMC Date: 6/07/11		R	65	187	98	-89	89	**65**	97	-90	90	**65**
		L	0	-	-	-		**0**	-	-		**0**
	SB	T	0	-	-	-		**0**	-	-		**0**
		R	0	-	-	-		**0**	-	-		**0**
			1,189									
		L	0	-	-	-		**0**	-	-		**0**
	EB	T	0	-	-	-		**0**	-	-		**0**
		R	0	-	-	-		**0**	-	-		**0**
2		L	236	300	350	50		**286**	351	51		**287**
W Burke Ave (SR 530)	WB	T	0	-	-	-		**0**	-	-		**0**
Hazel St (SR-9)		R	76	66	108	42		**118**	107	41		**117**
		L	0	-	-	-		**0**	-	-		**0**
	NB	T	380	391	718	327		**707**	721	330		**710**
TMC Date: 6/07/11		R	435	234	123	-111		**324**	124	-110		**325**
		L	61	86	97	11		**72**	97	11		**72**
	SB	T	244	221	309	88		**332**	310	89		**333**
		R	0	-	-	-		**0**	-	-		**0**
			1,432									
		L	0	-	-	-		**0**	-	-		**0**
	EB	T	303	263	226	-37		**266**	227	-36		**267**
		R	89	61	39	-22		**67**	40	-21		**68**
3		L	89	49	60	11		**100**	53	4		**93**
E Division St	WB	T	201	170	182	12		**213**	187	17		**218**
N Olympic Ave		R	0	-	-	-		**0**	-	-		**0**
		L	95	58	68	10		**105**	72	14		**109**
	NB	T	2	-	-	-		**2**	-	-		**2**
TMC Date: 6/07/11		R	129	53	46	-7		**122**	46	-7		**122**
		L	0	-	-	-		**0**	-	-		**0**
	SB	T	0	-	-	-		**0**	-	-		**0**
		R	3	-	-	-		**3**	-	-		**3**
			911									
		L	338	161	196	35		**373**	191	30		**368**
	EB	T	248	385	411	26		**274**	413	28		**276**
		R	174	167	248	81		**255**	188	21		**195**
4		L	72	104	109	5		**77**	112	8		**80**
W Division St (SR-530)	WB	T	162	255	288	33		**195**	296	41		**203**
Hazel St (SR-9)		R	139	52	110	58		**197**	111	59		**198**
		L	179	115	135	20		**199**	104	-11		**168**
	NB	T	353	411	536	125		**478**	543	132		**485**
TMC Date: 6/07/11		R	38	3	21	18		**56**	15	12		**50**
		L	82	5	7	2		**84**	7	2		**84**
	SB	T	230	272	367	95		**325**	361	89		**319**
		R	180	243	284	41		**221**	292	49		**229**
			2,195									
		L	124	48	88	40		**164**	86	38		**162**
	EB	T	4	-	-	-		**4**	-	-		**4**
		R	34	56	151	95		**129**	131	75		**109**
5		L	0	-	-	-		**0**	-	-		**0**
E Maple St	WB	T	2	-	-	-		**2**	-	-		**2**
S Olympic Ave		R	2	-	-	-		**2**	-	-		**2**
		L	23	70	152	82		**105**	138	68		**91**
	NB	T	115	20	18	-2		**113**	18	-2		**113**
TMC Date: 6/07/11		R	5	-	-	-		**5**	-	-		**5**
		L	2	-	-	-		**2**	-	-		**2**
	SB	T	106	42	65	23		**129**	45	3		**109**
		R	131	47	71	24		**155**	83	36		**167**
			548									
		L	5	-	-	-		**5**	-	-		**5**
	EB	T	0	-	-	-		**0**	-	-		**0**
		R	3	-	-	-		**3**	-	-		**3**
6		L	135	114	217	103		**238**	215	101		**236**
Lebanon St	WB	T	0	-	-	-		**0**	-	-		**0**
67th Ave NE		R	15	3	6	3		**18**	6	3		**18**
		L	4	-	-	-		**4**	-	-		**4**
	NB	T	252	206	416	210		**462**	423	217		**469**
TMC Date: 6/07/11		R	147	92	224	132		**279**	192	100		**247**
		L	12	11	16	5		**17**	24	13		**25**
	SB	T	159	163	270	107		**266**	308	145		**304**
		R	1	-	-	-		**1**	-	-		**1**
			733									

SCJ ALLIANCE
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Arlington Transportation Plan

PM Peak Hour Volumes

Intersection	Movement		EXISTING 2010 VOLUMES	EXISTING MODEL VOLUMES	2035 Base Model: 2035 BASE MODEL VOLUMES	2035 Base Model: BASE MODEL GROWTH	2035 Base Model: BASE MODEL ADJ	2035 Base Model: PROJECTED 2035 VOLUMES	2035 Model With Improvements: 2035 PLANNED MODEL VOLUMES	2035 Model With Improvements: 2035 PLANNED MODEL GROWTH	2035 Model With Improvements: PLANNED MODEL ADJ	2035 Model With Improvements: PROJECTED 2035 VOLUMES
		L	51	6	9	3		**54**	10	4		**55**
	EB	T	61	48	162	114		**175**	153	105		**166**
		R	73	99	198	99		**172**	197	98		**171**
7		L	7	6	20	14		**21**	19	13		**20**
E Highland Dr	WB	T	66	26	57	31		**97**	55	29		**95**
S Stillaguamish Ave		R	5	15	23	8		**13**	22	7		**12**
		L	67	47	87	40		**107**	94	47		**114**
	NB	T	79	81	107	26		**105**	101	20		**99**
TMC Date: 6/07/11		R	15	9	16	7		**22**	15	6		**21**
		L	8	26	163	137		**145**	121	95		**103**
	SB	T	75	126	198	72		**147**	194	68		**143**
		R	85	8	0	-8		**77**	4	-4		**81**
			592									
		L	43	78	154	76		**119**	96	18		**61**
	EB	T	0	-	-	-		**0**	-	-		**0**
		R	139	132	182	50		**189**	178	46		**185**
8		L	0	-	-	-		**0**	-	-		**0**
211th Pl NE	WB	T	0	-	-	-		**0**	-	-		**0**
67th Ave NE		R	0	-	-	-		**0**	-	-		**0**
		L	111	176	223	47		**158**	208	32		**143**
	NB	T	253	221	485	264		**517**	519	298		**551**
TMC Date: 6/07/11		R	0	-	-	-		**0**	-	-		**0**
		L	0	-	-	-		**0**	-	-		**0**
	SB	T	203	195	300	105		**308**	377	182		**385**
		R	32	82	187	105		**137**	147	65		**97**
			781									
		L	175	104	131	27		**202**	151	47		**222**
	EB	T	244	271	440	169		**413**	443	172		**416**
		R	153	114	296	182		**335**	233	119		**272**
9		L	159	114	130	16		**175**	106	-8		**151**
204th St NE	WB	T	222	214	282	68		**290**	312	98		**320**
SR-9		R	152	79	102	23		**175**	102	23		**175**
		L	79	76	119	43		**122**	100	24		**103**
	NB	T	295	400	455	55		**350**	417	17		**312**
TMC Date: 6/07/11		R	113	98	93	-5		**108**	92	-6		**107**
		L	69	82	120	38		**107**	109	27		**96**
	SB	T	253	419	572	153		**406**	475	56		**309**
		R	153	80	76	-4		**149**	122	42		**195**
			2,067									
		L	63	44	109	65		**128**	159	115		**178**
	EB	T	89	194	407	213		**302**	401	207		**296**
		R	27	25	34	9		**36**	15	-10		**17**
10		L	189	128	172	44		**233**	104	-24		**165**
204th St NE	WB	T	130	290	355	65		**195**	357	67		**197**
67th Ave NE		R	103	107	127	20		**123**	140	33		**136**
		L	32	65	93	28		**60**	36	-29	29	**32**
	NB	T	277	246	472	226		**503**	428	182		**459**
TMC Date: 6/07/11		R	187	190	315	125		**312**	88	-102		**85**
		L	115	87	115	28		**143**	119	32		**147**
	SB	T	180	186	297	111		**291**	275	89		**269**
		R	68	54	70	16		**84**	160	106		**174**
			1,460									
		L	0	-	-	-		**0**	-	-		**0**
	EB	T	660	677	800	123		**783**	740	63		**723**
		R	226	151	178	27		**253**	115	-36		**190**
11		L	3	28	37	9		**12**	36	8		**11**
211th Pl NE	WB	T	483	571	659	88		**571**	646	75		**558**
SR-530		R	0	-	-	-		**0**	-	-		**0**
		L	171	175	279	104		**275**	219	44		**215**
	NB	T	0	-	-	-		**0**	-	-		**0**
TMC Date: 6/07/11		R	4	16	39	23		**27**	36	20		**24**
		L	0	-	-	-		**0**	-	-		**0**
	SB	T	0	-	-	-		**0**	-	-		**0**
		R	0	-	-	-		**0**	-	-		**0**
			1,547									
		L	28	82	149	67		**95**	141	59		**87**
	EB	T	389	343	354	11		**400**	389	46		**435**
		R	0	0	0	0		**0**	0	0		**0**
12		L	0	0	0	0		**0**	0	0		**0**
SR-530	WB	T	424	458	686	228		**652**	769	311		**735**
I-5 NB Ramps		R	442	379	550	171		**613**	622	243		**685**
		L	135	258	299	41		**176**	227	-31		**104**
	NB	T	7	0	0	0		**7**	0	0		**7**
TMC Date: 6/07/11		R	635	541	574	33		**668**	541	0		**635**
		L	0	0	0	0		**0**	0	0		**0**
	SB	T	0	0	0	0		**0**	0	0		**0**
		R	0	0	0	0		**0**	0	0		**0**
			2,060									

SCJ ALLIANCE
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PM Peak Hour Volumes

Intersection	Movement		EXISTING 2010 VOLUMES	EXISTING MODEL VOLUMES	2035 Base Model: 2035 BASE MODEL VOLUMES	2035 Base Model: BASE MODEL GROWTH	2035 Base Model: BASE MODEL ADJ	2035 Base Model: PROJECTED 2035 VOLUMES	2035 Model With Improvements: 2035 PLANNED MODEL VOLUMES	2035 Model With Improvements: 2035 PLANNED MODEL GROWTH	2035 Model With Improvements: PLANNED MODEL ADJ	2035 Model With Improvements: PROJECTED 2035 VOLUMES
		L	0	0	0	0		**0**	0	0		**0**
	EB	T	104	174	230	56		**160**	233	59		**163**
		R	86	96	186	90		**176**	182	86		**172**
13		L	325	338	449	111		**436**	451	113		**438**
SR-530	WB	T	247	378	536	158		**405**	545	167		**414**
I-5 SB Ramps		R	0	0	0	0		**0**	0	0		**0**
		L	0	0	0	0		**0**	0	0		**0**
	NB	T	0	0	0	0		**0**	0	0		**0**
TMC Date: 6/07/11		R	0	0	0	0		**0**	0	0		**0**
		L	357	251	272	21		**378**	298	47		**404**
	SB	T	1	0	0	0		**1**	0	0		**1**
		R	50	65	108	43		**93**	80	15		**65**
			1,170									
		L	55	71	76	5		**60**	68	-3		**52**
	EB	T	32	99	99	0		**32**	65	-34	29	**27**
		R	27	32	231	199		**226**	116	84		**111**
14		L	78	76	81	5		**83**	100	24		**102**
Crown Ridge Blvd	WB	T	22	58	74	16		**38**	43	-15	14	**21**
SR-9		R	105	64	76	12		**117**	74	10		**115**
		L	33	22	51	29		**62**	40	18		**51**
	NB	T	324	439	517	78		**402**	467	28		**352**
TMC Date: 6/07/11		R	111	44	61	17		**128**	108	64		**175**
		L	103	73	86	13		**116**	85	12		**115**
	SB	T	452	451	758	307		**759**	614	163		**615**
		R	82	122	155	33		**115**	115	-7		**75**
			1,424									
		L	92	31	207	176		**268**	443	412		**504**
	EB	T	1	10	15	5		**6**	19	9		**10**
		R	74	87	415	328		**402**	254	167		**241**
15		L	17	3	2	-1		**16**	1	-2		**15**
188th St NE	WB	T	0	2	6	4		**4**	8	6		**6**
67th Ave NE		R	9	6	4	-2		**7**	3	-3		**6**
		L	24	31	23	-8		**16**	30	-1		**23**
	NB	T	389	307	319	12		**401**	234	-73		**316**
TMC Date: 6/07/11		R	15	3	5	2		**17**	3	0		**15**
		L	6	9	9	0		**6**	7	-2		**4**
	SB	T	341	431	517	86		**427**	435	4		**345**
		R	76	16	111	95		**171**	286	270		**346**
			1,044									
		L	3	0	-	-		**3**	16	16		**19**
	EB	T	5	0	-	-		**5**	146	146		**151**
		R	24	0	-	-		**24**	59	59		**83**
16		L	192	211	450	239		**431**	272	61		**253**
188th St NE	WB	T	9	0	-	-		**9**	398	398		**407**
Smokey Point Blvd		R	10	28	506	478		**488**	374	346		**356**
		L	18	0	-	-		**18**	159	159		**177**
	NB	T	202	252	475	223		**425**	474	222		**424**
TMC Date: 6/07/11		R	231	285	396	111		**342**	213	-72		**159**
		L	15	27	86	59		**74**	167	140		**155**
	SB	T	151	218	401	183		**334**	346	128		**279**
		R	0	0	-	-		**0**	32	32		**32**
			860									
		L	122	35	34	-1		**121**	111	76		**198**
	EB	T	83	101	474	373		**456**	783	682		**765**
		R	209	387	492	105		**314**	654	267		**476**
17		L	4	4	0	-4		**0**	18	14		**18**
Greenwood Rd	WB	T	30	42	331	289		**319**	561	519		**549**
SR-9		R	17	21	164	143		**160**	120	99		**116**
		L	146	230	272	42		**188**	255	25		**171**
	NB	T	245	449	432	-17		**228**	385	-64		**181**
TMC Date: 6/07/11		R	2	7	0	-7		**-5**	207	200		**202**
		L	21	30	182	152		**173**	111	81		**102**
	SB	T	323	453	798	345		**668**	611	158		**481**
		R	104	75	89	14		**118**	108	33		**137**
			1,306									
		L	128	155	79	-76		**52**	220	65		**193**
	EB	T	435	524	1,024	500		**935**	1,662	1,138		**1,573**
		R	0	-	-	-		**0**	-	-		**0**
18		L	0	-	-	-		**0**	-	-		**0**
172nd St NE	WB	T	253	317	545	228		**481**	861	544		**797**
Gleneagle Blvd		R	17	18	44	26		**43**	38	20		**37**
		L	0	-	-	-		**0**	-	-		**0**
	NB	T	0	-	-	-		**0**	-	-		**0**
TMC Date: 6/07/11		R	0	-	-	-		**0**	-	-		**0**
		L	17	34	18	-16		**1**	8	-26	10	**1**
	SB	T	0	-	-	-		**0**	-	-		**0**
		R	65	55	106	51		**116**	104	49		**114**
			915									

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Intersection	Movement		EXISTING 2010 VOLUMES	EXISTING MODEL VOLUMES	2035 Base Model: 2035 BASE MODEL VOLUMES	BASE MODEL GROWTH	BASE MODEL ADJ	PROJECTED 2035 VOLUMES	2035 Model With Improvements: 2035 PLANNED MODEL VOLUMES	2035 PLANNED MODEL GROWTH	PLANNED MODEL ADJ	PROJECTED 2035 VOLUMES
		L	259	174	164	-10		**249**	79	-95		**164**
	EB	T	454	702	964	262		**716**	1,704	1,002		**1,456**
		R	97	134	472	338		**435**	357	223		**320**
		L	40	10	144	134		**174**	81	71		**111**
172nd St NE	WB	T	305	374	562	188		**493**	929	555		**860**
67th Ave NE		R	45	16	8	-8		**37**	17	1		**46**
		L	77	59	144	85		**162**	115	56		**133**
	NB	T	161	124	332	208		**369**	199	75		**236**
TMC Date: 6/16/10		R	66	30	124	94		**160**	242	212		**278**
		L	82	14	0	-14		**68**	33	19		**101**
	SB	T	196	184	379	195		**391**	358	174		**370**
		R	231	139	122	-17		**214**	44	-95		**136**
			2,013									
		L	100	131	305	174		**274**	209	78	207	**385**
	EB	T	761	757	961	204		**965**	1,593	836		**1,597**
		R	17	0	163	163		**180**	0	0		**17**
20		L	4	0	127	127		**131**	105	105		**109**
172nd St NE	WB	T	570	593	782	189		**759**	1162	569		**1139**
59th Ave NE		R	35	44	47	3		**38**	9	-35		**0**
		L	24	0	295	295		**319**	0	0		**24**
	NB	T	1	0	204	204		**205**	475	475	-276	**200**
TMC Date: 6/16/10		R	5	0	411	411		**416**	338	338		**343**
		L	33	124	16	-108	108	**33**	118	-6		**27**
	SB	T	4	0	40	40		**44**	381	381	-185	**200**
		R	285	193	250	57		**342**	138	-55	139	**369**
			2,013									
		L	13	0	44	44		**57**	0	0		**13**
	EB	T	805	790	904	114		**919**	1,158	368		**1,173**
		R	142	151	306	155		**297**	0	-151	59	**50**
21		L	14	136	234	98		**112**	232	96	139	**249**
172nd St NE	WB	T	848	662	790	128		**976**	831	169		**1017**
51st Ave NE		R	91	0	227	227		**318**	243	243		**334**
		L	155	88	157	69		**224**	70	-18		**137**
	NB	T	6	0	414	414		**420**	225	225	69	**300**
TMC Date: 9/04/08		R	83	63	203	140		**223**	148	85	207	**375**
		L	28	0	22	22		**50**	120	120		**148**
	SB	T	22	0	93	93		**115**	124	124	46	**192**
		R	36	0	11	11		**47**	0	0		**36**
			1,839									
		L	39	28	100	72		**111**	132	104		**143**
	EB	T	895	914	1,104	190		**1,085**	859	-55		**840**
		R	9	0	0	0		**9**	73	73		**82**
22		L	12	0	0	0		**12**	35	35		**47**
172nd St NE	WB	T	882	779	1037	258		**1140**	872	93		**975**
43rd Ave NE		R	14	38	91	53		**67**	36	-2		**12**
		L	24	0	0	0		**24**	52	52		**76**
	NB	T	1	0	0	0		**1**	149	149		**150**
TMC Date: 1/26/11		R	11	0	0	0		**11**	29	29		**40**
		L	10	15	19	4		**14**	6	-9		**1**
	SB	T	0	0	0	0		**0**	42	42		**42**
		R	15	0	46	46		**61**	29	29		**44**
			1,912									
		L	332	264	286	22		**354**	303	39		**371**
	EB	T	807	706	825	119		**926**	879	173		**980**
		R	341	388	486	98		**439**	428	40		**381**
23		L	155	220	306	86		**241**	131	-89		**66**
172nd St NE	WB	T	757	575	1104	529		**1286**	963	388		**1145**
Smokey Point Blvd		R	123	177	367	190		**313**	279	102		**225**
		L	554	378	671	293		**847**	625	247		**801**
	NB	T	353	481	533	52		**405**	654	173		**526**
TMC Date: 1/26/11		R	179	204	296	92		**271**	52	-152		**27**
		L	215	111	204	93		**308**	169	58		**273**
	SB	T	211	281	281	0		**211**	298	17		**228**
		R	238	196	407	211		**449**	465	269		**507**
			4,265									
		L	53	1	1	0		**53**	2	1		**54**
	EB	T	1	-	-	-		**1**	-	-		**1**
		R	93	7	11	4		**97**	-	-		**93**
24		L	0	-	-	-		**0**	-	-		**0**
Smokey Point Dr	WB	T	0	-	-	-		**0**	-	-		**0**
Smokey Point Blvd		R	10	-	-	-		**10**	-	-		**10**
		L	90	4	7	3		**93**	-	-		**90**
	NB	T	653	919	1,179	260		**913**	-	-		**653**
TMC Date: 1/26/11		R	17	-	-	-		**17**	-	-		**17**
		L	0	-	-	-		**0**	-	-		**0**
	SB	T	500	582	882	300		**800**	-	-		**500**
		R	32	2	2	0		**32**	2	0		**32**
			1,449									

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		L	218	185	346	161		**379**	339	154		**372**
	EB	T	795	697	846	149		**944**	895	198		**993**
		R	0	0	0	0		**0**	0	0		**0**
		L	0	0	0	0		**0**	0	0		**0**
25	WB	T	1,229	712	1609	897		**2126**	1516	804		**2033**
172nd St NE		R	418	571	731	160		**578**	695	124		**542**
I-5 NB Ramps		L	577	538	637	99		**676**	642	104		**681**
	NB	T	0	0	0	0		**0**	0	0		**0**
TMC Date: 1/26/11		R	777	609	564	-45		**732**	527	-82		**695**
		L	0	0	0	0		**0**	0	0		**0**
	SB	T	0	0	0	0		**0**	0	0		**0**
		R	0	0	0	0		**0**	0	0		**0**
			4,014									
		L	0	0	0	0		**0**	0	0		**0**
	EB	T	774	591	968	377		**1,151**	1,023	432		**1,206**
		R	450	668	873	205		**655**	873	205		**655**
26		L	0	0	0	0		**0**	0	0		**0**
172nd St NE	WB	T	1,246	904	1396	492		**1738**	1377	473		**1719**
I-5 SB Ramps		R	560	347	850	503		**1,063**	781	434		**994**
		L	0	0	0	0		**0**	0	0		**0**
	NB	T	0	0	0	0		**0**	0	0		**0**
TMC Date: 1/26/11		R	0	0	0	0		**0**	0	0		**0**
		L	239	291	224	-67		**172**	211	-80		**159**
	SB	T	1	0	0	0		**1**	0	0		**1**
		R	216	290	504	214		**430**	520	230		**446**
			3,486									
		L	23	106	222	116		**139**	156	50		**73**
	EB	T	0	-	-	-		**0**	-	-		**0**
		R	24	14	75	61		**85**	41	27		**51**
27		L	0	-	-	-		**0**	-	-		**0**
200th St	WB	T	0	-	-	-		**0**	-	-		**0**
Smokey Point Blvd		R	0	-	-	-		**0**	-	-		**0**
		L	26	76	349	273		**299**	122	46		**72**
	NB	T	237	202	663	461		**698**	694	492		**729**
TMC Date: 3/31/15		R	0	-	-	-		**0**	-	-		**0**
		L	0	-	-	-		**0**	-	-		**0**
	SB	T	190	191	327	136		**326**	340	149		**339**
		R	32	119	386	267		**299**	207	88		**120**
			532									
		L	0	-	-	-		**0**	-	-		**0**
	EB	T	13	15	64	49		**62**	72	57		**70**
		R	2	9	16	7		**9**	10	1		**3**
28		L	26	161	576	415		**441**	163	2		**28**
200th St	WB	T	36	34	159	125		**161**	166	132		**168**
23rd Ave		R	0	-	-	-		**0**	-	-		**0**
		L	11	5	27	22		**33**	20	15		**26**
	NB	T	0	-	-	-		**0**	-	-		**0**
TMC Date: 3/31/15		R	29	105	233	128		**157**	125	20		**49**
		L	0	-	-	-		**0**	-	-		**0**
	SB	T	0	-	-	-		**0**	-	-		**0**
		R	0	-	-	-		**0**	-	-		**0**
			#REF!									
		L	0	-	-	-		**0**	-	-		**0**
	EB	T	784	718	384	-334	238	**688**	376	-342	214	**656**
		R	196	142	505	363	-238	**321**	491	349	-214	**331**
29		L	0	0	13	13	-13	**0**	0	0	0	**0**
SR 530	WB	T	649	645	483	-162	230	**717**	554	-91	731	**1,289**
Smokey Point Blvd - West Leg		R	0	-	-	-		**0**	-	-		**0**
		L	154	129	645	516	-230	**440**	705	576	-730	**0**
	NB	T	0	-	-	-		**0**	-	-		**0**
TMC Date: 7/25/12		R	7	0	12	12		**19**	0	0		**7**
		L	0	-	-	-		**0**	-	-		**0**
	SB	T	0	-	-	-		**0**	-	-		**0**
		R	0	-	-	-		**0**	-	-		**0**
			1,790									
		L	0	0	-	-		**0**	14	14		**14**
	EB	T	787	710	377	-333	238	**692**	362	-348	214	**653**
		R	4	4	0	-4		**0**	0	-4	50	**50**
30		L	90	153	571	418	-230	**278**	477	324	-194	**220**
SR 530	WB	T	639	640	472	-168	230	**701**	495	-145	194	**688**
Smokey Point Blvd - East Leg		R	0	0	-	-		**0**	6	6		**6**
		L	0	3	0	-3	3	**0**	42	39	537	**576**
	NB	T	0	0	-	-		**0**	14	14		**14**
TMC Date: 4/24/07		R	177	170	701	531	-238	**470**	587	417	-214	**380**
		L	0	0	-	-		**0**	10	10		**10**
	SB	T	0	0	-	-		**0**	13	13		**13**
		R	0	0	-	-		**0**	17	17		**17**
			1,697									

SCJ ALLIANCE
ENGINEERING AND PLANNING SERVICES

Arlington Transportation Plan

PM Peak Hour Volumes

Intersection	Movement		EXISTING 2010 VOLUMES	EXISTING MODEL VOLUMES	2035 Base Model: 2035 BASE MODEL VOLUMES	2035 Base Model: BASE MODEL GROWTH	2035 Base Model: BASE MODEL ADJ	2035 Base Model: PROJECTED 2035 VOLUMES	2035 Model With Improvements: 2035 PLANNED MODEL VOLUMES	2035 Model With Improvements: 2035 PLANNED MODEL GROWTH	2035 Model With Improvements: PLANNED MODEL ADJ	2035 Model With Improvements: PROJECTED 2035 VOLUMES
		L	0	-	-	-		**0**	-	-		**0**
	EB	T	0	0	238	238	-238	**0**	214	214	-214	**0**
		R	196	142	279	137		**333**	277	135		**331**
		L	94	157	342	185		**279**	296	139		**233**
Smokey Point Y	WB	T	0	0	230	230	-230	**0**	194	194	-194	**0**
Smokey Point Blvd		R	0	-	-	-		**0**	-	-		**0**
		L	177	129	427	298		**475**	511	382	-549	**10**
	NB	T	0	-	-	-		**0**	-	-		**0**
TMC Date: 10/16/08		R	166	174	463	289		**455**	429	255	549	**970**
		L	0	-	-	-		**0**	-	-		**0**
	SB	T	0	-	-	-		**0**	-	-		**0**
		R	0	-	-	-		**0**	-	-		**0**
			633									

Note: In cases where the projected future volume is a negative number the existing volume was used

H Roadway Sections

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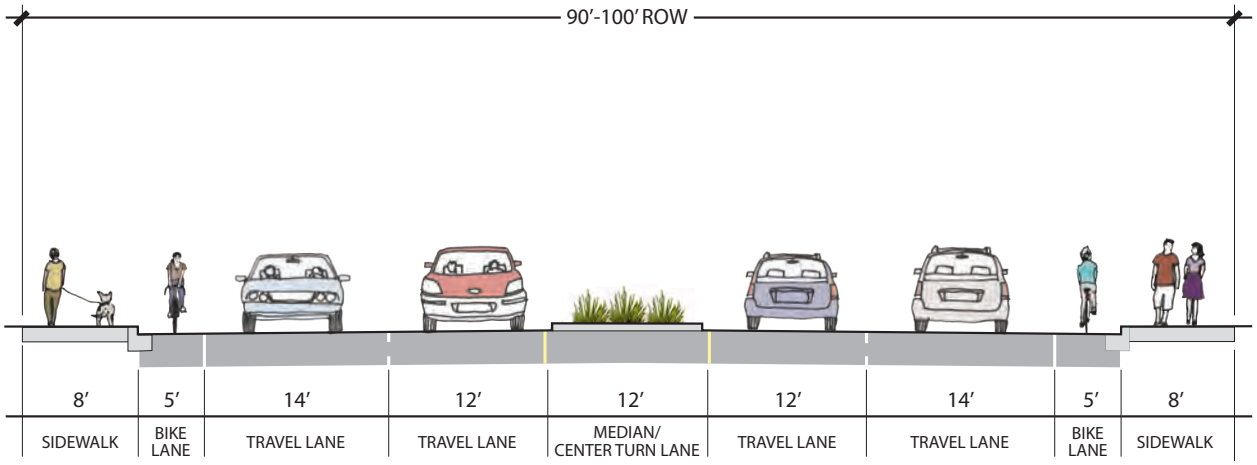
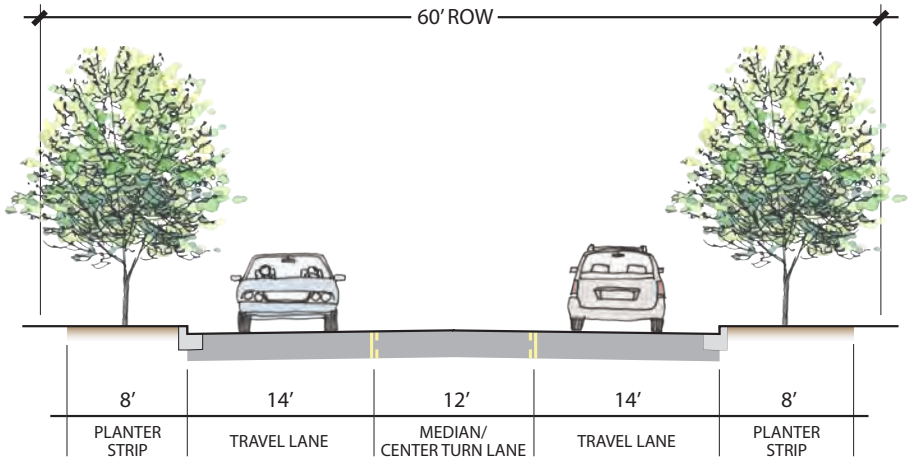
TYPICAL ROADWAY CROSS-SECTIONS

SECTION 1 *5-Lane Urban*

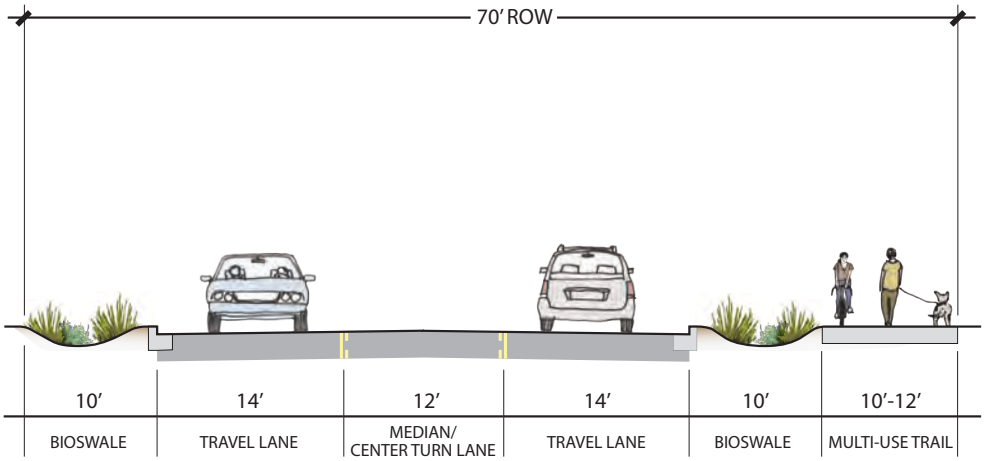


SECTION 2 *3-Lane Urban (Standard)*

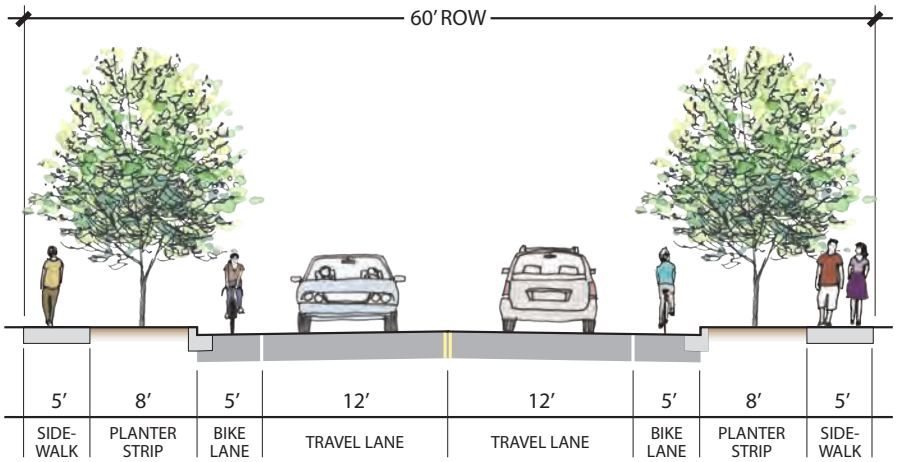


TYPICAL ROADWAY CROSS-SECTIONS

SECTION 3 *3-Lane Urban (LID)*

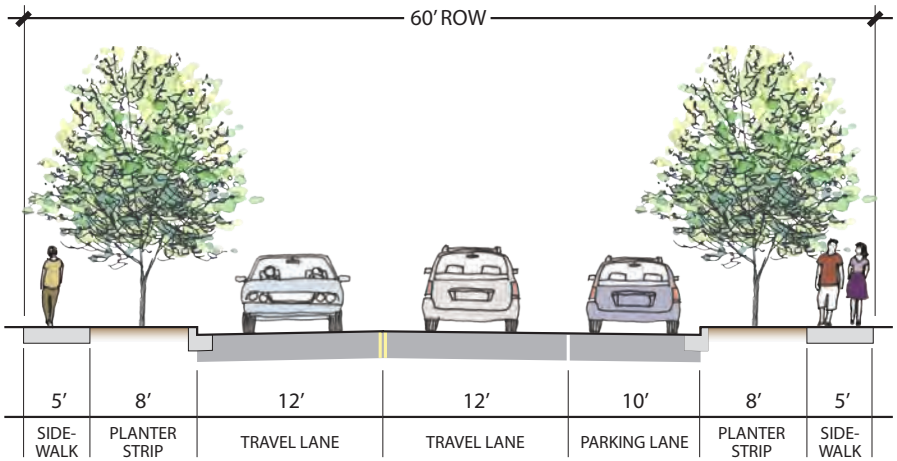


SECTION 4 *2-Lane Urban (High Traffic)*

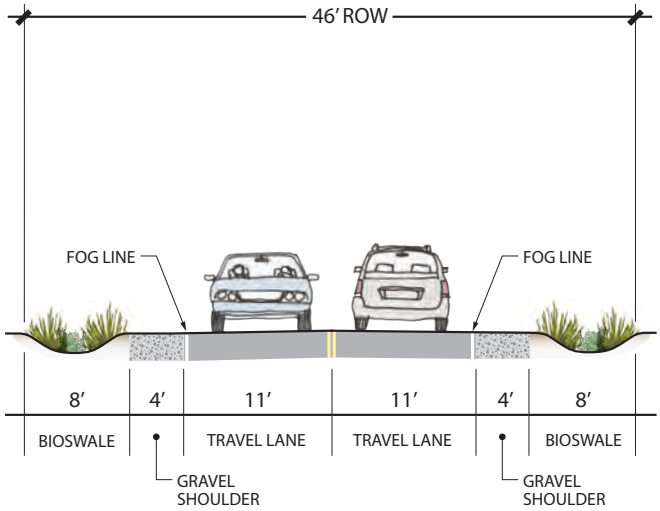


TYPICAL ROADWAY CROSS-SECTIONS

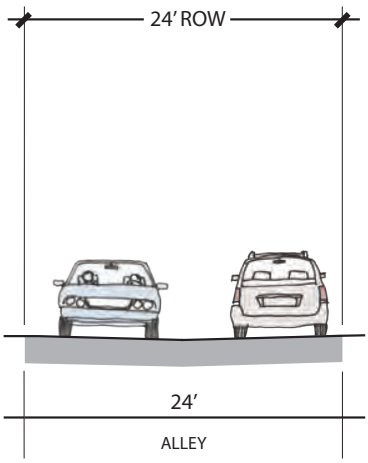
SECTION 5 *2-Lane Urban (Residential)*



SECTION 6 *2-Lane Rural*



SECTION 7 *Alley*



I Travel Demand Model Plot

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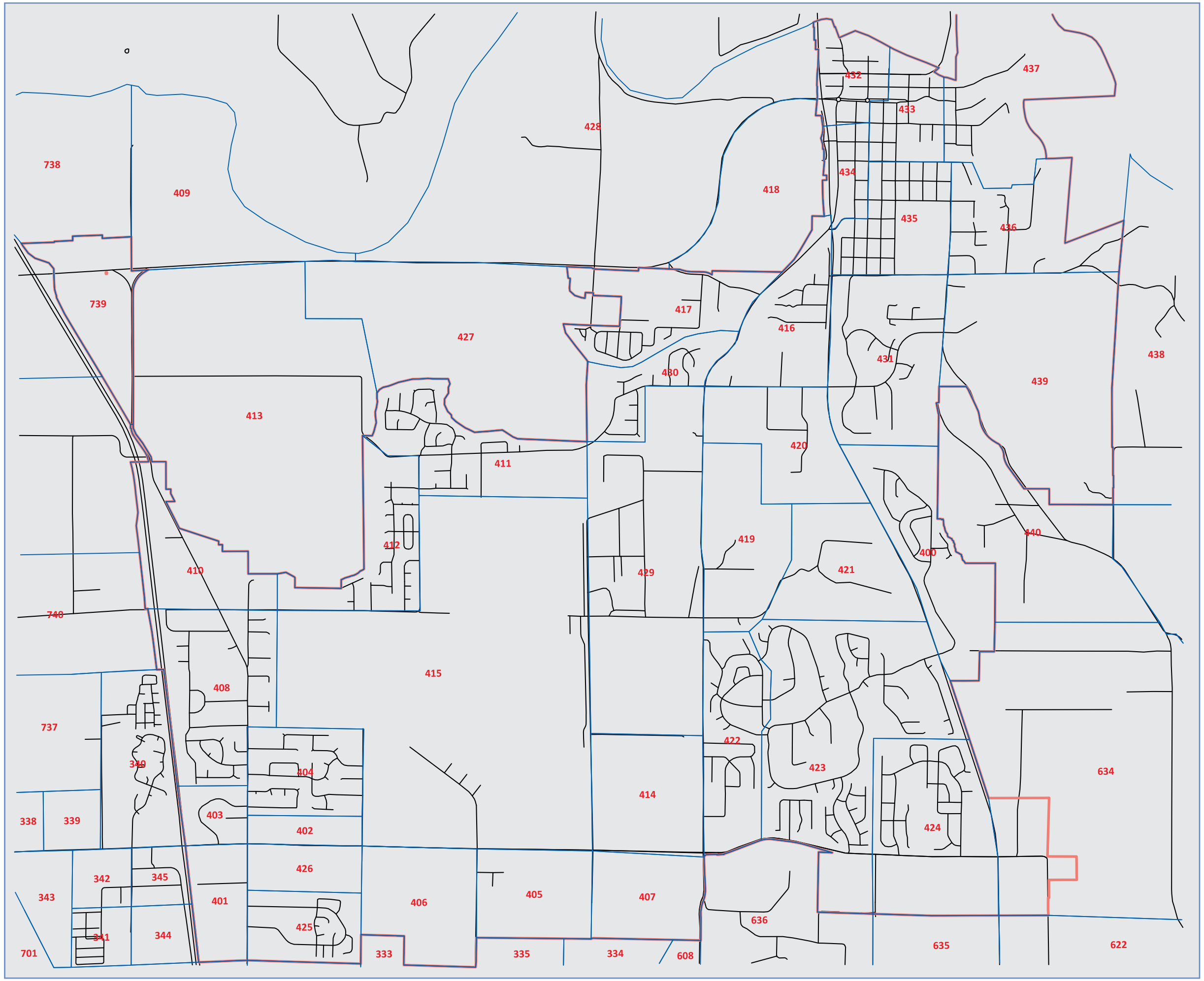
City of Arlington
2035 Transportation Plan

Figure I1

Transportation Analysis Zones



LEGEND

- Arlington UGA Boundary
- TAZ Boundaries

J Glossary Of Acronyms

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GLOSSARY OF ACRONYMS

ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
ALP	Airport Layout Plan
AP	Airport Protection District
BNSF	Burlington Northern Santa Fe Railroad
CFP	Capital Facilities Plan
COA	City of Arlington
CPP	Countywide Planning Policies
CTR	Commute Trip Reduction
ESD	Employment Security Department
FGTS	Freight and Goods Transportation System
FHWA	Federal Highway Administration
GTEC	Growth and Transportation Efficiency Centers
GMA	Growth Management Act
HCM	Highway Capacity Manual
HSP	Highway System Plan
HSS	Highways of Statewide Significance
ITE	Institute of Transportation Engineers
LOS	Level of Service
MPO	Metropolitan Planning Organization
MUTCD	Manual on Uniform Traffic Control Devices
PSRC	Puget Sound Regional Council
RTPO	Regional Transportation Planning Organization

SEPA	State Environmental Policy Act
SL&E	Seattle, Lake Shore and Eastern Railroad
SMTP	State Multimodal Transportation Plan
SR	State Route
TBD	Transportation Benefit District
TDM	Transportation Demand Management
TDR	Transfer of Development Rights
TIF	Transportation (or Traffic) Impact Fee
TIP	Transportation Improvement Plan
UGA	Urban Growth Area
WSDOT	Washington State Department of Transportation