

Capacity Analysis for Planning of Junctions

Input Worksheet

Project Name:	Research Forest and Lake Woodlands	Critical Lane Volume Sum			
Project Number:	4609.001	Acceptable Configurations			
Location:	2045 AM Lake Woodlands Drive and Grogans Mill Road	< 1200	1200 - 1399	1400 - 1599	≥ 1600
Date:	April 18, 2019	11	9	3	9

Results for Intersections

#	TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
1	Conventional	FULL	/	/	/	/	/	/	/	/	1233	<u>0.77</u>	0.77	2
2	Conventional Shared RT LN	CSRL	/	/	/	/	/	/	/	/	1551	<u>0.97</u>	0.97	12
3.1	Quadrant Roadway	S-W	/	/	798	<u>0.50</u>	/	/	908	<u>0.57</u>	1245	<u>0.78</u>	0.78	5
3.2		N-E	1212	<u>0.76</u>	/	/	949	<u>0.59</u>	/	/	1597	<u>1.00</u>	1.00	13
3.3		S-E	/	/	813	<u>0.51</u>	813	<u>0.51</u>	/	/	1378	<u>0.86</u>	0.86	9
3.4		N-W	851	<u>0.53</u>	/	/	/	/	939	<u>0.59</u>	1465	<u>0.92</u>	0.92	11
4.1	Partial Displaced Left Turn	N-S	671	<u>0.42</u>	675	<u>0.42</u>	/	/	/	/	1243	<u>0.78</u>	0.78	4
4.2		E-W	/	/	/	/	557	<u>0.35</u>	957	<u>0.60</u>	1240	<u>0.78</u>	0.78	3
5	Displaced Left Turn	FULL	671	<u>0.42</u>	675	<u>0.42</u>	648	<u>0.41</u>	957	<u>0.60</u>	1158	<u>0.72</u>	0.72	1
6.1	Restricted Crossing U-Turn	N-S	1365	<u>0.85</u>	1414	<u>0.88</u>	2045	<u>1.28</u>	2136	<u>1.34</u>	/	/	1.34	15
6.2		E-W	1217	<u>0.76</u>	1381	<u>0.86</u>	1905	<u>1.19</u>	1213	<u>0.76</u>	/	/	1.19	14
7.1	Median U-Turn	N-S	824	<u>0.52</u>	980	<u>0.61</u>	/	/	/	/	1378	<u>0.86</u>	0.86	9
7.2		E-W	/	/	/	/	1324	<u>0.83</u>	875	<u>0.55</u>	1245	<u>0.78</u>	0.83	6
8.1	Partial Median U-Turn	N-S	715	<u>0.45</u>	1004	<u>0.63</u>	/	/	/	/	1327	<u>0.83</u>	0.83	7
8.2		E-W	/	/	/	/	1100	<u>0.69</u>	910	<u>0.57</u>	1327	<u>0.83</u>	0.83	7

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Results for Roundabouts

#	TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Ranking
		Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3		
9.1	50 ICD	-0.92			#####			#####			-3.54			3448.50	7
9.2	75 ICD	-1.11			18.71			20.90			-4.70			20.90	6
9.3	1 X 1	5.31			3.35			4.16			8.18			8.18	5
9.4	1 X 2	2.99			1.18	2.17		3.07			3.38	4.80		4.80	3
9.5	2 X 1	2.86	2.45		2.48			2.30	1.87		5.16			5.16	4
9.6	2 X 2	1.77	1.38		2.31	3.03		1.79	1.38		0.92	1.61		3.03	1
9.7	3 X 3	0.38	2.37	1.87	0.10	1.03	1.70	0.53	1.70	1.58	0.37	2.85	3.58	3.58	2

Results for Interchanges

#	TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
10.1	Diamond	N-S					869	0.54	693	0.43					0.54	2
10.2		E-W					781	0.49	1025	0.64					0.64	7
11.1	Partial Cloverleaf	N-S					878	0.55	850	0.53					0.55	3
11.2		E-W					670	0.76	824	0.52					0.52	1
13.1	Displaced Left Turn	N-S	1093	0.68			721	0.45	587	0.37			703	0.44	0.68	9
13.2		E-W	957	0.60			934	0.58	883	0.55			740	0.46	0.60	5
14.1	Double Crossover Diamond	N-S	911	0.57	599	0.37	780	0.49	928	0.58	569	0.36	703	0.44	0.58	4
14.2		E-W	640	0.40	1028	0.64	571	0.36	724	0.45	958	0.60	772	0.48	0.64	8
15.1	Single Point	N-S	1157	0.72			829	0.52					733	0.46	0.72	10
15.2		E-W	930	0.58			975	0.61					772	0.48	0.61	6