

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 PM Lake Woodlands Drive and Grogans Mill Road	< 1200	1200 - 1399	1400 - 1599	≥ 1600
Date:	April 18, 2019	8	6	5	13

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	/	/	/	/	/	/	/	/	1496	<u>0.93</u>	0.93	4
2	Conventional Shared RT LN	CSRL	/	/	/	/	/	/	/	/	1830	<u>1.14</u>	1.14	12
3.1	Quadrant Roadway	S-W	/	/	1289	<u>0.81</u>	/	/	1307	<u>0.82</u>	1395	<u>0.87</u>	0.87	3
3.2		N-E	1032	<u>0.65</u>	/	/	1240	<u>0.78</u>	/	/	1882	<u>1.18</u>	1.18	13
3.3		S-E	/	/	1113	<u>0.70</u>	1113	<u>0.70</u>	/	/	1642	<u>1.03</u>	1.03	8
3.4		N-W	943	<u>0.59</u>	/	/	/	/	1490	<u>0.93</u>	1710	<u>1.07</u>	1.07	11
4.1	Partial Displaced Left Turn	N-S	754	<u>0.47</u>	991	<u>0.62</u>	/	/	/	/	1213	<u>0.76</u>	0.76	2
4.2		E-W	/	/	/	/	896	<u>0.56</u>	1085	<u>0.68</u>	1520	<u>0.95</u>	0.95	7
5	Displaced Left Turn	FULL	754	<u>0.47</u>	991	<u>0.62</u>	1043	<u>0.65</u>	1085	<u>0.68</u>	1114	<u>0.70</u>	0.70	1
6.1	Restricted Crossing U-Turn	N-S	1666	<u>1.04</u>	1814	<u>1.13</u>	2615	<u>1.63</u>	2520	<u>1.58</u>	/	/	1.63	15
6.2		E-W	1570	<u>0.98</u>	1777	<u>1.11</u>	1920	<u>1.20</u>	1732	<u>1.08</u>	/	/	1.20	14
7.1	Median U-Turn	N-S	1313	<u>0.82</u>	1230	<u>0.77</u>	/	/	/	/	1496	<u>0.94</u>	0.94	5
7.2		E-W	/	/	/	/	1386	<u>0.87</u>	1349	<u>0.84</u>	1506	<u>0.94</u>	0.94	6
8.1	Partial Median U-Turn	N-S	1140	<u>0.71</u>	1389	<u>0.87</u>	/	/	/	/	1659	<u>1.04</u>	1.04	9
8.2		E-W	/	/	/	/	922	<u>0.58</u>	1346	<u>0.84</u>	1659	<u>1.04</u>	1.04	9

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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			-4.32			-3.84			-2.46			-0.92	2
9.2	75 ICD	-1.07			-5.68			-5.07			-3.12			-1.07	1
9.3	1 X 1	12.65			7.55			8.45			8.44			12.65	7
9.4	1 X 2	6.18			2.41	5.14		5.34			4.51	3.93		6.18	4
9.5	2 X 1	7.01	5.64		4.88			4.95	3.50		5.09			7.01	5
9.6	2 X 2	3.86	2.75		2.96	2.37		3.38	2.21		1.68	3.32		3.86	3
9.7	3 X 3	1.53	5.15	3.77	0.06	2.21	3.69	1.60	3.27	2.79	0.71	3.53	2.87	5.15	3

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					1140	0.71	913	0.57					0.71	5
10.2		E-W					1187	0.74	1350	0.84					0.84	9
11.1	Partial Cloverleaf	N-S					1400	0.87	1125	0.70					0.87	10
11.2		E-W					930	0.65	838	0.52					0.58	1
13.1	Displaced Left Turn	N-S	754	0.47			734	0.46	614	0.38			991	0.62	0.62	2
13.2		E-W	1202	0.75			1203	0.75	1156	0.72			1187	0.74	0.75	6
14.1	Double Crossover Diamond	N-S	468	0.29	880	0.55	891	0.56	1136	0.71	582	0.36	979	0.61	0.71	4
14.2		E-W	868	0.54	1326	0.83	921	0.58	945	0.59	1288	0.81	1238	0.77	0.83	8
15.1	Single Point	N-S	640	0.40			998	0.62					1026	0.64	0.64	3
15.2		E-W	1219	0.76			1221	0.76					1238	0.77	0.77	7