Traffic Impact Study

Draft Report

Proposed Autumn Ridge Development

Waukee, Iowa

May 2014

Completed For:

City of Waukee

By:

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Project Description

The purpose of this traffic study is to evaluate the proposed zoning changes from office commercial to a combination of commercial and apartments for the Autumn Ridge development. For purposes of the study it was assumed that the commercial uses for the site would be medical/dental offices, retail shopping center, and a convenience mart with gas pumps.

The study area contains approximately 37 acres of undeveloped land located within the city limits of Waukee. This report identifies the likely impacts on the surrounding roadways as a result of the proposed land use changes. Determination of geometric lane configurations and turn lane needs at key access points along SE Brick Drive are documented.

Existing Conditions

The study area is located in Waukee west of Interstate 35. The site is south of Hickman Road and north of University Avenue. It is bounded by Alice's Road on the west and SE Brick Drive on the east. To the west of the site and along Alice's Road is existing commercial development. To the east of the site is a combination of apartments, townhomes and single family residential housing. The study area is shown in **Figure 1.**

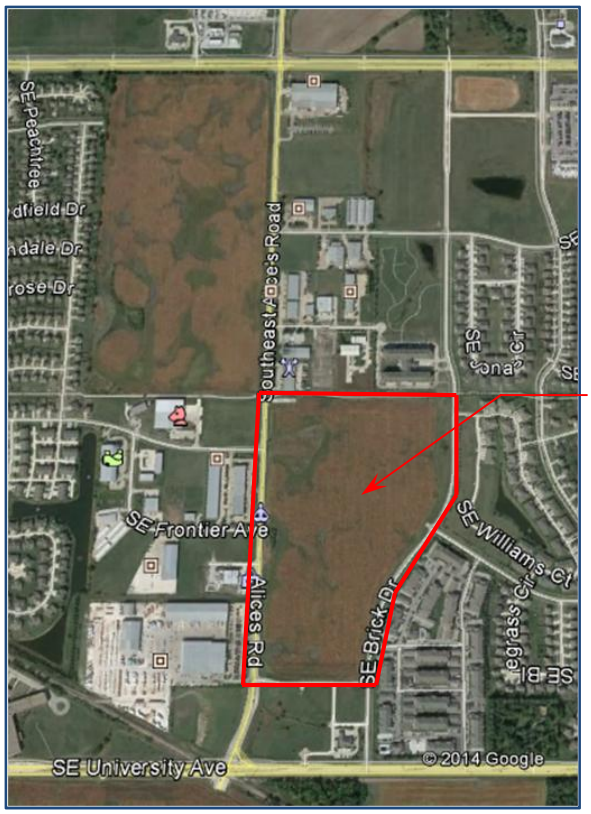

Figure 1 – Site Location

Trip Generation

Trip generation rates recommended in the *Institute of Transportation Engineers' (ITE) Trip Generation, 8th Edition*, were used to develop estimates of trips to and from the site based on the existing zoning as well and the proposed zoning. **Table 1** show the daily, AM peak hour, and PM peak hour trip generation for the existing land use zoning. **Table 2** shows the trip generation for the proposed land use zoning changes.

Table 1 – Trips Generation for Existing Zoning

Trip Generation							
Land Use Code	**Use**	**Total SF/Units/ Spaces**	**Factor**	**Percent**	**Entering**	**Percent**	**Exit**
			Daily				
750	Office Park	37	195.11	50%	3610	50%	3610
			AM Peak Hour				
750	Office Park	37	25.65	92%	873	8%	76
			PM Peak Hour				
750	Office Park	37	28.28	15%	157	85%	889

Table 2 – Trip Generation for Proposed Rezoning

Trip Generation							
Land Use Code	**Use**	**Total SF/Units/ Spaces**	**Factor**	**Percent**	**Entering**	**Percent**	**Exit**
			Daily				
220	Apartments	436	6.65	50%	1450	50%	1450
720	Medical/Dental Office	43,000	36.13	50%	777	50%	777
820	Shopping Center	46,000	42.94	50%	988	50%	988
853	Convenience Market with Gas Pumps	12	542.6	50%	3256	50%	3256
	Total				**6470**		**6470**
			AM Peak Hour				
220	Apartments	436	0.51	20%	44	80%	178
720	Medical/Dental Office	43,000	2.3	61%	60	39%	39
820	Shopping Center	46,000	1	50%	23	50%	23
853	Convenience Market with Gas Pumps	12	16.57	79%	157	21%	42
	Total				**285**		**281**
			PM Peak Hour				
220	Apartments	436	0.62	65%	176	35%	95
720	Medical/Dental Office	43,000	3.46	49%	73	51%	76
820	Shopping Center	46,000	3.73	50%	86	50%	86
853	Convenience Market with Gas Pumps	12	19.07	27%	62	73%	167
	Total				**396**		**423**

The anticipated traffic volumes on the roadways surrounding the study area will be affected by pass-by trips. Pass-by trips are trips that are already on the roadway network. For instance, a person is traveling on one of the adjacent study roadways on their way home from work. This person decides to stop by for gas on their way home. This person was already on the roadway adjacent to the site and does not represent a new trip. Pass-by-trips are made as intermediate stops on the way from an origin to a primary route destination without a route diversion. For the gas station/convenience mart, the pass-by rate is 66%. For a shopping center the pass-by rate is 34%. While these percentages do not represent a true reduction in the trip generation for the site, they reduce the overall impact of the site on the roadway network by redirecting vehicles which were already on adjacent roadways to the proposed development. **Table 3** shows the pass-by trips for the proposed land use changes.

The total number of trips for the site using the existing office park commercial zoning is 7,220 daily trips. The number of daily trips for the proposed zoning is 12,940. The total number of trips for the convenience mart is 6,511. Reducing that by the 66% pass-by rate equals approximately 2,214 new trips generated by the site. The shopping center generates 1,975 trips daily. Reducing the shopping center trips by the 34% pass-by rate would equal approximately 1,304 new trips generated by the shopping center. Factoring in pass-by trips, the adjusted new total trips generated by the proposed site will be 7,971 trips -- an increase in new trips generated of less than 10 percent.

The analysis also shows that the trips generated by the proposed development in the AM and PM peak hours are significantly fewer than those generated by the existing office park commercial zoning. When comparing the proposed zoning to the existing zoning, **Table 3** shows the total trips entering/exiting the site for the peak hours are reduced from 949 to 566 (40% reduction) in the AM and 1046 to 819 (25% reduction) in the PM. Thus a change in zoning from office park commercial to residential + retail would likely reduce traffic impacts on the proximate network.

Table 3 – Trip Distribution for Proposed Rezoning

Trip Distribution									
Land Use Code	Use	Total SF/Units/ Acres/ Spaces	Total Trips	AM In	AM Out	Pass-By	PM In	PM Out	Pass-By
220	Apartments	436	2899	44	178		176	95	
720	Medical/Dental Office	43,000	1554	78	21		40	109	
820	Shopping Center	46,000	1975	19	12	16	55	55	58
853	Convenience Market with Gas Pumps	12	6511	34	34	131	39	39	151

Trip Distribution and Assignments

Based on the trip generation of the proposed land use, the trip ends were assigned to the entrances/exits of the site. Assignments were based on assumed travel behaviors, location of trip destinations, and accessibility from/to various routes considering normal overall travel patterns. **Figure 2** shows the proposed site plan for the Autumn Ridge Development. For purposes of this study no analysis was performed on any of the entrances/exits to or from the site onto Alice's Road. Those will be evaluated in a separate traffic study.

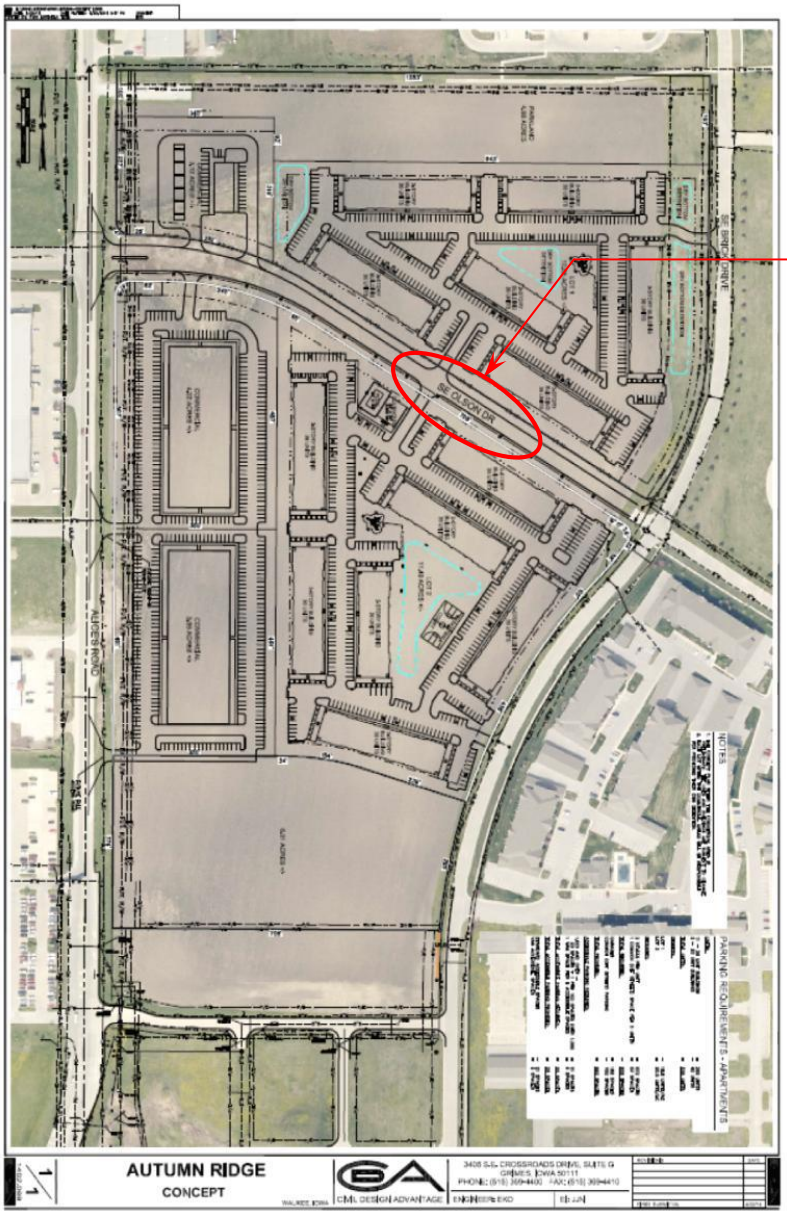

Figure 2 – Proposed Autumn Ridge Site Plan

The 3.95 and 4.22 acre commercial properties along Alice's Road were assumed to be the land uses of Medical/Dental Office and Shopping Center. Due to the location of these properties' entrances, it was assumed all the trips originating from the Medical/Dental lot would enter/exit onto Alice's Road. The trips exiting/entering the Shopping Center Lot were assumed to be a 60/40 split between the entrance on Alice's Road and SE Olson Drive. This assumption was based on the 34% pass-by rate for shopping centers.

The 2.12 acre commercial property north of SE Olson Drive was assumed to be the Convenience Market with Gas Pumps land use. Since this land use has a 66% pass-by rate it was assumed that 75% of the trips for this site would enter/exit to the west towards Alice's Road.

The rest of proposed Autumn Ridge Development consists of 436 apartments. Looking at the existing traffic numbers for Hickman Road and University Avenue it was assumed that 55% of the traffic for the apartments would enter/exit the site to the north and 45% would enter/exit the site to the south. It was also assumed that a there would be a 50/50 split of the traffic using the entrances/exits on SE Olson Drive and SE Brick Drive for access to the apartment complex. **Figure 3 and 4** shows the trip distribution during the AM and PM peak respectively, along SE Olson Drive and SE Brick Drive.

Figure 3 – Trip Distribution AM Peak

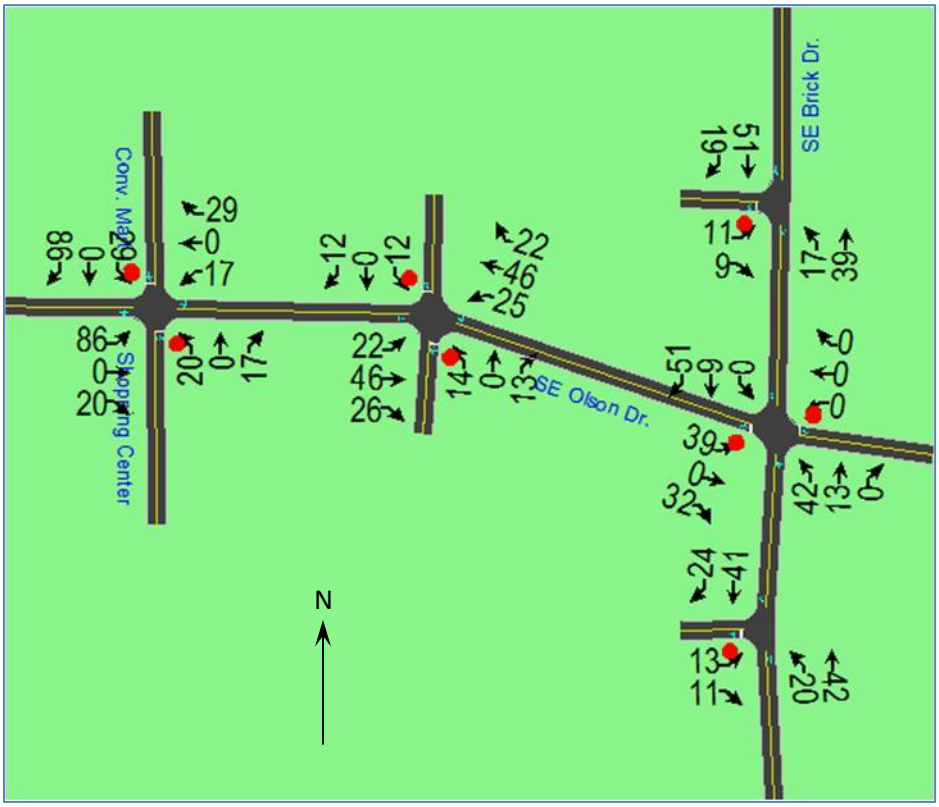

Figure 4 – Trip Distribution PM Peak

Intersection Analysis

An AM and PM peak traffic analysis was completed using *Synchro and Simtraffic, Version 8*, software and the Highway Capacity Manual 2010 methodology, with the trips from the Autumn Ridge Development distributed onto the network. The property entrances and the intersection of SE Olson Drive and SE Brick Drive were analyzed for the proposed development for level of service (LOS).

Level of service at intersections is primarily a function of peak hour turning movement volumes, intersection lane configuration, and traffic control. For intersection analysis, the Highway Capacity Manual (HCM) defines LOS in terms of the average control delay at the intersection in seconds per vehicle. The results of an HCM analysis are typically presented in the form of a letter grade (A-F) that provides a qualitative estimate of the operational efficiency or effectiveness of the corridor. Much like an academic report card, LOS A represents the best range of operating conditions (i.e., motorists experiencing little delay or congestion) and LOS F represents the worst (i.e., extreme delay or severe congestion). **Tables 3 and 4** show the level of service at the intersections during the AM and PM peaks.

Table 3 – AM Level of Service

	Overall Delay (Seconds)	EB	WB	NB	SB
Shopping Center/Convenience Mart Entrance	6.2	A	A	B	A
Apartments Entrance at SE Olson Drive	5.0	A	A	A	A
North Entrance with SE Brick Drive	3.7	A		A	A
South Entrance with SE Brick Drive	4.0	A		A	A

Table 4 – PM Level of Service

	Overall Delay (Seconds)	EB	WB	NB	SB
Shopping Center/Convenience Mart Entrance	7.5	A	A	B	A
Apartments Entrance at SE Olson Drive	3.6	A	A	A	A
North Entrance with SE Brick Drive	2.1	A		A	A
South Entrance with SE Brick Drive	2.5	A		A	A

As can be seen in the tables the level of service for all entrances/intersections is a LOS A in both the AM and PM. Only the northbound movement out of the shopping center is a LOS B, with the overall level of service for that intersection still being a LOS A.

Conclusion

After reviewing the trip generation for the proposed development it is determined that the change from all commercial to a mixture of apartments and commercial land uses will have little impact to SE Brick Drive. In actuality the zoning change will probably result in better traffic flow on SE Brick Drive than if the property remained all commercial. The newer layout of the site with the businesses along Alice's Road will likely keep a majority of that traffic to the west side of the site. SE Brick Drive will likely be used by mainly the apartment tenants.

Review of the entrances/exits from the apartment complex indicated that a widened (37') section to accommodate left turns is not necessary. According to the analysis, the level of service and delay remains the same whether or not there are left turn lanes at the entrances.

APPENDIX

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	288		343			312
Travel Time (s)	6.5		7.8			7.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	34	6	5	39	7	22	0	23	25	0	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.980			0.931			0.931	
Flt Protected		0.993			0.995			0.976			0.976	
Satd. Flow (prot)	0	1815	0	0	1816	0	0	1693	0	0	1693	0
Flt Permitted		0.993			0.995			0.976			0.976	
Satd. Flow (perm)	0	1815	0	0	1816	0	0	1693	0	0	1693	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		355			464			150			150	
Travel Time (s)		8.1			10.5			3.4			3.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	37	7	5	42	8	24	0	25	27	0	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	55	0	0	49	0	0	55	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 14.0%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	0	37	0	0	0	23	28	0	0	9	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.939									0.899	
Flt Protected		0.973						0.978				
Satd. Flow (prot)	0	1702	0	0	1863	0	0	1822	0	0	1675	0
Flt Permitted		0.973						0.978				
Satd. Flow (perm)	0	1702	0	0	1863	0	0	1822	0	0	1675	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		464			197			210			288	
Travel Time (s)		10.5			4.5			4.8			6.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	0	40	0	0	0	25	30	0	0	10	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	0	0	0	55	0	0	40	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 20.8%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	20	17	17	28	37	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.939				0.985	
Flt Protected	0.973			0.982		
Satd. Flow (prot)	1702	0	0	1829	1835	0
Flt Permitted	0.973			0.982		
Satd. Flow (perm)	1702	0	0	1829	1835	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	126			288	167	
Travel Time (s)	2.9			6.5	3.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	18	18	30	40	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	0	48	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.1%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	28	23	6	23	22	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.939				0.930	
Flt Protected	0.973			0.989		
Satd. Flow (prot)	1702	0	0	1842	1732	0
Flt Permitted	0.973			0.989		
Satd. Flow (perm)	1702	0	0	1842	1732	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	105			208	210	
Travel Time (s)	2.4			4.7	4.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	25	7	25	24	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	55	0	0	32	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	0	14	14	48	25	9	0	9	25	0	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.961			0.932			0.898	
Flt Protected		0.959			0.992			0.976			0.988	
Satd. Flow (prot)	0	1749	0	0	1776	0	0	1694	0	0	1653	0
Flt Permitted		0.959			0.992			0.976			0.988	
Satd. Flow (perm)	0	1749	0	0	1776	0	0	1694	0	0	1653	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			355			156			150	
Travel Time (s)		6.5			8.1			3.5			3.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	0	15	15	52	27	10	0	10	27	0	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	97	0	0	94	0	0	20	0	0	109	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 24.7%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	324		343			312
Travel Time (s)	7.4		7.8			7.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	46	26	25	46	22	14	0	13	12	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963			0.968			0.935			0.932	
Flt Protected		0.988			0.987			0.975			0.976	
Satd. Flow (prot)	0	1772	0	0	1780	0	0	1698	0	0	1694	0
Flt Permitted		0.988			0.987			0.975			0.976	
Satd. Flow (perm)	0	1772	0	0	1780	0	0	1698	0	0	1694	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		345			454			150			150	
Travel Time (s)		7.8			10.3			3.4			3.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	50	28	27	50	24	15	0	14	13	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	102	0	0	101	0	0	29	0	0	26	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	0	32	0	0	0	42	13	0	0	9	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.939									0.886	
Flt Protected		0.973						0.963				
Satd. Flow (prot)	0	1702	0	0	1863	0	0	1794	0	0	1650	0
Flt Permitted		0.973						0.963				
Satd. Flow (perm)	0	1702	0	0	1863	0	0	1794	0	0	1650	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		454			197			252			280	
Travel Time (s)		10.3			4.5			5.7			6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	42	0	35	0	0	0	46	14	0	0	10	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	0	0	0	0	0	60	0	0	65	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 20.5%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	11	9	17	39	51	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.939				0.963	
Flt Protected	0.973			0.985		
Satd. Flow (prot)	1702	0	0	1835	1794	0
Flt Permitted	0.973			0.985		
Satd. Flow (perm)	1702	0	0	1835	1794	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	126			280	250	
Travel Time (s)	2.9			6.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	10	18	42	55	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	0	60	76	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 19.7%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	13	11	20	42	41	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.938				0.951	
Flt Protected	0.974			0.984		
Satd. Flow (prot)	1702	0	0	1833	1771	0
Flt Permitted	0.974			0.984		
Satd. Flow (perm)	1702	0	0	1833	1771	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	105			208	252	
Travel Time (s)	2.4			4.7	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	12	22	46	45	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	0	0	68	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	0	20	17	0	29	20	0	17	29	0	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.914			0.939			0.900	
Flt Protected		0.961			0.982			0.973			0.987	
Satd. Flow (prot)	0	1744	0	0	1672	0	0	1702	0	0	1655	0
Flt Permitted		0.961			0.982			0.973			0.987	
Satd. Flow (perm)	0	1744	0	0	1672	0	0	1702	0	0	1655	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		324			345			271			245	
Travel Time (s)		7.4			7.8			6.2			5.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	0	22	18	0	32	22	0	18	32	0	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	0	0	50	0	0	40	0	0	125	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 25.7%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	288		343			312
Travel Time (s)	6.5		7.8			7.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	34	6	5	39	7	22	0	23	25	0	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.980			0.850			0.850	
Flt Protected		0.993			0.995		0.950			0.950		
Satd. Flow (prot)	0	1815	0	0	1816	0	1770	1583	0	1770	1583	0
Flt Permitted		0.993			0.995		0.950			0.950		
Satd. Flow (perm)	0	1815	0	0	1816	0	1770	1583	0	1770	1583	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		355			464			150			150	
Travel Time (s)		8.1			10.5			3.4			3.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	37	7	5	42	8	24	0	25	27	0	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	55	0	24	25	0	27	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 18.3%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	0	37	0	0	0	23	28	0	0	9	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.939									0.899	
Flt Protected		0.973						0.978				
Satd. Flow (prot)	0	1702	0	0	1863	0	0	1822	0	0	1675	0
Flt Permitted		0.973						0.978				
Satd. Flow (perm)	0	1702	0	0	1863	0	0	1822	0	0	1675	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		464			197			210			288	
Travel Time (s)		10.5			4.5			4.8			6.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	0	40	0	0	0	25	30	0	0	10	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	0	0	0	55	0	0	40	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 20.8%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	20	17	17	28	37	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.985	
Flt Protected	0.950			0.982		
Satd. Flow (prot)	1770	1583	0	1829	1835	0
Flt Permitted	0.950			0.982		
Satd. Flow (perm)	1770	1583	0	1829	1835	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	126			288	167	
Travel Time (s)	2.9			6.5	3.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	18	18	30	40	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	18	0	48	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.1%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	28	23	6	23	22	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.930	
Flt Protected	0.950			0.989		
Satd. Flow (prot)	1770	1583	0	1842	1732	0
Flt Permitted	0.950			0.989		
Satd. Flow (perm)	1770	1583	0	1842	1732	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	105			208	210	
Travel Time (s)	2.4			4.7	4.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	25	7	25	24	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	25	0	32	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	0	14	14	48	25	9	0	9	25	0	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.961			0.932			0.898	
Flt Protected		0.959			0.992			0.976			0.988	
Satd. Flow (prot)	0	1749	0	0	1776	0	0	1694	0	0	1653	0
Flt Permitted		0.959			0.992			0.976			0.988	
Satd. Flow (perm)	0	1749	0	0	1776	0	0	1694	0	0	1653	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			355			156			150	
Travel Time (s)		6.5			8.1			3.5			3.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	0	15	15	52	27	10	0	10	27	0	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	97	0	0	94	0	0	20	0	0	109	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 24.7%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	324		343			312
Travel Time (s)	7.4		7.8			7.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	46	26	25	46	22	14	0	13	12	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963			0.968			0.850			0.850	
Flt Protected		0.988			0.987		0.950			0.950		
Satd. Flow (prot)	0	1772	0	0	1780	0	1770	1583	0	1770	1583	0
Flt Permitted		0.988			0.987		0.950			0.950		
Satd. Flow (perm)	0	1772	0	0	1780	0	1770	1583	0	1770	1583	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		345			454			150			150	
Travel Time (s)		7.8			10.3			3.4			3.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	50	28	27	50	24	15	0	14	13	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	102	0	0	101	0	15	14	0	13	13	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 21.3%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	0	32	0	0	0	42	13	0	0	9	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.939									0.886	
Flt Protected		0.973						0.963				
Satd. Flow (prot)	0	1702	0	0	1863	0	0	1794	0	0	1650	0
Flt Permitted		0.973						0.963				
Satd. Flow (perm)	0	1702	0	0	1863	0	0	1794	0	0	1650	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		454			197			252			280	
Travel Time (s)		10.3			4.5			5.7			6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	42	0	35	0	0	0	46	14	0	0	10	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	0	0	0	0	0	60	0	0	65	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 20.5%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	11	9	17	39	51	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.963	
Flt Protected	0.950			0.985		
Satd. Flow (prot)	1770	1583	0	1835	1794	0
Flt Permitted	0.950			0.985		
Satd. Flow (perm)	1770	1583	0	1835	1794	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	126			280	250	
Travel Time (s)	2.9			6.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	10	18	42	55	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	10	0	60	76	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.7%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	13	11	20	42	41	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.951	
Flt Protected	0.950			0.984		
Satd. Flow (prot)	1770	1583	0	1833	1771	0
Flt Permitted	0.950			0.984		
Satd. Flow (perm)	1770	1583	0	1833	1771	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	105			208	252	
Travel Time (s)	2.4			4.7	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	12	22	46	45	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	12	0	68	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	0	20	17	0	29	20	0	17	29	0	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.914			0.939			0.900	
Flt Protected		0.961			0.982			0.973			0.987	
Satd. Flow (prot)	0	1744	0	0	1672	0	0	1702	0	0	1655	0
Flt Permitted		0.961			0.982			0.973			0.987	
Satd. Flow (perm)	0	1744	0	0	1672	0	0	1702	0	0	1655	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		324			345			271			245	
Travel Time (s)		7.4			7.8			6.2			5.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	0	22	18	0	32	22	0	18	32	0	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	0	0	50	0	0	40	0	0	125	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 25.7%	ICU Level of Service A
Analysis Period (min) 15	