TECHNICAL APPENDIX

APPENDIX A

TRAFFIC COUNTS

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Jones Dairy Road and Averette Road
Site Code : 00090518
Start Date : 9/5/2018
Page No : 1

Groups Printed- Cars & Trucks

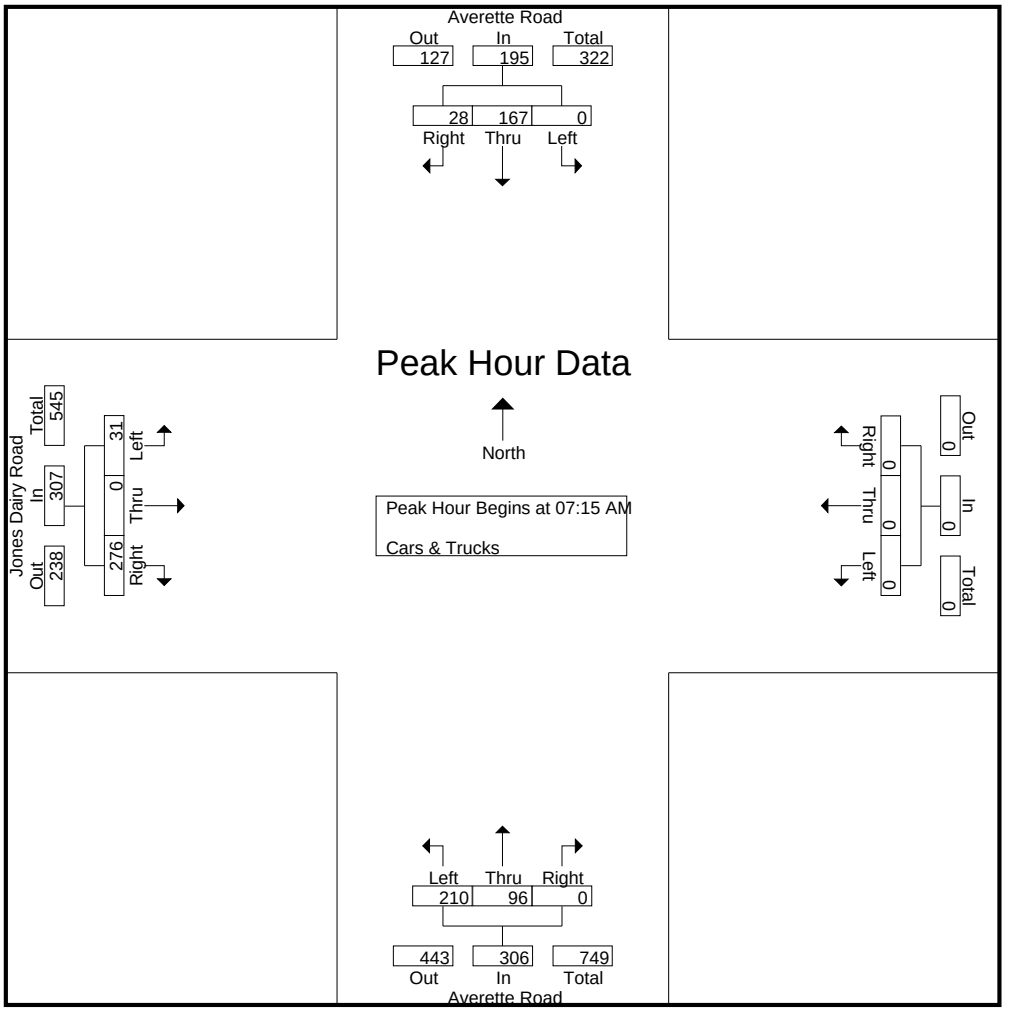
	Averette Road From North				From East				Averette Road From South				Jones Dairy Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	6	34	0	40	0	0	0	0	0	17	29	46	50	0	5	55	141
07:15 AM	8	51	0	59	0	0	0	0	0	18	21	39	59	0	10	69	167
07:30 AM	4	53	0	57	0	0	0	0	0	32	59	91	81	0	4	85	233
07:45 AM	8	33	0	41	0	0	0	0	0	21	77	98	66	0	11	77	216
Total	26	171	0	197	0	0	0	0	0	88	186	274	256	0	30	286	757
08:00 AM	8	30	0	38	0	0	0	0	0	25	53	78	70	0	6	76	192
08:15 AM	5	29	0	34	0	0	0	0	0	15	27	42	52	0	5	57	133
08:30 AM	14	29	0	43	0	0	0	0	0	17	32	49	37	0	1	38	130
08:45 AM	6	32	0	38	0	0	0	0	0	21	35	56	74	0	4	78	172
Total	33	120	0	153	0	0	0	0	0	78	147	225	233	0	16	249	627
09:00 AM	6	28	0	34	0	0	0	0	0	23	41	64	43	0	2	45	143
*** BREAK ***																	
Total	6	28	0	34	0	0	0	0	0	23	41	64	43	0	2	45	143
*** BREAK ***																	
03:30 PM	6	30	0	36	0	0	0	0	0	28	51	79	40	0	2	42	157
03:45 PM	6	20	0	26	0	0	0	0	0	52	52	104	53	0	8	61	191
Total	12	50	0	62	0	0	0	0	0	80	103	183	93	0	10	103	348
04:00 PM	4	19	0	23	0	0	0	0	0	32	40	72	28	0	6	34	129
04:15 PM	6	11	0	17	0	0	0	0	0	28	61	89	34	0	5	39	145
04:30 PM	4	35	0	39	0	0	0	0	0	39	53	92	41	0	9	50	181
04:45 PM	7	25	0	32	0	0	0	0	0	28	57	85	53	0	6	59	176
Total	21	90	0	111	0	0	0	0	0	127	211	338	156	0	26	182	631
05:00 PM	8	23	0	31	0	0	0	0	0	53	50	103	45	0	6	51	185
05:15 PM	4	38	0	42	0	0	0	0	0	49	62	111	43	0	5	48	201
05:30 PM	7	34	0	41	0	0	0	0	0	36	69	105	51	0	9	60	206
05:45 PM	9	21	0	30	0	0	0	0	0	33	53	86	56	0	4	60	176
Total	28	116	0	144	0	0	0	0	0	171	234	405	195	0	24	219	768
*** BREAK ***																	
Grand Total	126	575	0	701	0	0	0	0	0	567	922	1489	976	0	108	1084	3274
Apprch %	18	82	0		0	0	0		0	38.1	61.9		90	0	10		
Total %	3.8	17.6	0	21.4	0	0	0	0	0	17.3	28.2	45.5	29.8	0	3.3	33.1	

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Jones Dairy Road and Averette Road
Site Code : 00090518
Start Date : 9/5/2018
Page No : 2

	Averette Road From North				From East				Averette Road From South				Jones Dairy Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**8**	51	0	**59**	0	0	0	0	0	18	21	39	59	0	10	69	167
07:30 AM	4	**53**	0	57	0	0	0	0	0	**32**	59	91	**81**	0	4	**85**	**233**
07:45 AM	8	33	0	41	0	0	0	0	0	21	**77**	**98**	66	0	**11**	77	216
08:00 AM	8	30	0	38	0	0	0	0	0	25	53	78	70	0	6	76	192
Total Volume	28	167	0	195	0	0	0	0	0	96	210	306	276	0	31	307	808
% App. Total	14.4	85.6	0		0	0	0		0	31.4	68.6		89.9	0	10.1		
PHF	.875	.788	.000	.826	.000	.000	.000	.000	.000	.750	.682	.781	.852	.000	.705	.903	.867



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File Name : Jones Dairy Road and Averette Road
Site Code : 00090518
Start Date : 9/5/2018
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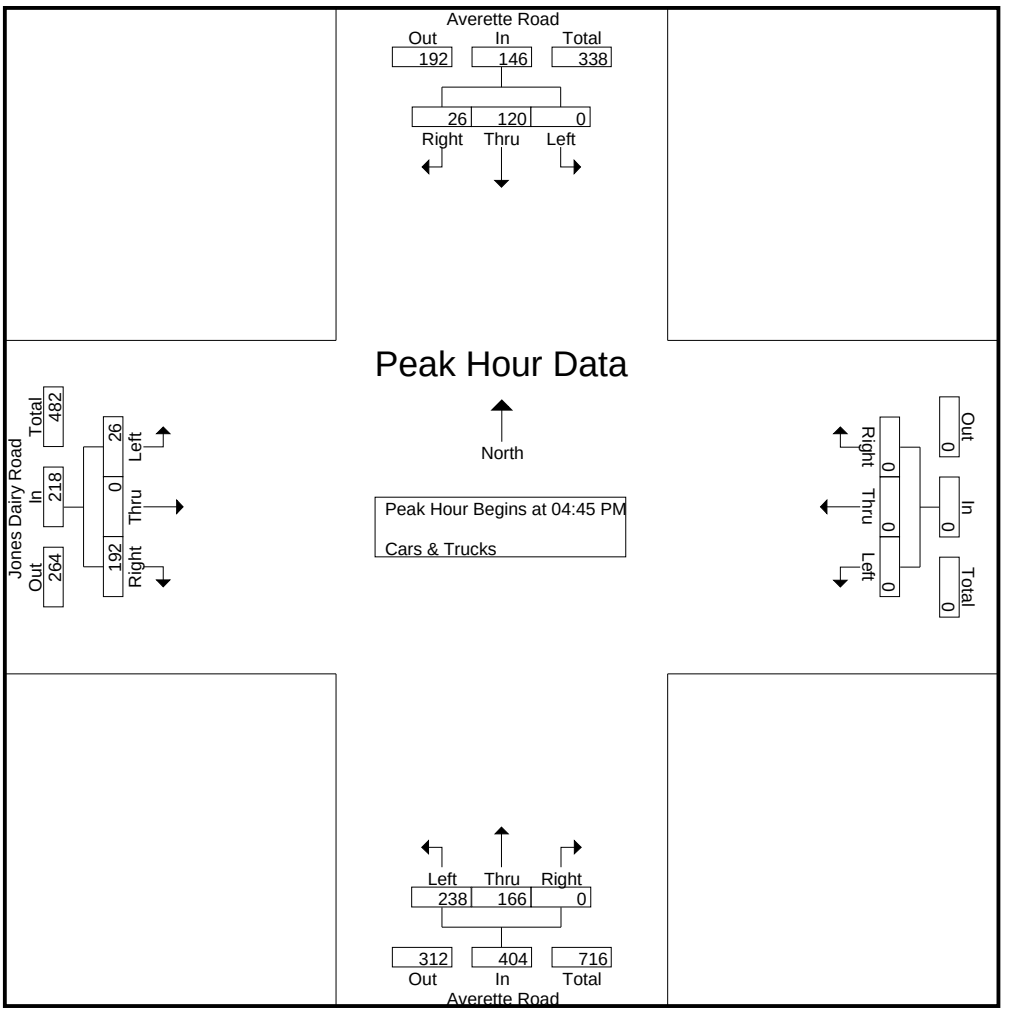
	Averette Road From North				From East				Averette Road From South				Jones Dairy Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	7	25	0	32	0	0	0	0	0	28	57	85	**53**	0	6	59	176
05:00 PM	**8**	23	0	31	0	0	0	0	0	**53**	50	103	45	0	6	51	185
05:15 PM	4	**38**	0	**42**	0	0	0	0	0	49	62	**111**	43	0	5	48	201
05:30 PM	7	34	0	41	0	0	0	0	0	36	**69**	105	51	0	**9**	**60**	**206**
Total Volume	26	120	0	146	0	0	0	0	0	166	238	404	192	0	26	218	768
% App. Total	17.8	82.2	0		0	0	0		0	41.1	58.9		88.1	0	11.9		
PHF	.813	.789	.000	.869	.000	.000	.000	.000	.000	.783	.862	.910	.906	.000	.722	.908	.932



Burns Service Inc.

1202 Langdon Terrace Drive
Indian Trail, NC, 28079

We Count because YOU Count

File Name : WakeForest(Main and Young) AM Peak
Site Code :
Start Date : 5/22/2018
Page No : 1

Groups Printed- Cars + - Trucks

	Young Street Southbound				Main Street Westbound				Young Street Northbound				Main Street Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	81	71	1	153	3	33	3	39	0	34	45	79	53	20	38	111	382
07:15	61	61	2	124	8	50	2	60	4	33	50	87	25	22	28	75	346
07:30	59	50	3	112	5	54	0	59	1	31	36	68	22	31	48	101	340
07:45	74	50	2	126	4	38	3	45	3	46	44	93	37	37	43	117	381
Total	275	232	8	515	20	175	8	203	8	144	175	327	137	110	157	404	1449
08:00	54	48	4	106	10	39	3	52	1	24	28	53	33	25	39	97	308
08:15	51	31	3	85	2	30	3	35	2	20	36	58	27	28	33	88	266
08:30	66	36	1	103	9	36	2	47	0	20	30	50	24	12	35	71	271
08:45	76	46	6	128	13	31	0	44	5	21	31	57	21	16	45	82	311
Total	247	161	14	422	34	136	8	178	8	85	125	218	105	81	152	338	1156
Grand Total	522	393	22	937	54	311	16	381	16	229	300	545	242	191	309	742	2605
Apprch %	55.7	41.9	2.3		14.2	81.6	4.2		2.9	42	55		32.6	25.7	41.6		
Total %	20	15.1	0.8	36	2.1	11.9	0.6	14.6	0.6	8.8	11.5	20.9	9.3	7.3	11.9	28.5	
Cars +	518	387	20	925	50	303	16	369	14	225	298	537	231	181	300	712	2543
% Cars +	99.2	98.5	90.9	98.7	92.6	97.4	100	96.9	87.5	98.3	99.3	98.5	95.5	94.8	97.1	96	97.6
Trucks	4	6	2	12	4	8	0	12	2	4	2	8	11	10	9	30	62
% Trucks	0.8	1.5	9.1	1.3	7.4	2.6	0	3.1	12.5	1.7	0.7	1.5	4.5	5.2	2.9	4	2.4

Burns Service Inc.

1202 Langdon Terrace Drive
Indian Trail, NC, 28079
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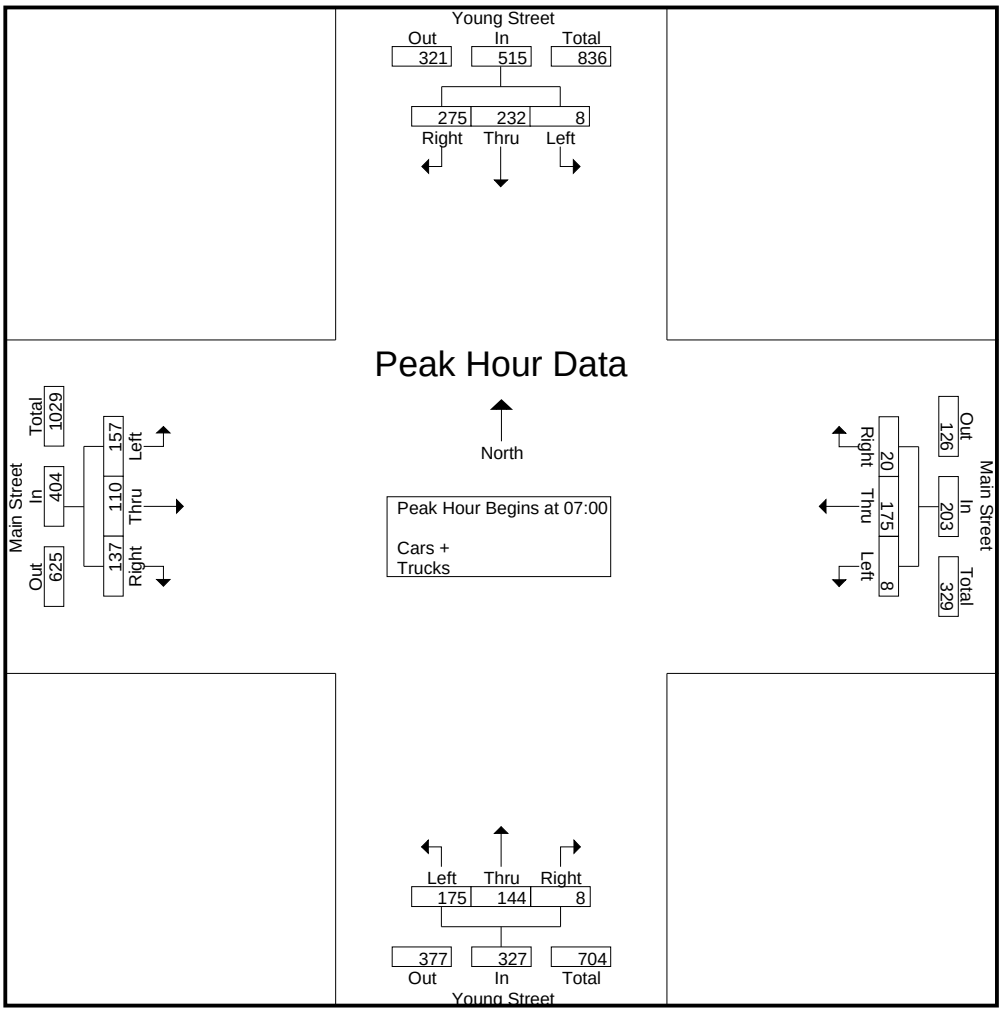
File Name : WakeForest(Main and Young) AM Peak
Site Code :
Start Date : 5/22/2018
Page No : 2

	Young Street Southbound				Main Street Westbound				Young Street Northbound				Main Street Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00																	
07:00	81	71	1	153	3	33	3	39	0	34	45	79	**53**	20	38	111	**382**
07:15	61	61	2	124	**8**	50	2	**60**	**4**	33	**50**	87	25	22	28	75	346
07:30	59	50	**3**	112	5	**54**	0	59	1	31	36	68	22	31	**48**	101	340
07:45	74	50	2	126	4	38	3	45	3	**46**	44	**93**	37	**37**	43	**117**	381
Total Volume	275	232	8	515	20	175	8	203	8	144	175	327	137	110	157	404	1449
% App. Total	53.4	45	1.6		9.9	86.2	3.9		2.4	44	53.5		33.9	27.2	38.9		
PHF	.849	.817	.667	.842	.625	.810	.667	.846	.500	.783	.875	.879	.646	.743	.818	.863	.948



Burns Service Inc.

1202 Langdon Terrace Drive
Indian Trail, NC, 28079

We Count because YOU Count

File Name : WakeForest(Main and Young) PM Peak
Site Code :
Start Date : 5/22/2018
Page No : 1

Groups Printed- Cars + - Trucks

	Young Road Southbound				Main Street Westbound				Yound Road Northbound				Main Street Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
16:00	61	30	14	105	1	28	3	32	3	34	25	62	41	43	57	141	340
16:15	38	34	5	77	7	33	2	42	5	45	26	76	35	55	48	138	333
16:30	41	18	7	66	6	26	3	35	6	28	23	57	29	51	46	126	284
16:45	37	21	6	64	4	20	2	26	4	44	33	81	28	41	59	128	299
Total	177	103	32	312	18	107	10	135	18	151	107	276	133	190	210	533	1256
17:00	35	30	5	70	5	27	3	35	1	37	34	72	31	42	45	118	295
17:15	43	28	10	81	7	40	3	50	0	58	35	93	36	60	46	142	366
17:30	46	24	6	76	1	24	3	28	1	44	30	75	36	55	63	154	333
17:45	52	34	7	93	10	56	4	70	1	38	40	79	26	47	67	140	382
Total	176	116	28	320	23	147	13	183	3	177	139	319	129	204	221	554	1376
18:00	29	23	2	54	3	25	3	31	4	37	37	78	30	40	59	129	292
18:15	37	18	3	58	4	29	0	33	1	33	26	60	36	46	56	138	289
Grand Total	419	260	65	744	48	308	26	382	26	398	309	733	328	480	546	1354	3213
Apprch %	56.3	34.9	8.7		12.6	80.6	6.8		3.5	54.3	42.2		24.2	35.5	40.3		
Total %	13	8.1	2	23.2	1.5	9.6	0.8	11.9	0.8	12.4	9.6	22.8	10.2	14.9	17	42.1	
Cars +	415	250	62	727	47	308	25	380	26	396	305	727	322	476	544	1342	3176
% Cars +	99	96.2	95.4	97.7	97.9	100	96.2	99.5	100	99.5	98.7	99.2	98.2	99.2	99.6	99.1	98.8
Trucks	4	10	3	17	1	0	1	2	0	2	4	6	6	4	2	12	37
% Trucks	1	3.8	4.6	2.3	2.1	0	3.8	0.5	0	0.5	1.3	0.8	1.8	0.8	0.4	0.9	1.2

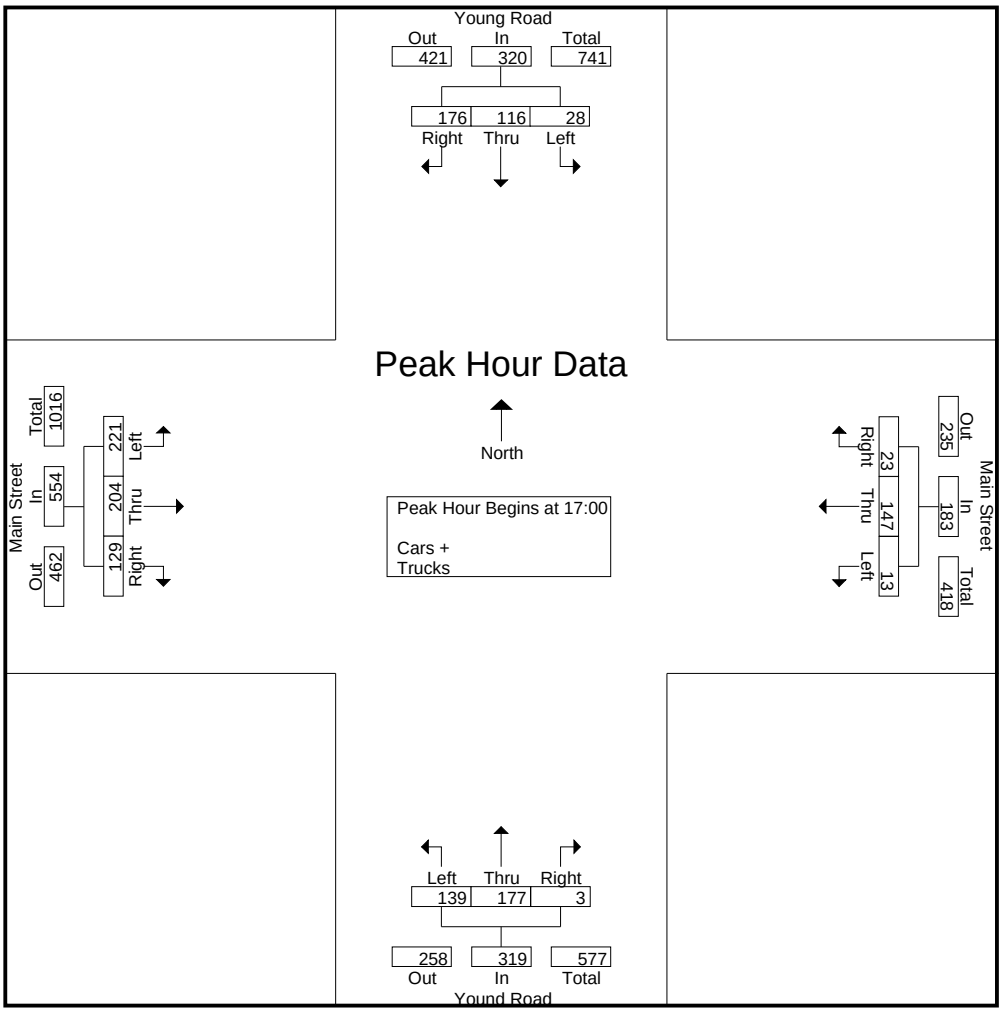
Burns Service Inc.

1202 Langdon Terrace Drive
Indian Trail, NC, 28079

We Count because YOU Count

File Name : WakeForest(Main and Young) PM Peak
Site Code :
Start Date : 5/22/2018
Page No : 2

	Young Road Southbound				Main Street Westbound				Yound Road Northbound				Main Street Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 18:15 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	**35**	**30**	**5**	**70**	**5**	**27**	**3**	**35**	1	37	34	72	31	42	45	118	295
17:15	43	28	10	81	7	40	3	50	0	58	35	93	**36**	**60**	46	142	366
17:30	46	24	6	76	1	24	3	28	1	44	30	75	36	55	63	**154**	333
17:45	**52**	**34**	7	**93**	**10**	**56**	**4**	**70**	1	38	**40**	79	26	47	**67**	140	**382**
Total Volume	176	116	28	320	23	147	13	183	3	177	139	319	129	204	221	554	1376
% App. Total	55	36.2	8.8		12.6	80.3	7.1		0.9	55.5	43.6		23.3	36.8	39.9		
PHF	.846	.853	.700	.860	.575	.656	.813	.654	.750	.763	.869	.858	.896	.850	.825	.899	.901



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : NC 98 and Jones Dairy Road
Site Code : 00013117
Start Date : 1/31/2018
Page No : 1

Groups Printed- Cars & Trucks

	Traditions Grande Boulevard From North					NC 98 (Wait Avenue) From East					Jones Dairy Road From South					NC 98 (Wait Avenue) From West							
Start Time	Right	Thru	Left	TRKS	App. Total	Right	Thru	Left	TRKS	App. Total	Right	Thru	Left	TRKS	App. Total	Right	Thru	Left	TRKS	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	63	38	12	1	113	33	143	7	0	183	1	68	85	0	154	24	80	38	4	142	5	592	597
07:15 AM	81	69	25	0	175	27	182	13	1	222	6	45	93	0	144	74	95	56	1	225	2	766	768
07:30 AM	75	120	25	0	220	12	184	19	0	215	3	108	154	0	265	116	91	81	3	288	3	988	991
07:45 AM	78	119	11	1	208	27	137	24	4	188	7	136	123	0	266	51	146	118	8	315	13	977	990
Total	297	346	73	2	716	99	646	63	5	808	17	357	455	0	829	265	412	293	16	970	23	3323	3346
08:00 AM	121	71	20	0	212	50	158	30	2	238	8	114	105	0	227	38	89	163	3	290	5	967	972
08:15 AM	133	50	17	0	200	29	138	13	0	180	6	27	51	1	84	24	97	75	3	196	4	660	664
08:30 AM	111	33	13	2	157	17	137	13	0	167	2	16	39	0	57	25	73	43	6	141	8	522	530
*** BREAK ***																							
Total	365	154	50	2	569	96	433	56	2	585	16	157	195	1	368	87	259	281	12	627	17	2149	2166
*** BREAK ***																							
04:00 PM	58	39	32	0	129	21	89	4	3	114	10	41	41	1	92	50	184	69	1	303	5	638	643
04:15 PM	59	33	36	3	128	18	102	13	2	133	7	28	52	0	87	37	163	63	2	263	7	611	618
04:30 PM	42	41	24	1	107	24	132	8	0	164	8	30	49	0	87	49	183	85	1	317	2	675	677
04:45 PM	41	42	23	3	106	16	144	21	0	181	4	22	38	0	64	67	202	74	1	343	4	694	698
Total	200	155	115	7	470	79	467	46	5	592	29	121	180	1	330	203	732	291	5	1226	18	2618	2636
05:00 PM	67	65	38	0	170	16	104	16	3	136	6	42	62	0	110	65	181	98	0	344	3	760	763
05:15 PM	63	56	34	2	153	22	133	7	0	162	5	37	46	0	88	75	213	87	4	375	6	778	784
05:30 PM	75	42	31	1	148	21	162	10	0	193	9	36	71	0	116	70	212	88	1	370	2	827	829
05:45 PM	0	0	1	0	1	0	0	0	0	0	7	23	51	0	81	77	186	83	2	346	2	428	430
Total	205	163	104	3	472	59	399	33	3	491	27	138	230	0	395	287	792	356	7	1435	13	2793	2806
*** BREAK ***																							
Grand Total	1067	818	342	14	2227	333	1945	198	15	2476	89	773	1060	2	1922	842	2195	1221	40	4258	71	10883	10954
Apprch %	47.9	36.7	15.4			13.4	78.6	8			4.6	40.2	55.2			19.8	51.6	28.7					
Total %	9.8	7.5	3.1		20.5	3.1	17.9	1.8		22.8	0.8	7.1	9.7		17.7	7.7	20.2	11.2		39.1	0.6	99.4	

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
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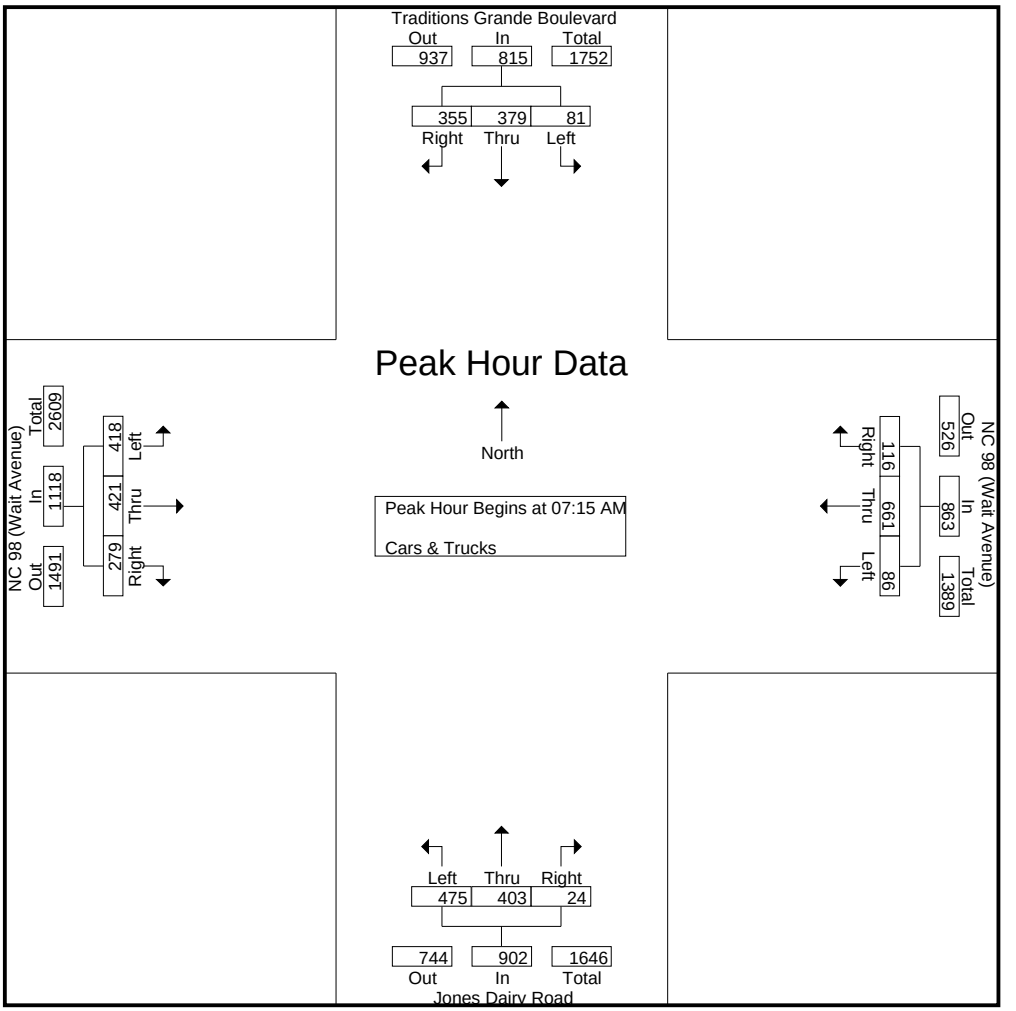
PH: 919 872-5115

File Name : NC 98 and Jones Dairy Road
Site Code : 00013117
Start Date : 1/31/2018
Page No : 2

	Traditions Grande Boulevard From North				NC 98 (Wait Avenue) From East				Jones Dairy Road From South				NC 98 (Wait Avenue) From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	81	69	25	175	27	182	13	222	6	45	93	144	74	95	56	225	766
07:30 AM	75	120	25	220	12	184	19	215	3	108	154	265	116	91	81	288	988
07:45 AM	78	119	11	208	27	137	24	188	7	136	123	266	51	146	118	315	977
08:00 AM	121	71	20	212	50	158	30	238	8	114	105	227	38	89	163	290	967
Total Volume	355	379	81	815	116	661	86	863	24	403	475	902	279	421	418	1118	3698
% App. Total	43.6	46.5	9.9		13.4	76.6	10		2.7	44.7	52.7		25	37.7	37.4		
PHF	.733	.790	.810	.926	.580	.898	.717	.907	.750	.741	.771	.848	.601	.721	.641	.887	.936



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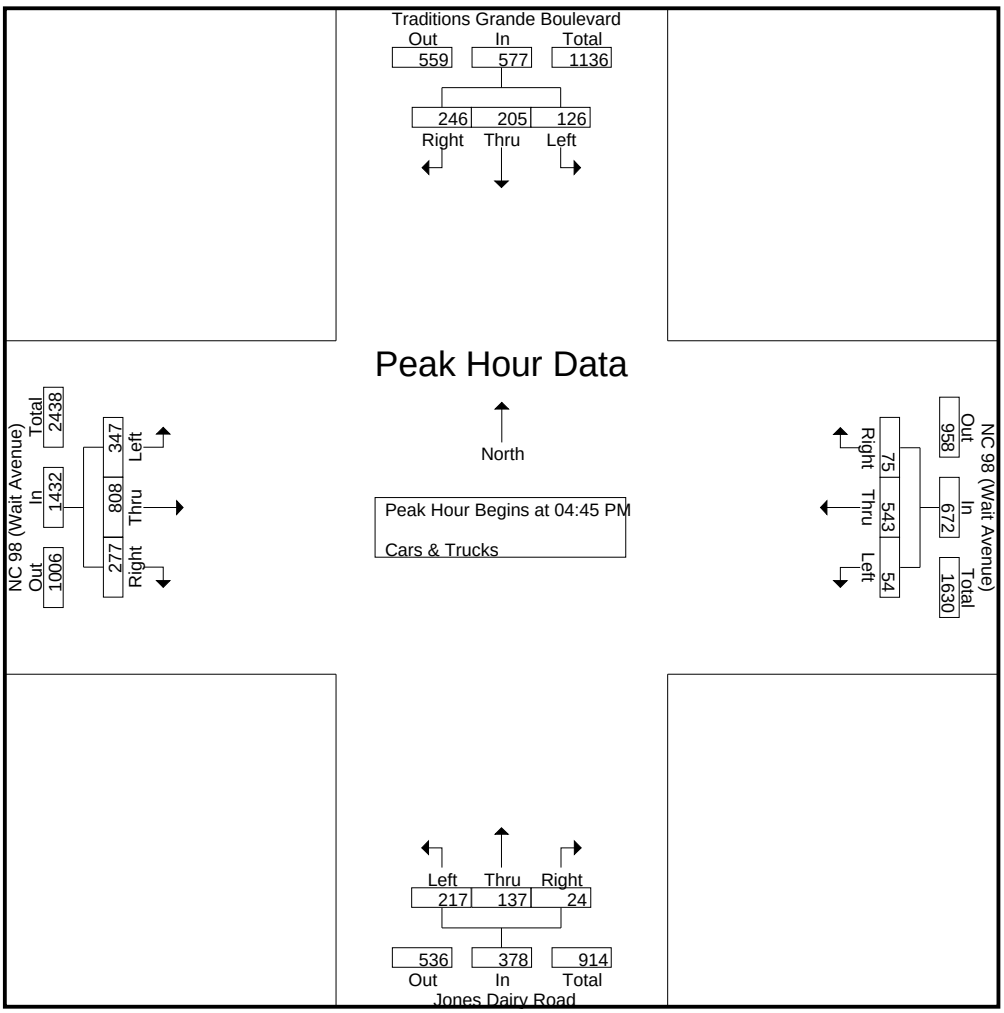
Page No : 3

	Traditions Grande Boulevard From North				NC 98 (Wait Avenue) From East				Jones Dairy Road From South				NC 98 (Wait Avenue) From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	41	42	23	106	16	144	21	181	4	22	38	64	67	202	74	343	694
05:00 PM	67	65	38	170	16	104	16	136	6	42	62	110	65	181	98	344	760
05:15 PM	63	56	34	153	22	133	7	162	5	37	46	88	75	213	87	375	778
05:30 PM	75	42	31	148	21	162	10	193	9	36	71	116	70	212	88	370	827
Total Volume	246	205	126	577	75	543	54	672	24	137	217	378	277	808	347	1432	3059
% App. Total	42.6	35.5	21.8		11.2	80.8	8		6.3	36.2	57.4		19.3	56.4	24.2		
PHF	.820	.788	.829	.849	.852	.838	.643	.870	.667	.815	.764	.815	.923	.948	.885	.955	.925



Burns Service Inc.

1202 Langdon Terrace Drive
Indian Trail, NC, 28079

We Count because YOU Count

File Name : WakeForest(Averette and NC 98) AM Peak
Site Code :
Start Date : 5/22/2018
Page No : 1

Groups Printed- Cars + - Trucks

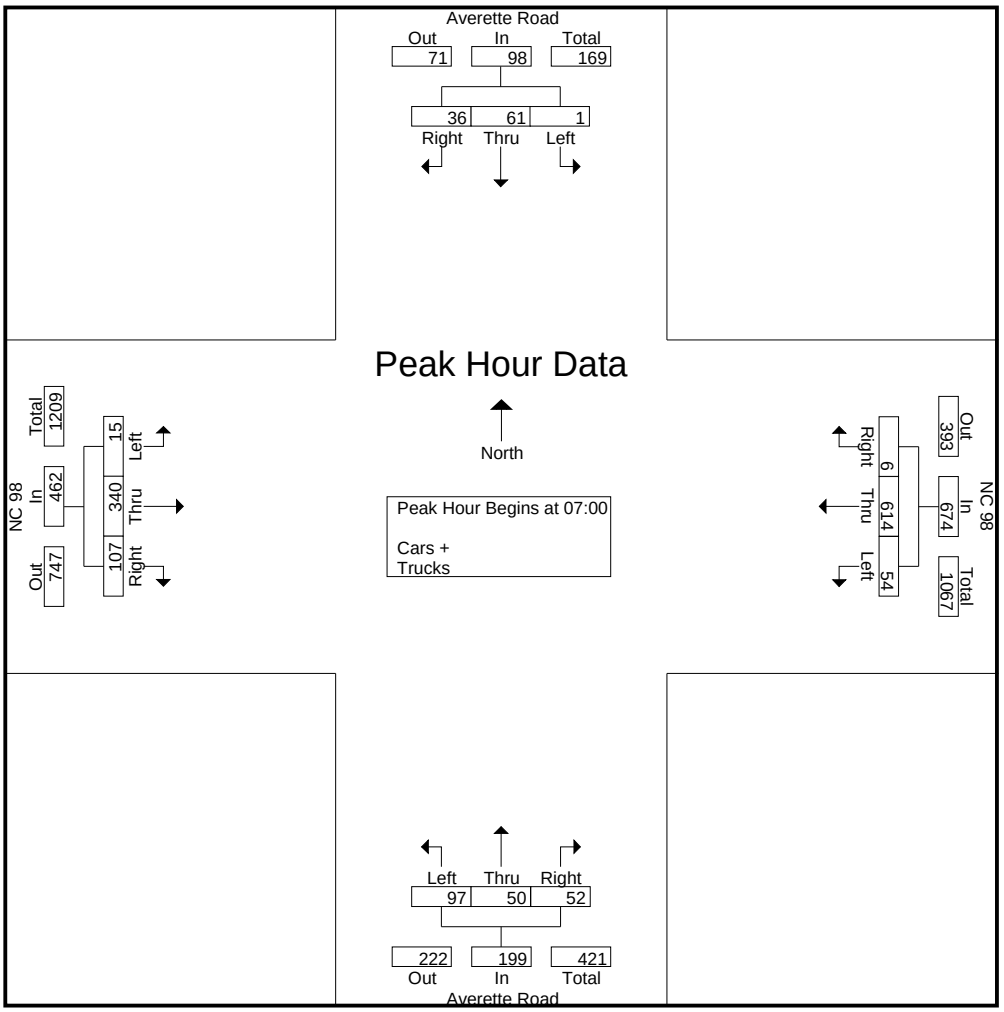
	Averette Road Southbound				NC 98 Westbound				Averette Road Northbound				NC 98 Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	12	17	0	29	0	134	12	146	12	9	27	48	17	77	2	96	319
07:15	9	15	0	24	3	175	15	193	11	12	23	46	31	96	3	130	393
07:30	5	14	0	19	0	153	17	170	14	12	21	47	31	102	4	137	373
07:45	10	15	1	26	3	152	10	165	15	17	26	58	28	65	6	99	348
Total	36	61	1	98	6	614	54	674	52	50	97	199	107	340	15	462	1433
08:00	4	13	0	17	1	125	12	138	8	9	18	35	22	88	6	116	306
08:15	5	6	0	11	0	112	10	122	5	6	13	24	20	75	2	97	254
08:30	6	8	1	15	0	125	4	129	7	6	15	28	13	71	3	87	259
08:45	2	13	0	15	0	116	14	130	8	8	12	28	18	53	0	71	244
Total	17	40	1	58	1	478	40	519	28	29	58	115	73	287	11	371	1063
Grand Total	53	101	2	156	7	1092	94	1193	80	79	155	314	180	627	26	833	2496
Apprch %	34	64.7	1.3		0.6	91.5	7.9		25.5	25.2	49.4		21.6	75.3	3.1		
Total %	2.1	4	0.1	6.2	0.3	43.8	3.8	47.8	3.2	3.2	6.2	12.6	7.2	25.1	1	33.4	
Cars +	53	101	2	156	7	1083	92	1182	80	79	154	313	180	612	26	818	2469
% Cars +	100	100	100	100	100	99.2	97.9	99.1	100	100	99.4	99.7	100	97.6	100	98.2	98.9
Trucks	0	0	0	0	0	9	2	11	0	0	1	1	0	15	0	15	27
% Trucks	0	0	0	0	0	0.8	2.1	0.9	0	0	0.6	0.3	0	2.4	0	1.8	1.1

Burns Service Inc.

1202 Langdon Terrace Drive
Indian Trail, NC, 28079
We Count because YOU Count

File Name : WakeForest(Averette and NC 98) AM Peak
Site Code :
Start Date : 5/22/2018
Page No : 2

	Averette Road Southbound				NC 98 Westbound				Averette Road Northbound				NC 98 Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00																	
07:00	12	17	0	29	0	134	12	146	12	9	27	48	17	77	2	96	319
07:15	9	15	0	24	**3**	**175**	15	**193**	11	12	23	46	**31**	96	3	130	**393**
07:30	5	14	0	19	0	153	**17**	170	14	12	21	47	31	**102**	4	**137**	373
07:45	10	15	**1**	26	3	152	10	165	**15**	**17**	26	**58**	28	65	**6**	99	348
Total Volume	36	61	1	98	6	614	54	674	52	50	97	199	107	340	15	462	1433
% App. Total	36.7	62.2	1		0.9	91.1	8		26.1	25.1	48.7		23.2	73.6	3.2		
PHF	.750	.897	.250	.845	.500	.877	.794	.873	.867	.735	.898	.858	.863	.833	.625	.843	.912



Burns Service Inc.

1202 Langdon Terrace Drive
Indian Trail, NC, 28079

We Count because YOU Count

File Name : WakeForest(Averette and NC 98) PM Peak
Site Code :
Start Date : 5/22/2018
Page No : 1

Groups Printed- Cars + - Trucks

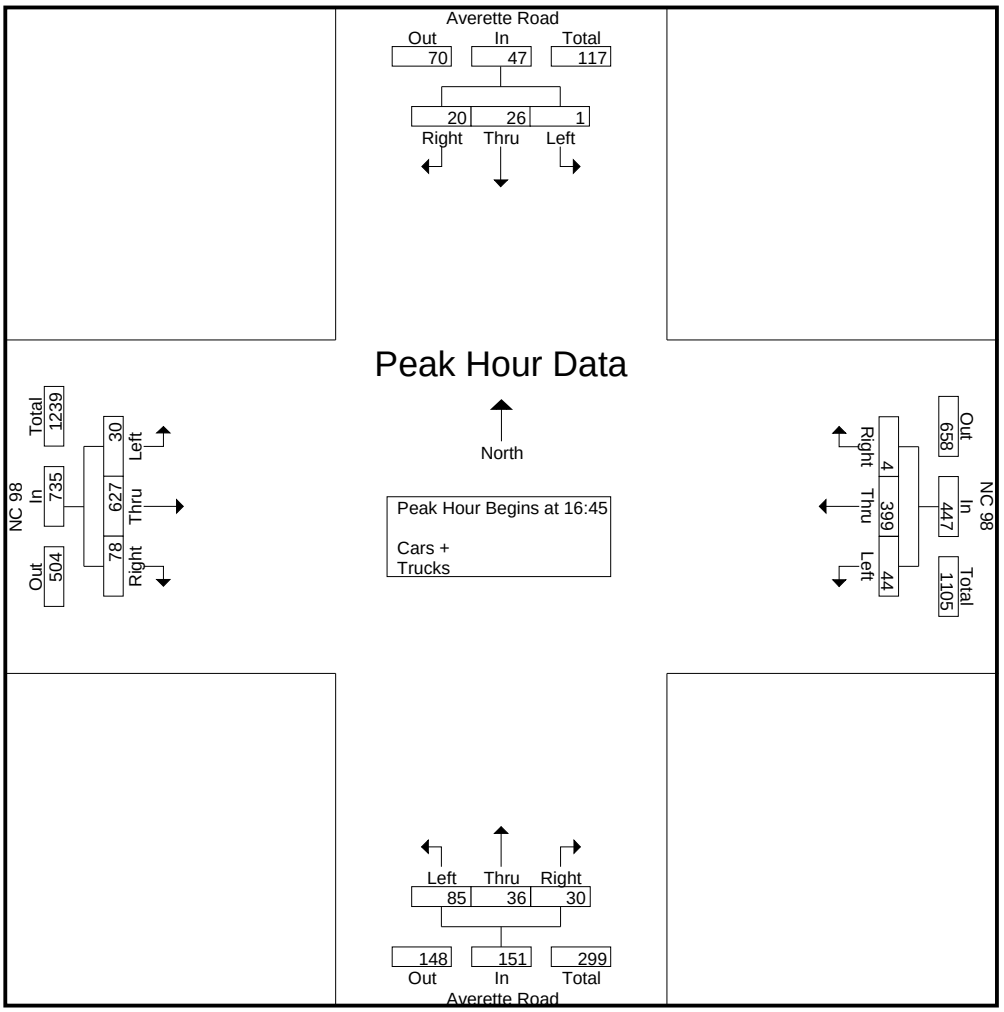
	Averette Road Southbound				NC 98 Westbound				Averette Road Northbound				NC 98 Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
16:00	4	9	4	17	1	77	11	89	8	16	30	54	20	154	4	178	338
16:15	3	5	0	8	0	85	7	92	7	11	17	35	19	137	7	163	298
16:30	2	8	1	11	1	86	16	103	9	8	18	35	10	138	11	159	308
16:45	7	6	1	14	0	92	15	107	8	13	22	43	20	152	5	177	341
Total	16	28	6	50	2	340	49	391	32	48	87	167	69	581	27	677	1285
17:00	4	5	0	9	1	83	10	94	6	5	11	22	8	163	7	178	303
17:15	3	10	0	13	3	127	7	137	8	12	30	50	19	163	9	191	391
17:30	6	5	0	11	0	97	12	109	8	6	22	36	31	149	9	189	345
17:45	4	4	0	8	0	95	6	101	4	16	21	41	19	149	9	177	327
Total	17	24	0	41	4	402	35	441	26	39	84	149	77	624	34	735	1366
18:00	3	7	0	10	0	95	6	101	8	17	18	43	10	111	8	129	283
18:15	1	1	0	2	0	87	5	92	12	17	19	48	17	108	4	129	271
Grand Total	37	60	6	103	6	924	95	1025	78	121	208	407	173	1424	73	1670	3205
Apprch %	35.9	58.3	5.8		0.6	90.1	9.3		19.2	29.7	51.1		10.4	85.3	4.4		
Total %	1.2	1.9	0.2	3.2	0.2	28.8	3	32	2.4	3.8	6.5	12.7	5.4	44.4	2.3	52.1	
Cars +	37	59	5	101	6	921	93	1020	78	121	207	406	173	1407	72	1652	3179
% Cars +	100	98.3	83.3	98.1	100	99.7	97.9	99.5	100	100	99.5	99.8	100	98.8	98.6	98.9	99.2
Trucks	0	1	1	2	0	3	2	5	0	0	1	1	0	17	1	18	26
% Trucks	0	1.7	16.7	1.9	0	0.3	2.1	0.5	0	0	0.5	0.2	0	1.2	1.4	1.1	0.8

Burns Service Inc.

1202 Langdon Terrace Drive
Indian Trail, NC, 28079
We Count because YOU Count

File Name : WakeForest(Averette and NC 98) PM Peak
Site Code :
Start Date : 5/22/2018
Page No : 2

	Averette Road Southbound				NC 98 Westbound				Averette Road Northbound				NC 98 Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 18:15 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	7	6	1	14	0	92	15	107	**8**	**13**	22	43	20	152	5	177	341
17:00	4	5	0	9	1	83	10	94	6	5	11	22	8	**163**	7	178	303
17:15	3	**10**	0	13	**3**	**127**	7	**137**	8	12	**30**	**50**	19	163	**9**	**191**	**391**
17:30	6	5	0	11	0	97	12	109	8	6	22	36	**31**	149	9	189	345
Total Volume	20	26	1	47	4	399	44	447	30	36	85	151	78	627	30	735	1380
% App. Total	42.6	55.3	2.1		0.9	89.3	9.8		19.9	23.8	56.3		10.6	85.3	4.1		
PHF	.714	.650	.250	.839	.333	.785	.733	.816	.938	.692	.708	.755	.629	.962	.833	.962	.882



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Jones Dairy Road and Winter Spring Drive
Site Code : 00090518
Start Date : 9/5/2018
Page No : 1

Groups Printed- Cars & Trucks

	Jones Dairy Road From North				Winter Spring Drive From East				Jones Dairy Road From South				School Driveway From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	3	12	1	16	4	0	0	4	1	22	0	23	1	0	0	1	44
07:05 AM	0	14	1	15	0	0	0	0	0	14	0	14	0	0	0	0	29
07:10 AM	4	15	0	19	2	0	0	2	0	17	0	17	0	0	0	0	38
07:15 AM	2	18	2	22	2	0	0	2	0	12	0	12	0	0	0	0	36
07:20 AM	2	16	0	18	2	0	0	2	0	14	0	14	0	0	0	0	34
07:25 AM	3	18	0	21	2	0	1	3	1	13	2	16	0	0	0	0	40
07:30 AM	5	30	1	36	3	1	2	6	0	19	3	22	0	0	1	1	65
07:35 AM	5	25	1	31	6	0	2	8	0	18	0	18	0	0	0	0	57
07:40 AM	2	18	1	21	4	0	0	4	0	20	2	22	0	0	0	0	47
07:45 AM	3	22	0	25	3	0	1	4	1	33	2	36	0	0	0	0	65
07:50 AM	5	27	2	34	4	0	0	4	0	41	3	44	0	0	1	1	83
07:55 AM	5	22	1	28	3	1	2	6	1	28	1	30	0	0	0	0	64
Total	39	237	10	286	35	2	8	45	4	251	13	268	1	0	2	3	602
08:00 AM	10	18	1	29	3	0	0	3	1	25	4	30	0	0	0	0	62
08:05 AM	2	18	3	23	3	0	1	4	0	16	2	18	0	0	0	0	45
08:10 AM	4	22	0	26	3	0	3	6	1	17	1	19	0	0	0	0	51
08:15 AM	8	18	1	27	4	0	2	6	0	30	2	32	0	0	0	0	65
08:20 AM	5	12	6	23	3	1	0	4	1	19	3	23	0	0	0	0	50
08:25 AM	5	18	1	24	2	0	3	5	0	8	1	9	0	0	0	0	38
08:30 AM	9	11	0	20	2	0	2	4	0	6	0	6	0	0	0	0	30
08:35 AM	8	20	1	29	3	0	0	3	0	10	3	13	0	0	0	0	45
08:40 AM	14	12	2	28	5	0	0	5	2	9	3	14	0	0	0	0	47
08:45 AM	10	18	0	28	2	0	3	5	1	23	10	34	0	0	0	0	67
08:50 AM	15	15	1	31	2	1	0	3	0	39	3	42	0	0	1	1	77
08:55 AM	13	21	0	34	3	1	0	4	1	34	2	37	1	0	1	2	77
Total	103	203	16	322	35	3	14	52	7	236	34	277	1	0	2	3	654
09:00 AM	14	5	2	21	2	0	1	3	1	37	3	41	0	0	0	0	65
09:05 AM	14	15	1	30	2	0	1	3	1	32	2	35	0	0	0	0	68
09:10 AM	11	6	2	19	3	0	0	3	1	20	5	26	1	0	0	1	49
09:15 AM	5	12	0	17	0	1	0	1	0	24	0	24	0	0	0	0	42
09:20 AM	1	8	2	11	1	0	0	1	0	3	0	3	0	0	0	0	15
*** BREAK ***																	
Total	45	46	7	98	8	1	2	11	3	116	10	129	1	0	0	1	239

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Jones Dairy Road and Winter Spring Drive
Site Code : 00090518
Start Date : 9/5/2018
Page No : 2

Groups Printed- Cars & Trucks

	Jones Dairy Road From North				Winter Spring Drive From East				Jones Dairy Road From South				School Driveway From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
*** BREAK ***																	
03:30 PM	8	23	7	38	3	1	2	6	1	19	5	25	1	0	0	1	70
03:35 PM	6	19	2	27	3	0	0	3	0	13	1	14	0	0	0	0	44
03:40 PM	0	8	2	10	0	0	1	1	1	17	0	18	0	0	0	0	29
03:45 PM	7	23	2	32	2	0	0	2	1	32	6	39	0	0	0	0	73
03:50 PM	19	21	8	48	4	0	0	4	0	48	4	52	0	0	0	0	104
03:55 PM	11	18	5	34	2	1	0	3	0	25	6	31	0	0	0	0	68
Total	51	112	26	189	14	2	3	19	3	154	22	179	1	0	0	1	388
04:00 PM	7	13	4	24	1	0	0	1	3	30	2	35	0	0	1	1	61
04:05 PM	3	10	1	14	4	0	0	4	1	27	0	28	0	0	0	0	46
04:10 PM	1	13	2	16	1	0	0	1	3	26	0	29	0	0	1	1	47
04:15 PM	2	12	2	16	0	0	0	0	0	21	0	21	1	0	1	2	39
04:20 PM	2	14	3	19	0	0	1	1	1	20	0	21	0	0	4	4	45
04:25 PM	0	15	5	20	2	0	1	3	1	21	0	22	0	2	3	5	50
04:30 PM	1	9	6	16	4	0	2	6	0	22	1	23	0	0	3	3	48
04:35 PM	0	23	1	24	1	0	0	1	2	22	0	24	0	0	0	0	49
04:40 PM	1	13	6	20	2	0	2	4	0	17	1	18	0	0	0	0	42
04:45 PM	1	24	7	32	2	0	0	2	2	14	0	16	1	0	0	1	51
04:50 PM	0	18	5	23	2	0	0	2	0	20	1	21	0	0	1	1	47
04:55 PM	0	7	3	10	4	1	0	5	1	14	1	16	0	0	1	1	32
Total	18	171	45	234	23	1	6	30	14	254	6	274	2	2	15	19	557
05:00 PM	1	10	8	19	1	0	0	1	0	16	0	16	0	0	0	0	36
05:05 PM	2	13	0	15	4	0	0	4	1	22	0	23	0	0	0	0	42
05:10 PM	1	22	4	27	2	0	1	3	1	20	1	22	0	0	0	0	52
05:15 PM	1	16	4	21	0	0	0	0	3	19	0	22	1	0	2	3	46
05:20 PM	3	17	0	20	2	0	0	2	1	17	1	19	0	0	0	0	41
05:25 PM	1	17	3	21	3	0	1	4	1	26	0	27	0	0	1	1	53
05:30 PM	3	13	3	19	1	0	3	4	0	15	0	15	0	0	1	1	39
05:35 PM	1	26	4	31	1	0	1	2	0	27	0	27	0	0	0	0	60
05:40 PM	0	17	5	22	2	0	1	3	2	21	2	25	0	0	0	0	50
05:45 PM	1	21	1	23	0	0	1	1	2	21	2	25	0	0	2	2	51
05:50 PM	0	21	5	26	3	0	2	5	2	18	2	22	0	0	0	0	53
05:55 PM	0	13	2	15	0	0	2	2	0	20	1	21	0	0	0	0	38
Total	14	206	39	259	19	0	12	31	13	242	9	264	1	0	6	7	561
Grand Total	270	975	143	1388	134	9	45	188	44	1253	94	1391	7	2	25	34	3001
Apprch %	19.5	70.2	10.3		71.3	4.8	23.9		3.2	90.1	6.8		20.6	5.9	73.5		
Total %	9	32.5	4.8	46.3	4.5	0.3	1.5	6.3	1.5	41.8	3.1	46.4	0.2	0.1	0.8	1.1	

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Jones Dairy Road and Winter Spring Drive
Site Code : 00090518
Start Date : 9/5/2018
Page No : 3

	Jones Dairy Road From North				Winter Spring Drive From East				Jones Dairy Road From South				School Driveway From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:55 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:25 AM																	
07:25 AM	3	18	0	21	2	0	1	3	**1**	13	2	16	0	0	0	0	40
07:30 AM	5	**30**	1	**36**	3	**1**	2	6	0	19	3	22	0	0	**1**	**1**	65
07:35 AM	5	25	1	31	**6**	0	2	**8**	0	18	0	18	0	0	0	0	57
07:40 AM	2	18	1	21	4	0	0	4	0	20	2	22	0	0	0	0	47
07:45 AM	3	22	0	25	3	0	1	4	1	33	2	36	0	0	0	0	65
07:50 AM	5	27	2	34	4	0	0	4	0	**41**	3	**44**	0	0	1	1	**83**
07:55 AM	5	22	1	28	3	1	2	6	1	28	1	30	0	0	0	0	64
08:00 AM	**10**	18	1	29	3	0	0	3	1	25	**4**	30	0	0	0	0	62
08:05 AM	2	18	3	23	3	0	1	4	0	16	2	18	0	0	0	0	45
08:10 AM	4	22	0	26	3	0	**3**	6	1	17	1	19	0	0	0	0	51
08:15 AM	8	18	1	27	4	0	2	6	0	30	2	32	0	0	0	0	65
08:20 AM	5	12	**6**	23	3	1	0	4	1	19	3	23	0	0	0	0	50
Total Volume	57	250	17	324	41	3	14	58	6	279	25	310	0	0	2	2	694
% App. Total	17.6	77.2	5.2		70.7	5.2	24.1		1.9	90	8.1		0	0	100		
PHF	.475	.694	.236	.750	.569	.250	.389	.604	.500	.567	.521	.587	.000	.000	.167	.167	.697

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
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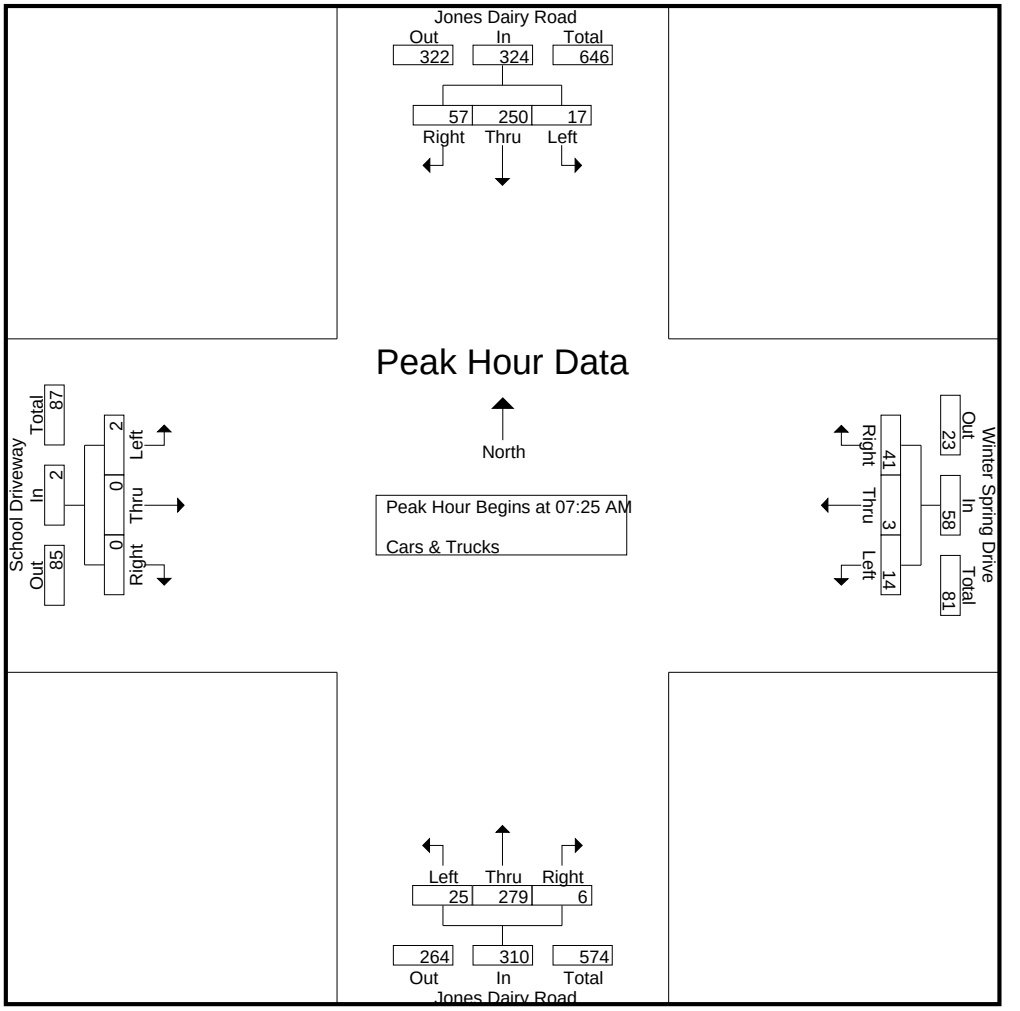
File Name : Jones Dairy Road and Winter Spring Drive
Site Code : 00090518
Start Date : 9/5/2018
Page No : 4



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

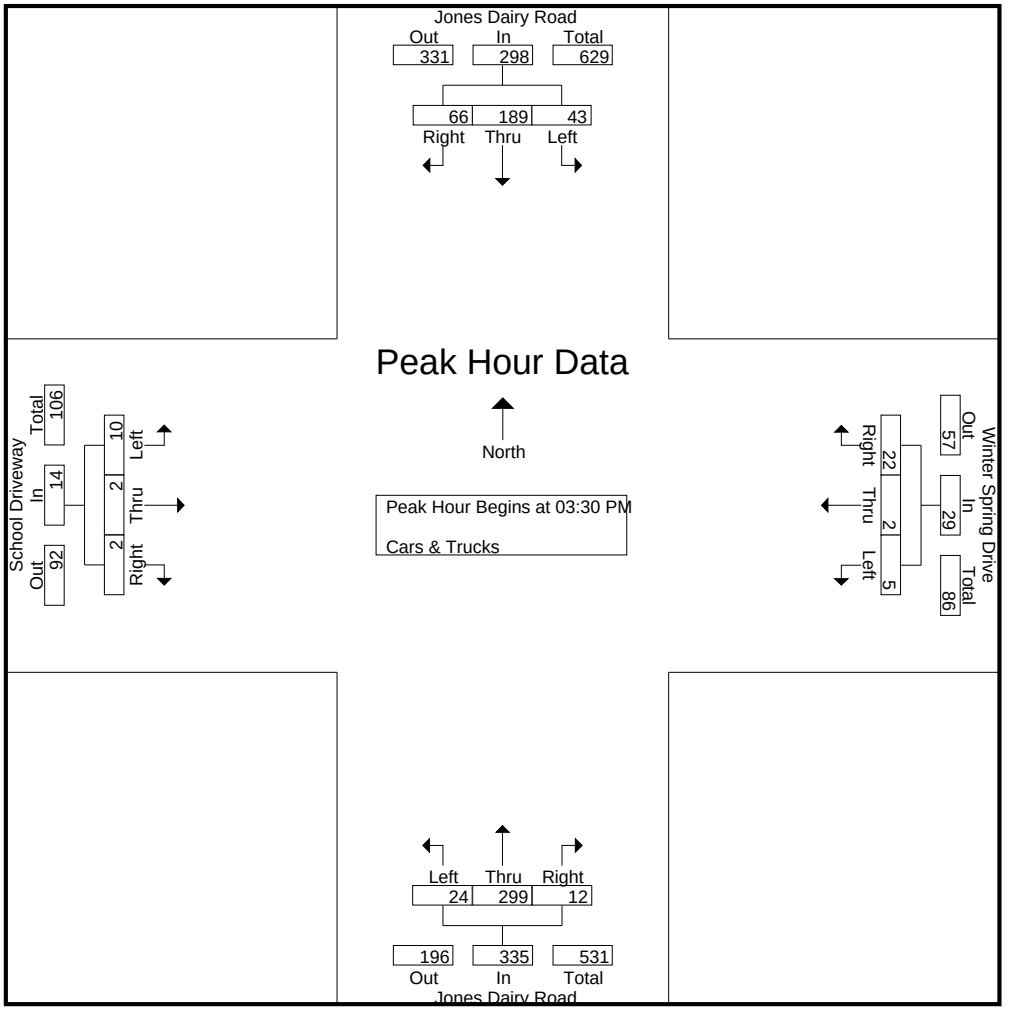
File Name : Jones Dairy Road and Winter Spring Drive
Site Code : 00090518
Start Date : 9/5/2018
Page No : 5

	Jones Dairy Road From North				Winter Spring Drive From East				Jones Dairy Road From South				School Driveway From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:55 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:30 PM																	
03:30 PM	8	**23**	7	38	3	**1**	**2**	**6**	1	19	5	25	**1**	0	0	1	70
03:35 PM	6	19	2	27	3	0	0	3	0	13	1	14	0	0	0	0	44
03:40 PM	0	8	2	10	0	0	1	1	1	17	0	18	0	0	0	0	29
03:45 PM	7	23	2	32	2	0	0	2	1	32	**6**	39	0	0	0	0	73
03:50 PM	**19**	21	**8**	**48**	**4**	0	0	4	0	**48**	4	**52**	0	0	0	0	**104**
03:55 PM	11	18	5	34	2	1	0	3	0	25	6	31	0	0	0	0	68
04:00 PM	7	13	4	24	1	0	0	1	**3**	30	2	35	0	0	1	1	61
04:05 PM	3	10	1	14	4	0	0	4	1	27	0	28	0	0	0	0	46
04:10 PM	1	13	2	16	1	0	0	1	3	26	0	29	0	0	1	1	47
04:15 PM	2	12	2	16	0	0	0	0	0	21	0	21	1	0	1	2	39
04:20 PM	2	14	3	19	0	0	1	1	1	20	0	21	0	0	**4**	4	45
04:25 PM	0	15	5	20	2	0	1	3	1	21	0	22	0	**2**	3	**5**	50
Total Volume	66	189	43	298	22	2	5	29	12	299	24	335	2	2	10	14	676
% App. Total	22.1	63.4	14.4		75.9	6.9	17.2		3.6	89.3	7.2		14.3	14.3	71.4		
PHF	.289	.685	.448	.517	.458	.167	.208	.403	.333	.519	.333	.537	.167	.083	.208	.233	.542

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Jones Dairy Road and Winter Spring Drive
Site Code : 00090518
Start Date : 9/5/2018
Page No : 6



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5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Jones Dairy Road and Alfalfa Lane
Site Code : 00090418
Start Date : 9/4/2018
Page No : 1

Groups Printed- Cars & Trucks

	Jones Dairy Road From North				Alfalfa Lane From East				Jones Dairy Road From South				From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	45	0	45	3	0	9	12	0	48	0	48	0	0	0	0	105
07:15 AM	0	59	1	60	3	0	8	11	1	34	0	35	0	0	0	0	106
07:30 AM	0	82	3	85	4	0	4	8	1	74	0	75	0	0	0	0	168
07:45 AM	0	94	2	96	1	0	9	10	0	108	0	108	0	0	0	0	214
Total	0	280	6	286	11	0	30	41	2	264	0	266	0	0	0	0	593
08:00 AM	0	67	2	69	3	0	5	8	0	61	0	61	0	0	0	0	138
08:15 AM	0	48	0	48	2	0	5	7	2	41	0	43	0	0	0	0	98
08:30 AM	0	46	0	46	3	0	3	6	2	45	0	47	0	0	0	0	99
08:45 AM	0	63	0	63	4	0	8	12	0	45	0	45	0	0	0	0	120
Total	0	224	2	226	12	0	21	33	4	192	0	196	0	0	0	0	455
09:00 AM	0	54	2	56	2	0	4	6	2	44	0	46	0	0	0	0	108
*** BREAK ***																	
Total	0	54	2	56	2	0	4	6	2	44	0	46	0	0	0	0	108
*** BREAK ***																	
03:30 PM	0	55	2	57	2	0	3	5	2	55	0	57	0	0	0	0	119
03:45 PM	0	66	4	70	4	0	2	6	3	58	0	61	0	0	0	0	137
Total	0	121	6	127	6	0	5	11	5	113	0	118	0	0	0	0	256
04:00 PM	0	44	3	47	1	0	3	4	5	56	0	61	0	0	0	0	112
04:15 PM	0	54	2	56	1	0	3	4	4	41	0	45	0	0	0	0	105
04:30 PM	0	63	1	64	1	0	2	3	8	57	0	65	0	0	0	0	132
04:45 PM	0	59	3	62	0	0	6	6	7	45	0	52	0	0	0	0	120
Total	0	220	9	229	3	0	14	17	24	199	0	223	0	0	0	0	469
05:00 PM	0	55	4	59	1	0	5	6	7	53	0	60	0	0	0	0	125
05:15 PM	0	53	1	54	1	0	6	7	6	62	0	68	0	0	0	0	129
05:30 PM	0	83	2	85	4	0	4	8	5	73	0	78	0	0	0	0	171
05:45 PM	0	55	3	58	3	0	6	9	6	76	0	82	0	0	0	0	149
Total	0	246	10	256	9	0	21	30	24	264	0	288	0	0	0	0	574
Grand Total	0	1145	35	1180	43	0	95	138	61	1076	0	1137	0	0	0	0	2455
Apprch %	0	97	3		31.2	0	68.8		5.4	94.6	0		0	0	0		
Total %	0	46.6	1.4	48.1	1.8	0	3.9	5.6	2.5	43.8	0	46.3	0	0	0	0	

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

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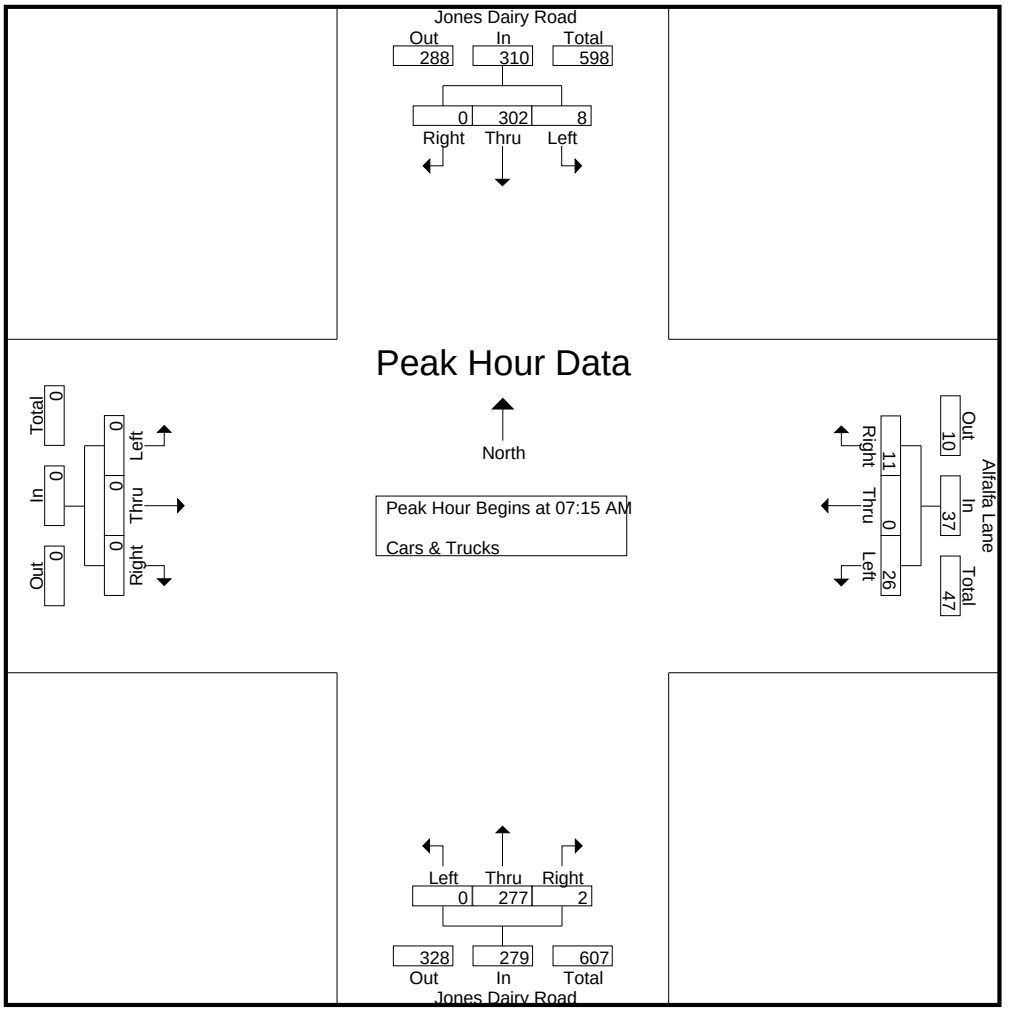
PH: 919 872-5115

File Name : Jones Dairy Road and Alfalfa Lane
Site Code : 00090418
Start Date : 9/4/2018
Page No : 2

	Jones Dairy Road From North				Alfalfa Lane From East				Jones Dairy Road From South				From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	59	1	60	3	0	8	**11**	**1**	34	0	35	0	0	0	0	106
07:30 AM	0	82	**3**	85	**4**	0	4	8	1	74	0	75	0	0	0	0	168
07:45 AM	0	**94**	2	**96**	1	0	**9**	10	0	**108**	0	**108**	0	0	0	0	**214**
08:00 AM	0	67	2	69	3	0	5	8	0	61	0	61	0	0	0	0	138
Total Volume	0	302	8	310	11	0	26	37	2	277	0	279	0	0	0	0	626
% App. Total	0	97.4	2.6		29.7	0	70.3		0.7	99.3	0		0	0	0		
PHF	.000	.803	.667	.807	.688	.000	.722	.841	.500	.641	.000	.646	.000	.000	.000	.000	.731



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5808 Faringdon Place, Suite 100
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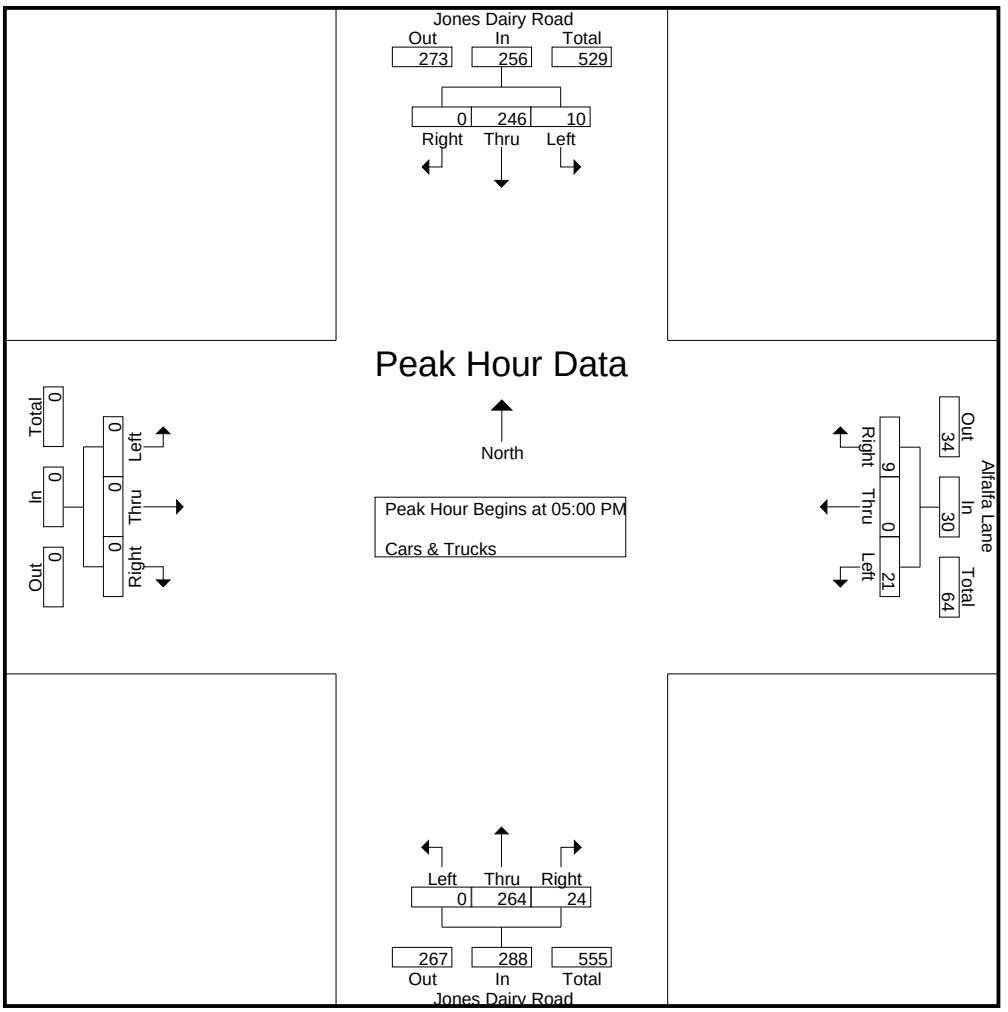
File Name : Jones Dairy Road and Alfalfa Lane
Site Code : 00090418
Start Date : 9/4/2018
Page No : 3

	Jones Dairy Road From North				Alfalfa Lane From East				Jones Dairy Road From South				From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	55	**4**	59	1	0	5	6	**7**	53	0	60	0	0	0	0	125
05:15 PM	0	53	1	54	1	0	**6**	7	6	62	0	68	0	0	0	0	129
05:30 PM	0	**83**	2	**85**	**4**	0	4	8	5	73	0	78	0	0	0	0	**171**
05:45 PM	0	55	3	58	3	0	6	**9**	6	**76**	0	**82**	0	0	0	0	149
Total Volume	0	246	10	256	9	0	21	30	24	264	0	288	0	0	0	0	574
% App. Total	0	96.1	3.9		30	0	70		8.3	91.7	0		0	0	0		
PHF	.000	.741	.625	.753	.563	.000	.875	.833	.857	.868	.000	.878	.000	.000	.000	.000	.839



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5808 Faringdon Place, Suite 100
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PH: 919 872-5115

File Name : Jones Dairy Road and Flash Drive
Site Code : 00090418
Start Date : 9/4/2018
Page No : 1

Groups Printed- Cars & Trucks

	From North				Jones Dairy Road From East				Flash Drive From South				Jones Dairy Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	0	0	0	0	36	0	36	2	0	3	5	0	56	0	56	97
07:15 AM	0	0	0	0	0	29	0	29	5	0	2	7	3	58	0	61	97
07:30 AM	0	0	0	0	0	47	0	47	3	0	6	9	1	80	0	81	137
07:45 AM	0	0	0	0	0	78	1	79	0	0	1	1	1	77	0	78	158
Total	0	0	0	0	0	190	1	191	10	0	12	22	5	271	0	276	489
08:00 AM	0	0	0	0	0	47	1	48	2	0	2	4	1	59	0	60	112
08:15 AM	0	0	0	0	0	25	5	30	3	0	1	4	4	56	0	60	94
08:30 AM	0	0	0	0	0	37	2	39	3	0	4	7	3	48	0	51	97
08:45 AM	0	0	0	0	0	40	1	41	2	0	2	4	3	66	0	69	114
Total	0	0	0	0	0	149	9	158	10	0	9	19	11	229	0	240	417
09:00 AM	0	0	0	0	0	33	0	33	2	0	1	3	5	43	0	48	84
*** BREAK ***																	
Total	0	0	0	0	0	33	0	33	2	0	1	3	5	43	0	48	84
*** BREAK ***																	
03:30 PM	0	0	0	0	0	40	3	43	4	0	2	6	3	51	0	54	103
03:45 PM	0	0	0	0	0	52	2	54	0	0	3	3	4	66	1	71	128
Total	0	0	0	0	0	92	5	97	4	0	5	9	7	117	1	125	231
04:00 PM	0	0	0	0	0	57	0	57	0	0	1	1	1	29	1	31	89
04:15 PM	0	0	0	0	0	34	3	37	1	0	2	3	1	48	1	50	90
04:30 PM	0	0	0	0	0	40	4	44	1	0	2	3	4	53	0	57	104
04:45 PM	0	0	0	0	1	46	7	54	1	0	1	2	3	51	0	54	110
Total	0	0	0	0	1	177	14	192	3	0	6	9	9	181	2	192	393
05:00 PM	0	0	0	0	0	59	4	63	1	0	5	6	4	47	0	51	120
05:15 PM	0	0	0	0	0	59	5	64	3	0	3	6	2	50	0	52	122
05:30 PM	0	0	0	0	0	75	2	77	4	0	0	4	3	78	0	81	162
05:45 PM	0	0	0	0	0	91	6	97	0	0	4	4	1	48	0	49	150
Total	0	0	0	0	0	284	17	301	8	0	12	20	10	223	0	233	554
Grand Total	0	0	0	0	1	925	46	972	37	0	45	82	47	1064	3	1114	2168
Apprch %	0	0	0		0.1	95.2	4.7		45.1	0	54.9		4.2	95.5	0.3		
Total %	0	0	0	0	0	42.7	2.1	44.8	1.7	0	2.1	3.8	2.2	49.1	0.1	51.4	

RAMEY KEMP & ASSOCIATES
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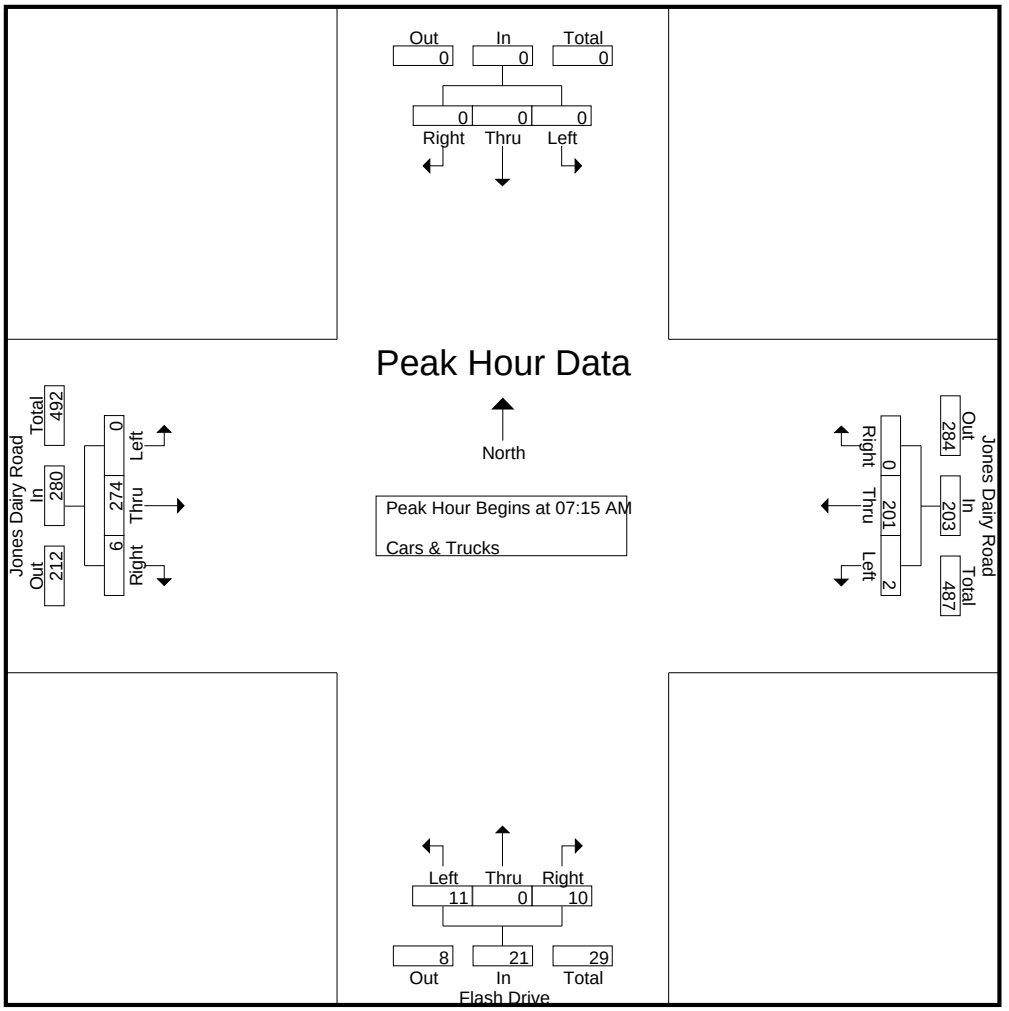
File Name : Jones Dairy Road and Flash Drive
Site Code : 00090418
Start Date : 9/4/2018
Page No : 2

	From North				Jones Dairy Road From East				Flash Drive From South				Jones Dairy Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	29	0	29	**5**	0	2	7	**3**	58	0	61	97
07:30 AM	0	0	0	0	0	47	0	47	3	0	**6**	**9**	1	**80**	0	**81**	137
07:45 AM	0	0	0	0	0	**78**	**1**	**79**	0	0	1	1	1	77	0	78	**158**
08:00 AM	0	0	0	0	0	47	1	48	2	0	2	4	1	59	0	60	112
Total Volume	0	0	0	0	0	201	2	203	10	0	11	21	6	274	0	280	504
% App. Total	0	0	0		0	99	1		47.6	0	52.4		2.1	97.9	0		
PHF	.000	.000	.000	.000	.000	.644	.500	.642	.500	.000	.458	.583	.500	.856	.000	.864	.797



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5808 Faringdon Place, Suite 100
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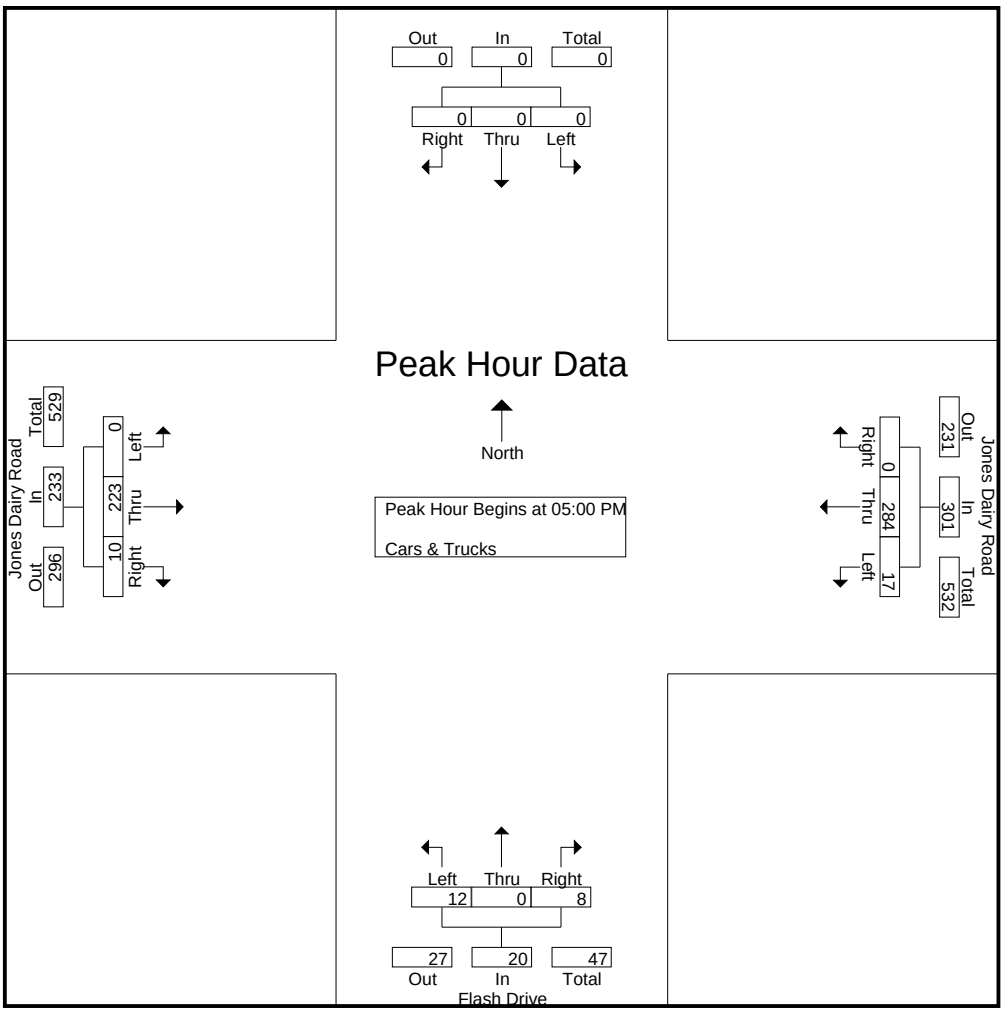
File Name : Jones Dairy Road and Flash Drive
Site Code : 00090418
Start Date : 9/4/2018
Page No : 3

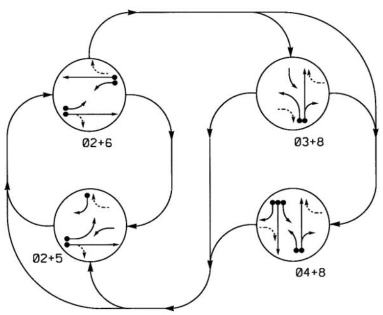
	From North				Jones Dairy Road From East				Flash Drive From South				Jones Dairy Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	59	4	63	1	0	**5**	**6**	**4**	47	0	51	120
05:15 PM	0	0	0	0	0	59	5	64	3	0	3	6	2	50	0	52	122
05:30 PM	0	0	0	0	0	75	2	77	**4**	0	0	4	3	**78**	0	**81**	**162**
05:45 PM	0	0	0	0	0	**91**	**6**	**97**	0	0	4	4	1	48	0	49	150
Total Volume	0	0	0	0	0	284	17	301	8	0	12	20	10	223	0	233	554
% App. Total	0	0	0		0	94.4	5.6		40	0	60		4.3	95.7	0		
PHF	.000	.000	.000	.000	.000	.780	.708	.776	.500	.000	.600	.833	.625	.715	.000	.719	.855



APPENDIX B

SIGNAL PLANS

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+5	Ø2+6	Ø3+8	Ø4+8	FLASH
21, 22	G	G	R	R	Y
31	←R	←R	←	←F/Y	←R
41	R	R	R	G	R
42	R/→	R	R	G	R
43	←R	←R	←F/Y	←F/Y	←R
51	←	←F/Y	←R	←R	←Y
61, 62	R	G	R	R	Y
63	←F/Y	←F/Y	←R	←R	←Y
81, 82	R	R	G	G	R

OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS: LOOP	SIZE (FT)	TURNS	DISTANCE FROM STOPBAR (FT)	NEW LOOP	DETECTOR PROGRAMMING: PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	4	70	-	2	Y	Y	-	-	-	-	-
3A	6X60	2-4-2	0	-	3	Y	Y	-	-	15	-	-
					8	Y	Y	-	-	3	-	-
4A	6X40	2-4-2	0	-	4	Y	Y	-	-	3	-	-
4B	6X40	2-4-2	0	-	4	Y	Y	-	-	-	-	-
5A	6X60	2-4-2	0	-	5	Y	Y	-	-	15	-	-
					2	Y	Y	-	-	-	-	-
5B	6X40	2-4-2	0	-	5	Y	Y	-	-	15	-	-
6A	6X6	4	70	-	6	Y	Y	-	-	-	-	-
6B	6X60	2-4-2	0	-	6	Y	Y	-	-	-	-	-
8A	6X60	2-4-2	0	-	8	Y	Y	-	-	10	-	-

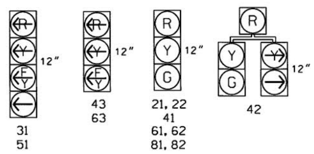
4 Phase
Fully Actuated
(US 401 Closed Loop System)

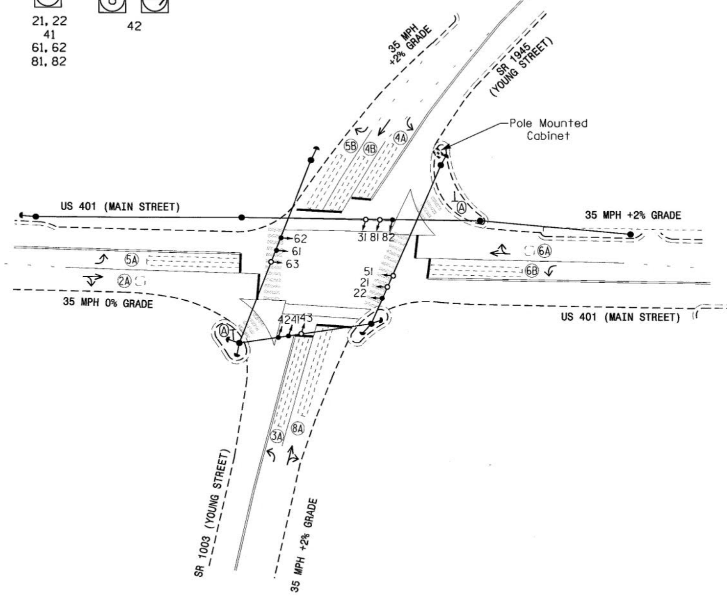
NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Disable Backup Protect for phase 6.
4. Phase 5 may be lagged.
5. Phase 3 may be lagged.
6. Reposition existing signal heads numbered 22, 41, and 82.
7. Set all detector units to presence mode.
8. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
9. Pavement markings are existing.
10. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
11. Closed loop system data: Controller Asset # 0119.

SIGNAL FACE I.D.

All Heads L.E.D.





LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
(A)	"YIELD" Sign (R1-2)	(A)

OASIS 2070 TIMING CHART

FEATURE	PHASE 2	3	4	5	6	8
Min Green 1 *	10	7	7	7	10	7
Extension 1 *	3.0	2.0	2.0	2.0	3.0	2.0
Max Green 1 *	180	20	30	20	120	30
Yellow Clearance	3.8	3.0	3.7	3.0	3.8	3.7
Red Clearance	2.4	1.9	1.3	2.9	2.3	1.3
Walk 1 *	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	-	-	-	-	-
Max Variable Initial *	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-
Recall Mode	MIN RECALL	-	-	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	-	-	YELLOW	-
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

Signal Upgrade

Prepared in the Offices of: Transportation Mobility and Safety Division, Signal Design Section

750 N.Greenfield Pkwy,Garner,NC 27529

SCALE 0 40 1"=40'

US 401 (Main Street) at SR 1003/SR 1945 (Young Street)

Division 5 Wake County Rolesville

PLAN DATE: November 2013 REVIEWED BY:

PREPARED BY: N. Salehizadeh REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 36833 RYAN W. HOUGH

Ryan W. Hough 2-4-14
SIGNATURE DATE

SIG. INVENTORY NO. 05-0119

07-FEB-2014 14:41
S:*ITS&SU*ITS Signals*Signal Design Section*Central Region*Div 5*05-0119*050119_sig_dsn_20140204.dgn
r.hough

RKA Signal Timing Data Collection

Intersection: Main Street & Young Street

Timing Plans

Event #	Run Time	Plan #	Offset #
Event 1	6:45 - 915	66 (Free)	1
Event 2			
Event 3			
Event 4			
Event 5	15:45 - 18:15	3	1
Event 6			
Event 7			
Event 8			
Event 9			
Event 10			

AM Free Run

- was running free while I was there (~15:55)

Splits

Phase #	Cycle Length	Offset	Phase Sequence	Timing splits - Phase #								
				1	2	3	4	5	6	7	8	9
Plan ~~1~~3	110	109		0	58	25	27	26	32	0	52	
Plan 2												
Plan 3												
Plan 4												
Plan 5												
Plan 6												
Plan 7												
Plan 8												
Plan 9												
Plan 10												

Φ5 lead	Φ2 Φ6	Φ3 lead	Φ4 Φ8

PROJECT REFERENCE NO.	SHEET NO.
05-2092	Sig-1

8 Phase Fully Actuated (NC 98 Closed Loop System)

PHASING DIAGRAM

TABLE OF OPERATION

SIGNAL FACE	PHASE 0 1 + 5	0 1 + 6	0 2 + 5	0 2 + 6	0 3 + 7	0 3 + 8	0 4 + 7	0 4 + 8	FLASH
11	—	—	R	R	R	R	R	R	R
21	R	R	G	G	R	R	R	R	Y
22	R	R	G	G	R	R	R	R	Y
31, 32	R	R	R	R	—	—	R	R	R
41,42	R	R	R	R	R	R	G	G	R
51, 52	—	R	—	R	R	R	R	R	R
53	—	R	—	R	R	R	—	—	R
61	R	G	R	G	R	R	R	R	Y
62	R	G	R	G	R	R	R	R	Y
71, 72	R	R	R	R	—	R	—	R	R
81, 82	R	R	R	R	R	G	R	G	R

PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

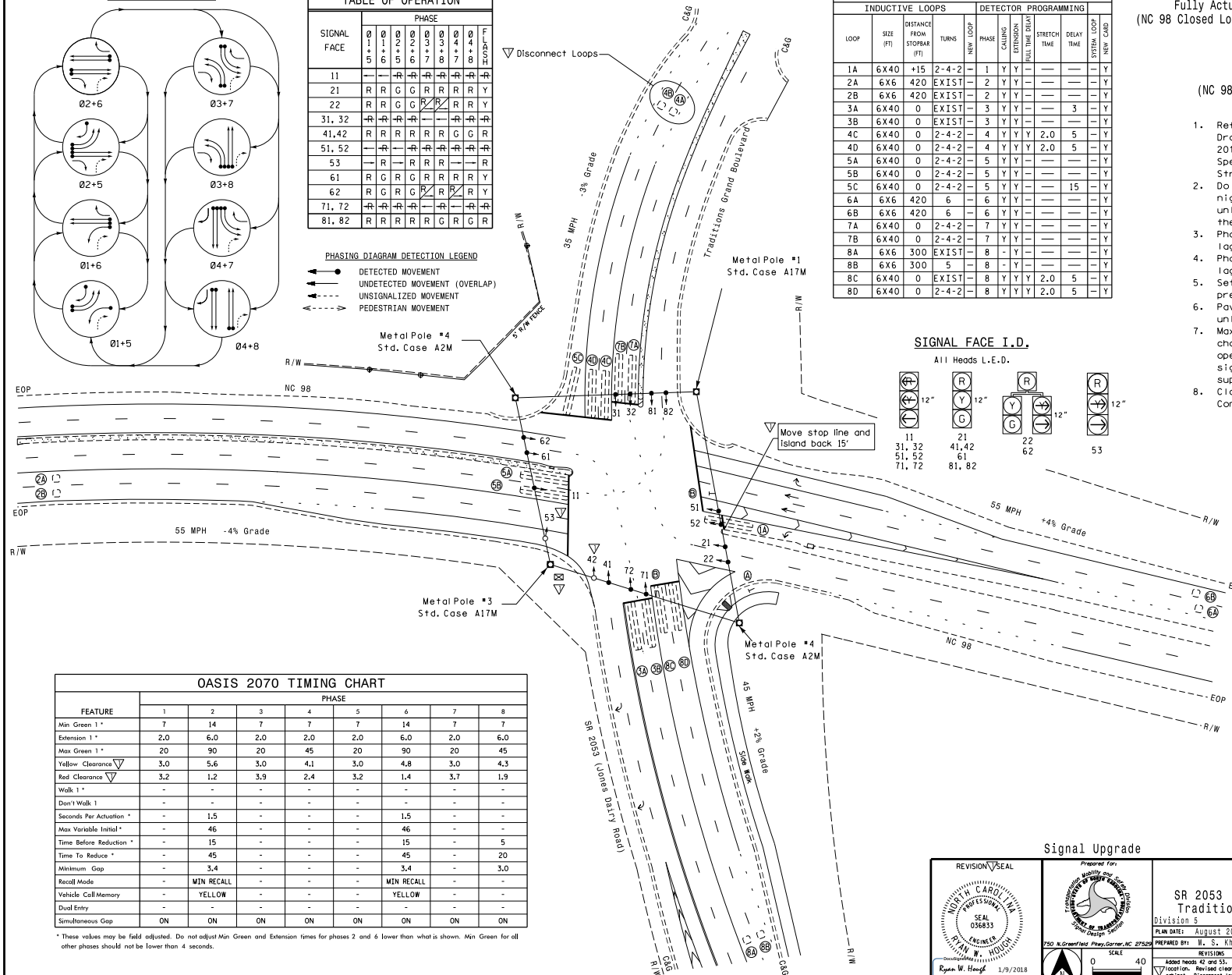
OASIS 2070 LOOP & DETECTOR INSTALLATION

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	+15	2-4-2	–	1	Y	Y	–	—	—	–	Y
2A	6X6	420	EXIST	–	2	Y	Y	–	—	—	–	Y
2B	6X6	420	EXIST	–	2	Y	Y	–	—	—	–	Y
3A	6X40	0	EXIST	–	3	Y	Y	–	—	3	–	Y
3B	6X40	0	EXIST	–	3	Y	Y	–	—	—	–	Y
4C	6X40	0	2-4-2	–	4	Y	Y	Y	2.0	5	–	Y
4D	6X40	0	2-4-2	–	4	Y	Y	Y	2.0	5	–	Y
5A	6X40	0	2-4-2	–	5	Y	Y	–	—	—	–	Y
5B	6X40	0	2-4-2	–	5	Y	Y	–	—	—	–	Y
5C	6X40	0	2-4-2	–	5	Y	Y	–	—	15	–	Y
6A	6X6	420	6	–	6	Y	Y	–	—	—	–	Y
6B	6X6	420	6	–	6	Y	Y	–	—	—	–	Y
7A	6X40	0	2-4-2	–	7	Y	Y	–	—	—	–	Y
7B	6X40	0	2-4-2	–	7	Y	Y	–	—	—	–	Y
8A	6X6	300	EXIST	–	8	-	Y	–	—	—	–	Y
8B	6X6	300	5	–	8	-	Y	–	—	—	–	Y
8C	6X40	0	EXIST	–	8	Y	Y	Y	2.0	5	–	Y
8D	6X40	0	2-4-2	–	8	Y	Y	Y	2.0	5	–	Y

8 Phase Fully Actuated (NC 98 Closed Loop Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Phase 3 and/or phase 7 may be lagged.
5. Set all detector units to presence mode.
6. Pavement markings are existing unless otherwise shown.
7. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
8. Closed loop system data: Controller Asset #: 2092.



SIGNAL FACE I.D.

All Heads L.E.D.

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Metal Strain Pole	
Ⓐ	"YIELD" Sign (R1-2)	Ⓐ
Ⓑ	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓑ

OASIS 2070 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	7	8
Min Green 1 *	7	14	7	7	7	14	7	7
Extension 1 *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	6.0
Max Green 1 *	20	90	20	45	20	90	20	45
Yellow Clearance ▽	3.0	5.6	3.0	4.1	3.0	4.8	3.0	4.3
Red Clearance ▽	3.2	1.2	3.9	2.4	3.2	1.4	3.7	1.9
Walk 1 *	-	-	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-	-	-
Seconds Per Actuation *	-	1.5	-	-	-	1.5	-	-
Max Variable Initial *	-	46	-	-	-	46	-	-
Time Before Reduction *	-	15	-	-	-	15	-	5
Time To Reduce *	-	45	-	-	-	45	-	20
Minimum Gap	-	3.4	-	-	-	3.4	-	3.0
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-	-
Dual Entry	-	-	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

Signal Upgrade

REVISION ▽ SEAL

NORTH CAROLINA PROFESSIONAL SEAL 036833 ENGINEER RYAN W. HOUGH

Ryan W. Hough 1/9/2018 DATE

Prepared For: Transportation Mobility and Safety Division, Traffic Engineering Branch, Signal Design Section

750 N.Greenfield Pkwy.Garner,NC 27529

SCALE 0 40 1"=40'

NC 98 at SR 2053 (Jones Dairy Road)/ Traditions Grand Boulevard

Division 5 Wake County Wake Forest

PLAN DATE: August 2017 REVIEWED BY:

PREPARED BY: W. S. Khan REVIEWED BY:

REVISIONS	INIT.	DATE
Added heads 42 and 53. Adjusted MB stop line location. Revised clearance times. Installed new cabinet. Disconnect loops 4A and 4B. ▽	RWH	1/9/18

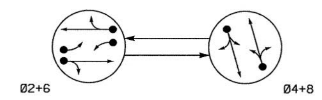
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Not a certified document as to the Original Document but Only as to the Revisions - This document originally Issued and sealed by W. Jason Hamilton, PE #032396 on March 8, 2013. This document is only certified as to the revisions.

SIG. INVENTORY NO. 05-2092

PROJECT REFERENCE NO.	SHEET NO.
SS-4905P	Sig. 1

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

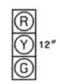
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+6	PHASE Ø4+8	PHASE FLASH
21,22	G	R	Y
41,42	R	G	R
61,62	G	R	Y
81,82	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.



21, 22
41, 42
61, 62
81, 82

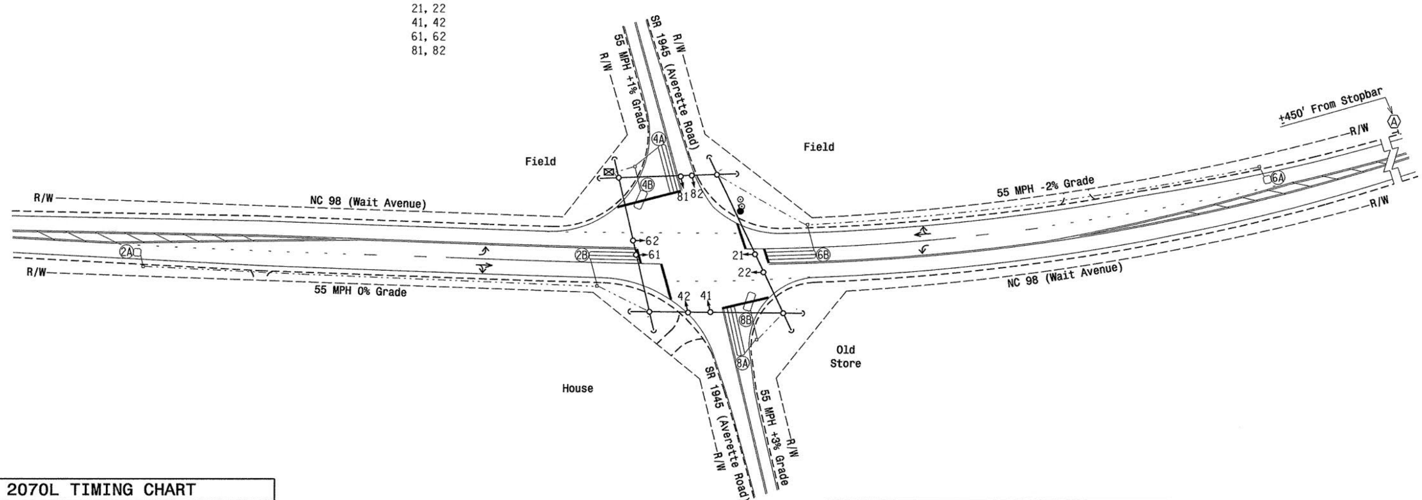
2070L LOOP & DETECTOR INSTALLATION

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	420	6	Y	2	Y	Y	–	—	—	–	Y
2B	6X40	0	2-4-2	Y	2	Y	Y	Y	—	3	–	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	–	—	5	–	Y
4B	6X15	+5	3	Y	4	Y	Y	–	—	15	–	Y
6A	6X6	420	6	Y	6	Y	Y	–	—	—	–	Y
6B	6X40	0	2-4-2	Y	6	Y	Y	Y	—	3	–	Y
8A	6X40	0	2-4-2	Y	8	Y	Y	–	—	5	–	Y
8B	6X15	+5	3	Y	8	Y	Y	–	—	15	–	Y

2 Phase
Fully Actuated
Isolated

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.



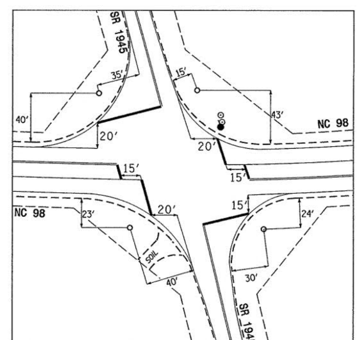
LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Pavement Marking Arrow	
	Signal Ahead Sign (W3-3)	

2070L TIMING CHART

FEATURE	PHASE 2	4	6	8
Min Green 1 *	14	7	14	7
Extension 1 *	6.0	2.0	6.0	2.0
Max Green 1 *	90	20	90	20
Yellow Clearance	5.2	5.0	5.4	4.9
Red Clearance	1.0	1.1	1.2	1.5
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	2.5	-	2.5	-
Max Variable Initial *	46	-	46	-
Time Before Reduction *	15	-	15	-
Time To Reduce *	45	-	45	-
Minimum Gap	3.4	-	3.4	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.



Proposed Stopbar & Pole Locations

New Installation Corr. File Number 05-05-209

Prepared in the Offices of: Traffic Engineering and Safety Systems Branch, Signals and Geometrics Section, 750 N. Greenfield Pkwy, Garner, NC 27529

NC 98 (Wait Avenue)
at
SR 1945 (Averette Road)

Division 5 Wake County Wake Forest

PLAN DATE: April 2008 REVIEWED BY: M Mahbooba
PREPARED BY: EM Minshew REVIEWED BY:

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 29904 JASON B. GALLOWAY

SIGNATURE 5-16-08 DATE

SIG. INVENTORY NO. 05-1935

27-MAY-2008 14:02
s:*its signals\workgroups\safety groups\division\05-1935\051935_sig_dsn_2008mmdd.dgn
emminshew

APPENDIX C

ADJACENT DEVELOPMENT INFORMATION

Kimley»Horn

KIMLEY-HORN AND ASSOCIATES, INC
NC License #F-0102

MEMORANDUM

To:	Mr. Danny Johnson, Town of Rolesville
From:	Travis Fluitt, P.E.
	Kimley-Horn and Associates, Inc.
Date:	December 6, 2017
Subject:	Averette Farms – Traffic Impact Analysis

NORTH CAROLINA PROFESSIONAL SEAL 034394 ENGINEER TRAVIS FLUITT
DocuSigned by:
E8D32[illegible]03B429...
12/6/2017

Kimley-Horn has performed a Traffic Impact Analysis for the proposed Averette Farms residential development located on the west side of Averette Road south of Old Pearce Road in Rolesville, North Carolina. As currently envisioned, the development will include 94 single-family homes and 108 townhomes and is proposed to be accessed via two full-movement driveways on Averette Road. The development has a projected build-out year of 2021.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the proposed development in the 2021 study year. The site location and proposed site plan are shown on **Figures 1** and **2**, respectively. **Figure 3** shows the existing roadway laneage at study intersections.

Existing and Background Traffic

AM and PM peak hour turning movement counts collected on November 7, 2017 at the following intersections were obtained from another project in the study area:

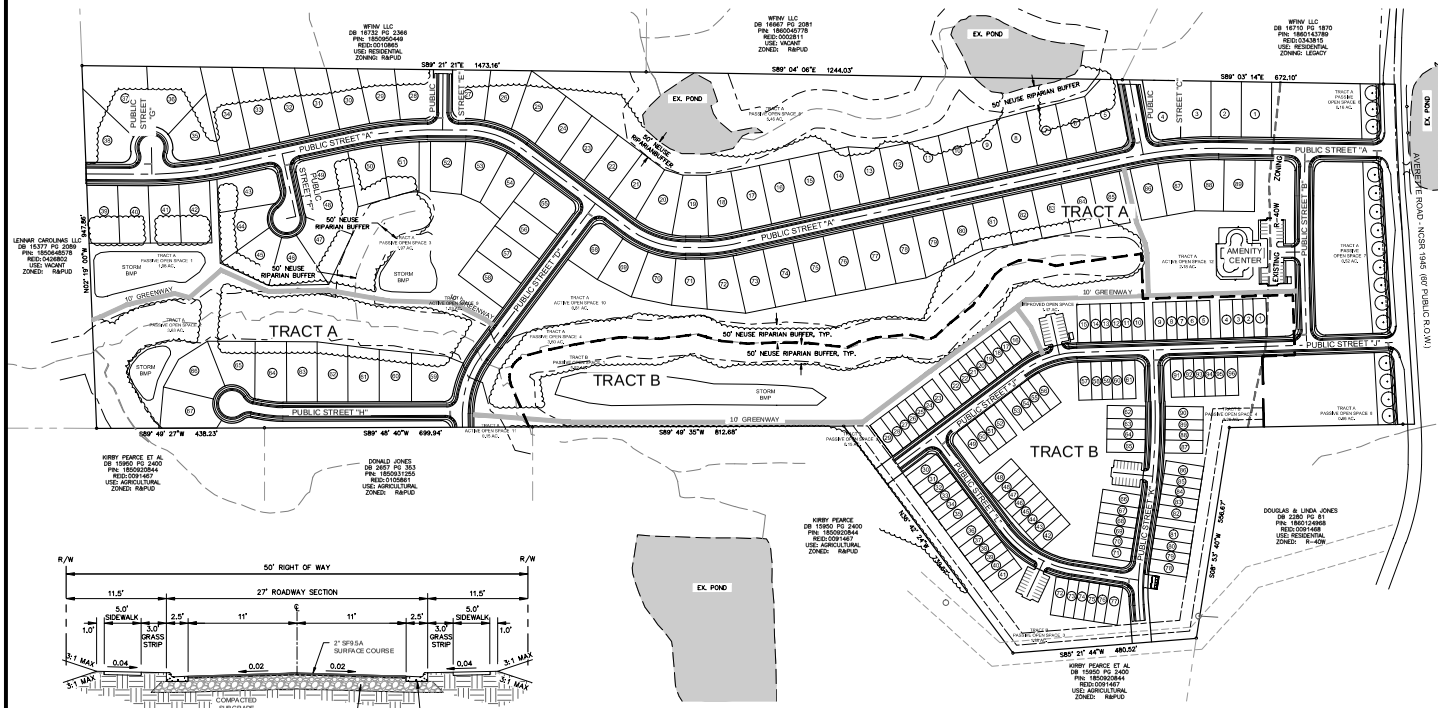
- NC 98 at Averette Road
- Averette Road at Old Pearce Road

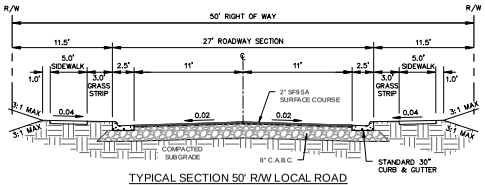
The existing AM and PM peak hour turning movement volumes are shown on **Figures 4** and **5**, respectively, and the count data is attached.

Based on historic daily traffic volumes in the area, an annual growth factor of 2% was applied to the existing traffic volumes up to the year 2021 to calculate background traffic volumes. Peak hour background traffic volumes, which include historic growth traffic, are shown on **Figures 4** and **5**.

Trip Generation

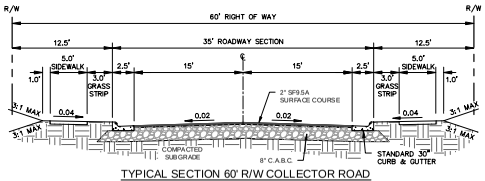
The trip generation potential of the development was determined using the traffic generation rates published in the *ITE Trip Generation Handbook* (Institute of Transportation Engineers, Tenth Edition, 2017). The trip generation for the development is summarized in Table 1.





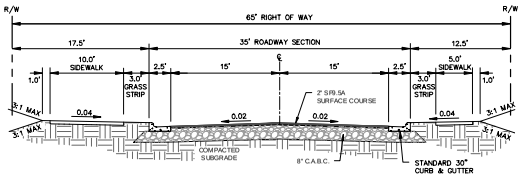
TYPICAL SECTION 50' R/W LOCAL ROAD

NOT TO SCALE



TYPICAL SECTION 60' R/W COLLECTOR ROAD

NOT TO SCALE



65' R/W LOCAL ROAD (STREET "C")

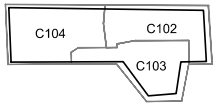
NOT TO SCALE

REV.NO.	DESCRIPTIONS
#####	#####
#####	#####
#####	#####

REVISIONS

SITE PLAN NOTES

1. PER FEMA MAPS 3720180 00J & 3720186 00J FOR NORTH CAROLINA, THERE ARE NO FLOOD HAZARD AREAS WITHIN THE DEVELOPMENT BOUNDARIES.
2. WATER SUPPLY AND WASTE WATER FOR ALL LOTS IN THIS DEVELOPMENT SHALL BE BY PROVIDED BY THE CITY OF RALEIGH THROUGH A MERGER AGREEMENT WITH THE TOWN OF ROLESVILLE.
3. ROAD NAMES SHALL BE SUBMITTED AND APPROVED PRIOR TO APPROVAL OF THE FINAL PLAT.
4. ALL OPEN SPACE PARCELS SHALL BE OWNED BY A LEGALLY ORGANIZED HOME OWNERS ASSOCIATION THAT WILL BE RESPONSIBLE FOR MANAGING AND ENSURING RESIDENTS' ACCESS.
5. AS PER THE TOWN OF ROLESVILLE UDO 15.4.8.2.B.4, THE PROPOSED PASSIVE OPEN SPACE MAY CONTAIN ENVIRONMENTALLY SENSITIVE AREAS, LIKE BODIES OF WATER, NEUSE RIVER RIPARIAN BUFFERS, WETLANDS, SPECIAL FLOOD HAZARD AREAS, ROCK OUTCROPS AND STEEP SLOPES. PASSIVE OPEN SPACE WILL BE USED FOR CONSERVATION OF NATURAL RESOURCES, MEADOWS, WOODLANDS, WETLANDS, WILDLIFE CORRIDORS AND SIMILAR CONSERVATION ORIENTED ACTIVITIES.
6. IT IS THE INTENT OF THIS PROJECT THAT THE 6.53 AC. ZONED R-40W WILL BE REGRADED AT CONSTRUCTION SO THAT IT CAN BE REMOVED FROM THE WATERSHED. FOLLOWING THE WATERSHED ADJUSTMENT, A REZONING REQUEST WILL BE FILED. THE 12 SINGLE FAMILY DETACHED LOTS AND 4 TOWNHOME LOTS CURRENTLY LOCATED IN THE R-40W HAVE NOT BEEN SHOWN ON THIS PRELIMINARY SUBDIVISION PLAT BUT, WILL BE SUBMITTED FOR TOWN APPROVAL ONCE THE WATERSHED ADJUSTMENT HAS BEEN FINALIZED AND THE REZONING APPROVED.
7. FRONT FACING TOWNHOME GARAGES SHALL HAVE AT LEAST TWENTY FEET (20') SEPARATING THE NEIGHBORING DRIVEWAYS OR NO MORE THAN FIVE FEET (5') SEPARATING NEIGHBORING DRIVEWAYS. IF THE SEPARATION MEASURES FIVE FEET (5') OR LESS, THE NEXT SEPARATION MUST BE AT LEAST TWENTY FEET (20'). REAR FACING GARAGES MAY BE ACCESSED BY A PRIVATE ALLEY WITH NO SEPARATION REQUIREMENTS.
8. HANDICAP RAMPS WILL BE INSTALLED AT ALL INTERSECTIONS NECCESSARY FOR SIDEWALK CONNECTIVITY.



SITE PLAN SHEET KEY

SITE DEVELOPMENT DATA

GROSS TRACT AREA:	82.399 AC.
AREA IN EXISTING ROW:	0.613 AC.
AREA IN NEW DEDICATED ROW:	0.261 AC.
NEW GROSS TRACT AREA:	81.525 AC.
PROPOSED USE:	RESIDENTIAL
MAXIMUM BUILDING HEIGHT:	45 FT, 3 STORIES

ALLOWED DENSITY

SINGLE FAMILY DWELLINGS (TRACT "A")	4 / AC.
TOWNHOUSES (TRACT "B")	8 / AC.
TOTAL TRACT	4 / AC.

PROPOSED DENSITY

AREA IN TRACT "A", SINGLE FAMILY DWELLINGS:	58.38 AC.
PROPOSED LOTS:	89 LOTS
PROPOSED DENSITY TRACT "A":	1.52 LOTS / AC.
AREA IN TRACT "B":	23.15 AC.
PROPOSED UNITS:	98 UNITS
PROPOSED DENSITY TRACT "B":	4.23 UNITS / AC.
TOTAL PROPOSED DENSITY:	2.28 UNITS / AC.

LOT DIMENSIONS

TRACT "A" (SINGLE FAMILY)	
MINIMUM WIDTH:	50'
PROPOSED:	80'
AVERAGE LOT SIZE:	11,382 SF
TRACT "B" (TOWNHOUSES)	
MINIMUM LOT WIDTH:	20'
PROPOSED:	26'

SETBACKS

TRACT "A" (SINGLE FAMILY)	
FRONT	25'
REAR	25'
SIDE	5'
TRACT "B" (TOWNHOUSES)	
FRONT	15' (FROM R.O.W.)
PROPOSED	20'
REAR	15' (FROM PROPERTY LINE)

PARKING

TRACT "A" (SINGLE FAMILY DETACHED)	
NUMBER OF UNITS:	89
CLUSTER MAILBOX UNITS:	
REQUIRED:	4 SPACES (79-104 DWELLING UNITS)
PROPOSED:	5 SPACES AT AMENITY CENTER
TRACT "B" (TOWNHOUSES)	
NUMBER OF UNITS:	98
REQUIRED:	3 / TOWNHOUSE 98 x 3 = 294
PROPOSED:	324
REQUIRED GUEST PARKING:	1 / 4 TOWNHOUSES (98 / 4 = 24.5)
PROPOSED GUEST PARKING:	42
CLUSTER MAILBOX UNITS:	
REQUIRED PARKING SPACES:	4 SPACES (79-104 DWELLING UNITS)
PROVIDED PARKING SPACES:	6 SPACES AT NORTH PARKING LOT

PERIMETER LANDSCAPE BUFFERS

TRACT "A" (SINGLE FAMILY)	
CLASS II ADJOINING CLASS II:	NONE
STREETSCAPE AVERETTE ROAD:	50'
TRACT "B" (TOWNHOUSES)	
CLASS III ADJOINING CLASS II:	20' TYPE B LANDSCAPE 50' PERIMETER YARD BUFFER

RECREATION & OPEN SPACE

REQUIRED	
TRACT "A" (SINGLE FAMILY)	
10% OF SFD (58.38 AC.) :	5.84 AC.
PROPOSED:	21.19 AC.
50% OF 5.84 AC. TO BE SUITABLE FOR ACTIVE:	2.92 AC.
PROPOSED ACTIVE OPEN SPACE:	4.17 AC.
PROPOSED PASSIVE OPEN SPACE:	17.02 AC
TRACT "B" (TOWNHOUSES)	
15% OF TH (23.15 AC):	3.47 AC.
PROPOSED:	11.47 AC.
35% OF REQUIRED SPACE TO BE IMPROVED:	1.22 AC.
PROPOSED IMPROVED OPEN SPACE:	3.16 AC.
PROPOSED PASSIVE OPEN SPACE:	8.31 AC.

SEE SHEET C107 - OPEN SPACE PLAN

811 KNOW WHAT IS BELOW CALL BEFORE YOU DIG

1"=150' 150 0 150 300

Bateman Civil Survey Company
Engineers • Surveyors • Planners
2524 Reliance Avenue, Apex, North Carolina 27539
Phone: 919.577.1080 Fax: 919.577.1081
NCBELS Firm No. C-2378

PRELIMINARY PLAT PLANS----SUBDIVISION PLANS

PRELIMINARY PLAT PLANS
SUBDIVISION PLANS
ELIZABETH HEIGHTS

1205 AVERETTE ROAD
WAKE FOREST, NC 27587

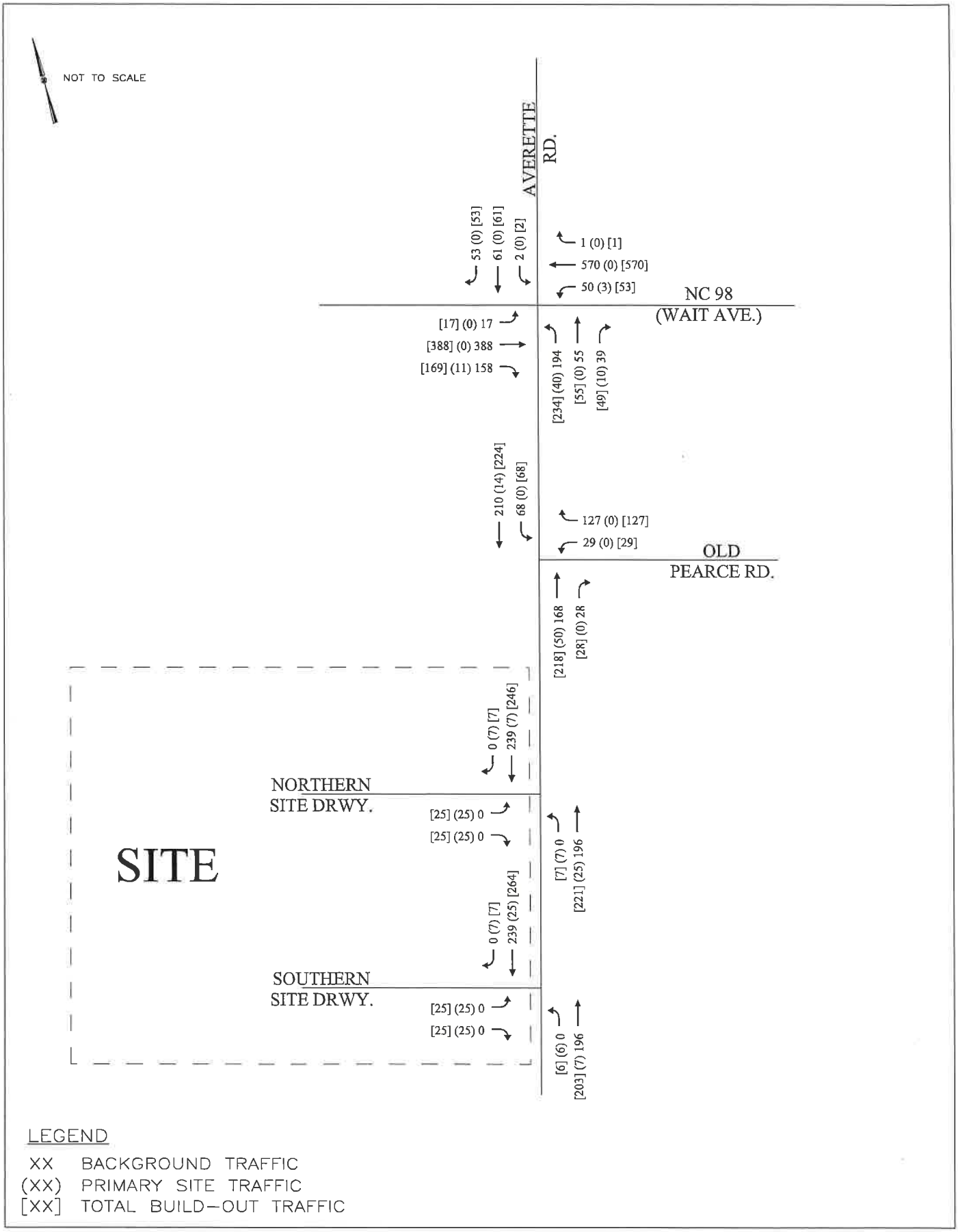
OVERALL SITE DATA

Project Engineer:	TSS
Designed By:	TAN
Drawn By:	TAN
Checked By:	TSS

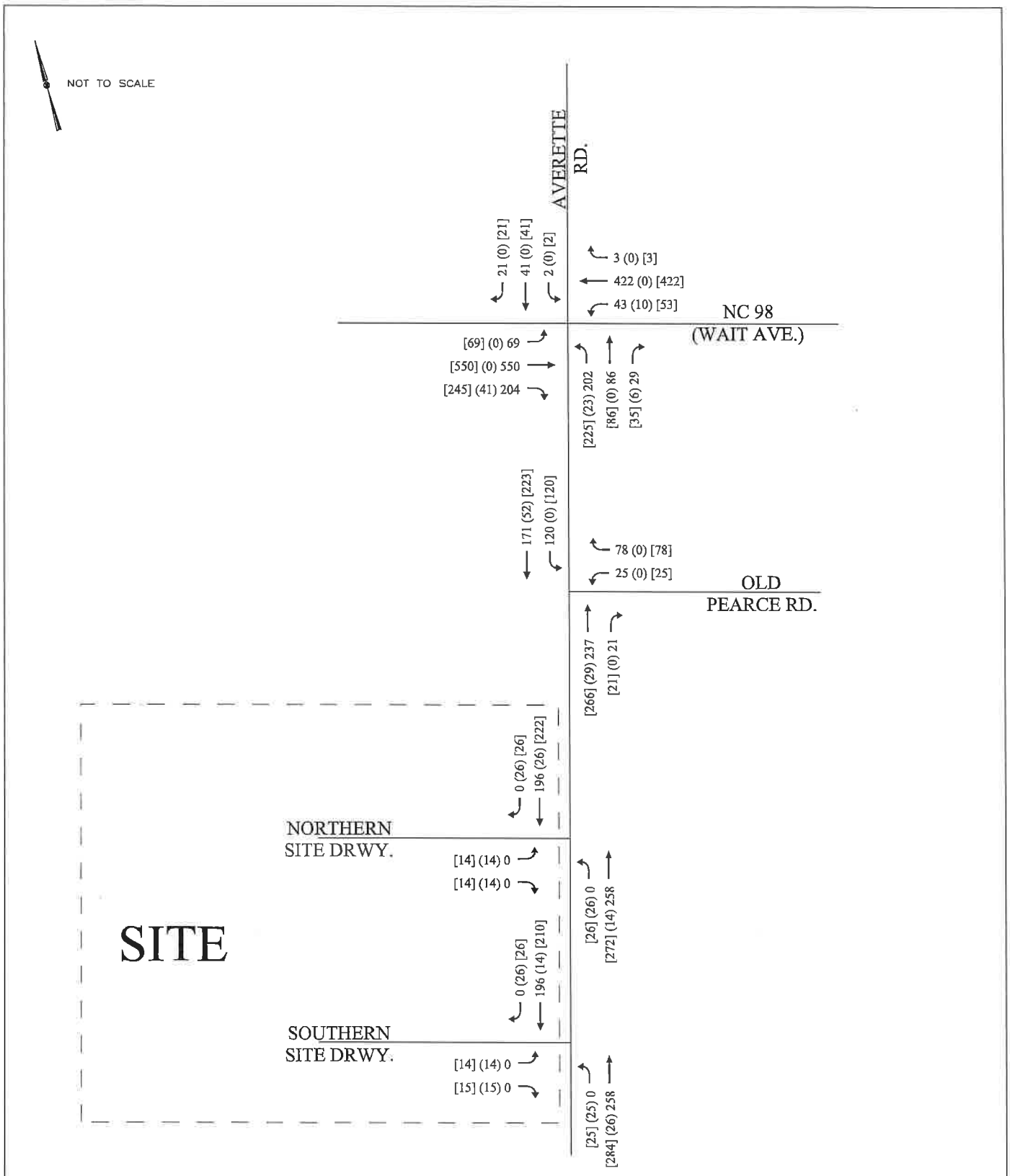
PRELIMINARY
NOT RELEASED
FOR CONSTRUCTION
03-12-18

Project Number: .170347

SHEET
C101



Kimley»Horn	AVERETTE FARMS ROLESVILLE, NC TRAFFIC IMPACT ANALYSIS	PROJECTED (2021) BUILD-OUT AM PEAK HOUR TRAFFIC VOLUMES	FIGURE 7



LEGEND

XX BACKGROUND TRAFFIC
(XX) PRIMARY SITE TRAFFIC
[XX] TOTAL BUILD-OUT TRAFFIC

Kimley»Horn	AVERETTE FARMS ROLESVILLE, NC TRAFFIC IMPACT ANALYSIS	PROJECTED (2021) BUILD-OUT PM PEAK HOUR TRAFFIC VOLUMES	FIGURE 8

Traffic Impact Analysis

Thales Academy
Rolesville, NC

Prepared for:

Thales Academy

Kimley»Horn

Traffic Impact Analysis
for
Thales Academy
Rolesville, North Carolina

Prepared for:

Thales Academy

Rolesville, NC

Prepared by:

Kimley-Horn and Associates, Inc.

NC License #F-0102

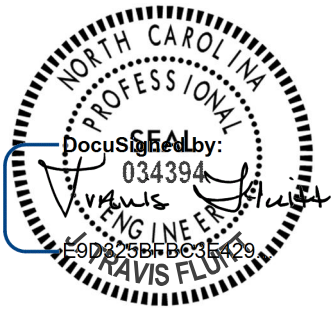
421 Fayetteville Street, Suite 600

Raleigh, NC 27601

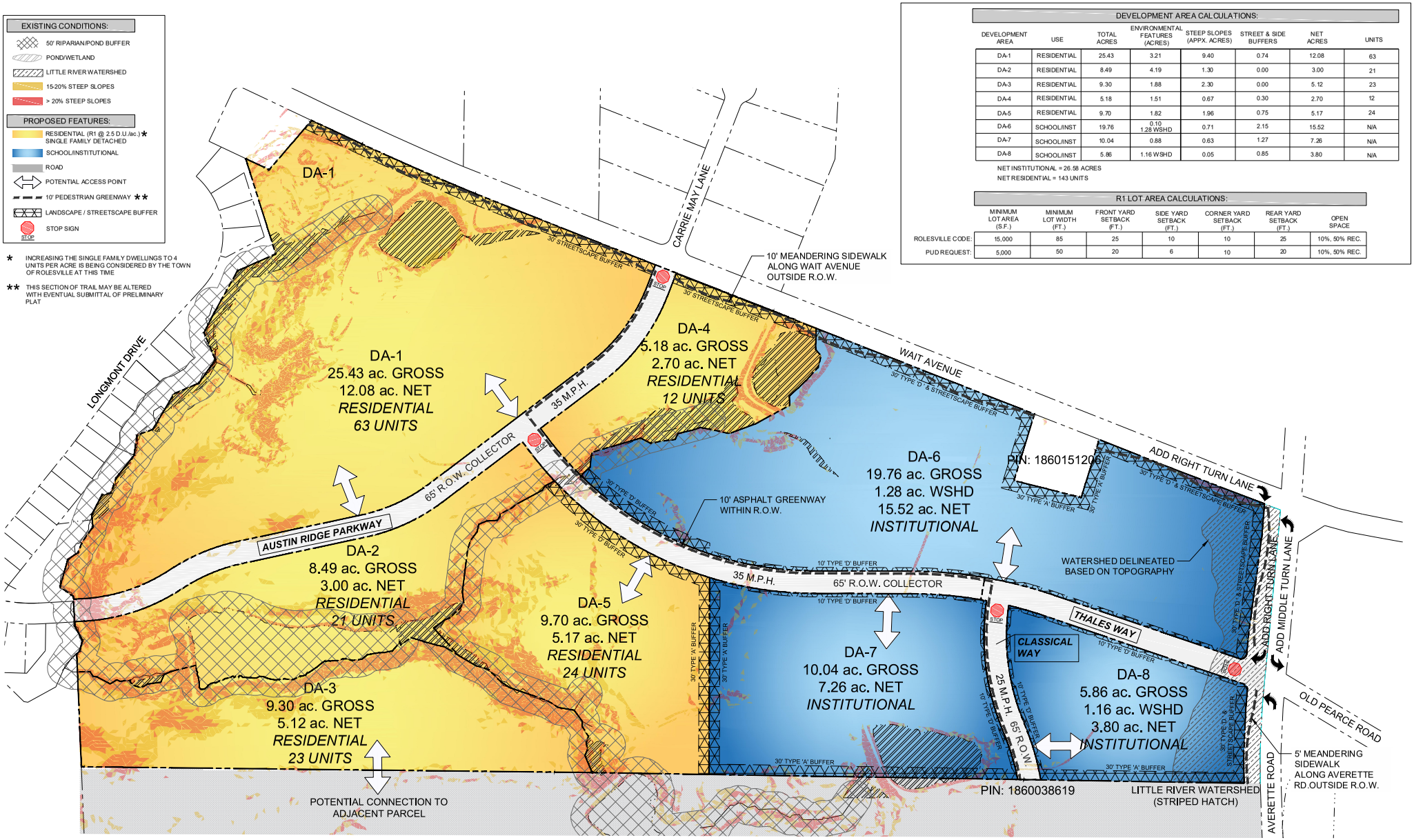
(919) 677-2000

April 2018

017214004



4/11/2018



DEVELOPMENT AREA CALCULATIONS:

DEVELOPMENT AREA	USE	TOTAL ACRES	ENVIRONMENTAL FEATURES (ACRES)	STEEP SLOPES (APPX. ACRES)	STREET & SIDE BUFFERS	NET ACRES	UNITS
DA-1	RESIDENTIAL	25.43	3.21	9.40	0.74	12.08	63
DA-2	RESIDENTIAL	8.49	4.19	1.30	0.00	3.00	21
DA-3	RESIDENTIAL	9.30	1.88	2.30	0.00	5.12	23
DA-4	RESIDENTIAL	5.18	1.51	0.67	0.30	2.70	12
DA-5	RESIDENTIAL	9.70	1.82	1.96	0.75	5.17	24
DA-6	SCHOOL/INST	19.76	0.10 1.28 WSHD	0.71	2.15	15.52	N/A
DA-7	SCHOOL/INST	10.04	0.88	0.63	1.27	7.26	N/A
DA-8	SCHOOL/INST	5.86	1.16 WSHD	0.05	0.85	3.80	N/A

NET INSTITUTIONAL = 26.58 ACRES
NET RESIDENTIAL = 143 UNITS

R1 LOT AREA CALCULATIONS:

	MINIMUM LOT AREA (S.F.)	MINIMUM LOT WIDTH (FT.)	FRONT YARD SETBACK (FT.)	SIDE YARD SETBACK (FT.)	CORNER YARD SETBACK (FT.)	REAR YARD SETBACK (FT.)	OPEN SPACE
ROLESVILLE CODE:	15,000	85	25	10	10	25	10%, 50% REC.
PUD REQUEST:	5,000	50	20	6	10	20	10%, 50% REC.

NOTES:
1. A SPECIAL USE PERMIT WILL BE REQUIRED FOR ANY FUTURE RESIDENTIAL PHASES

DRAFT - SUBJECT TO CHANGE

SCALE: 1" = 100' (0, 50, 100, 200) NORTH

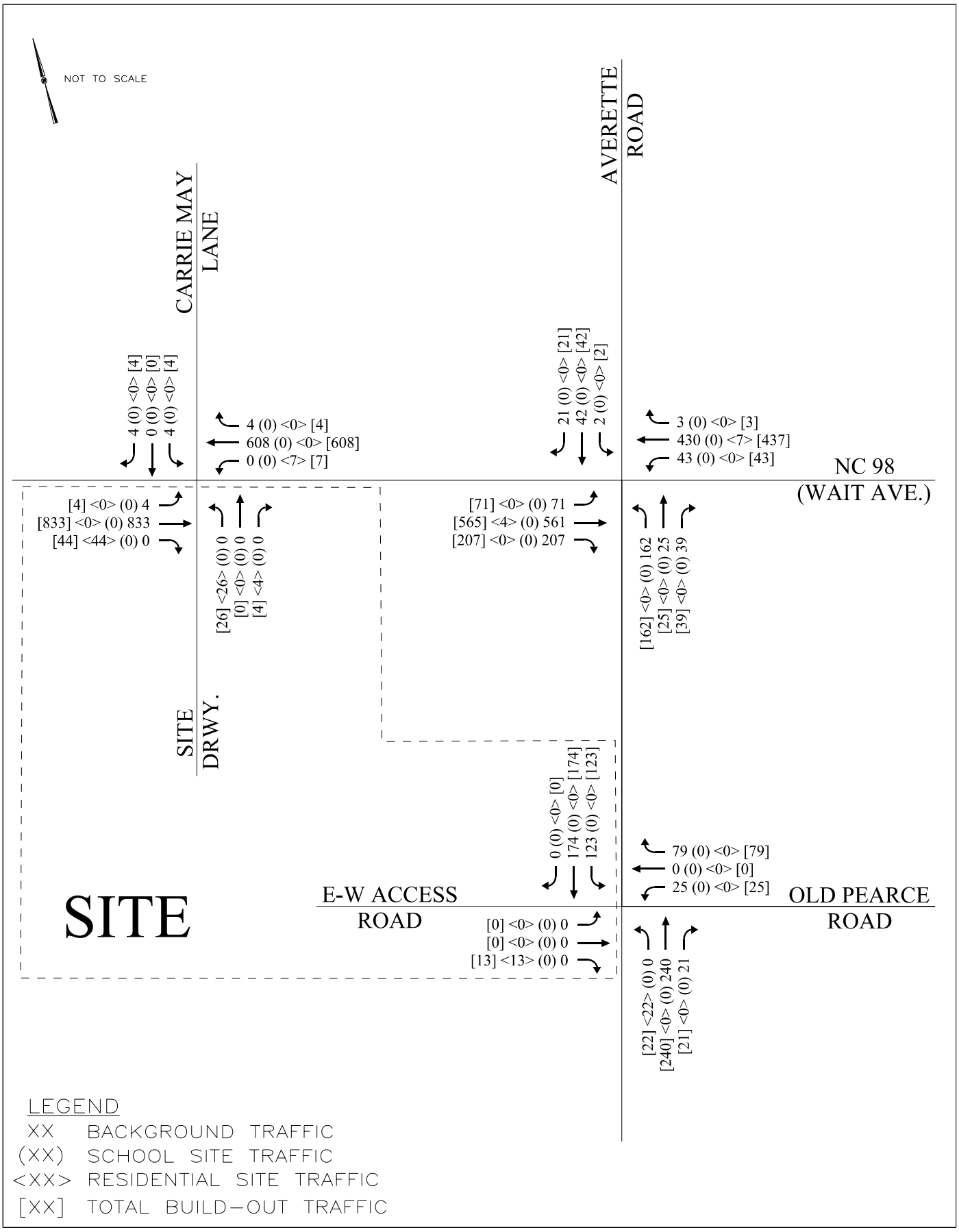
THALES ACADEMY

WAIT AVE. & AVERETTE RD.

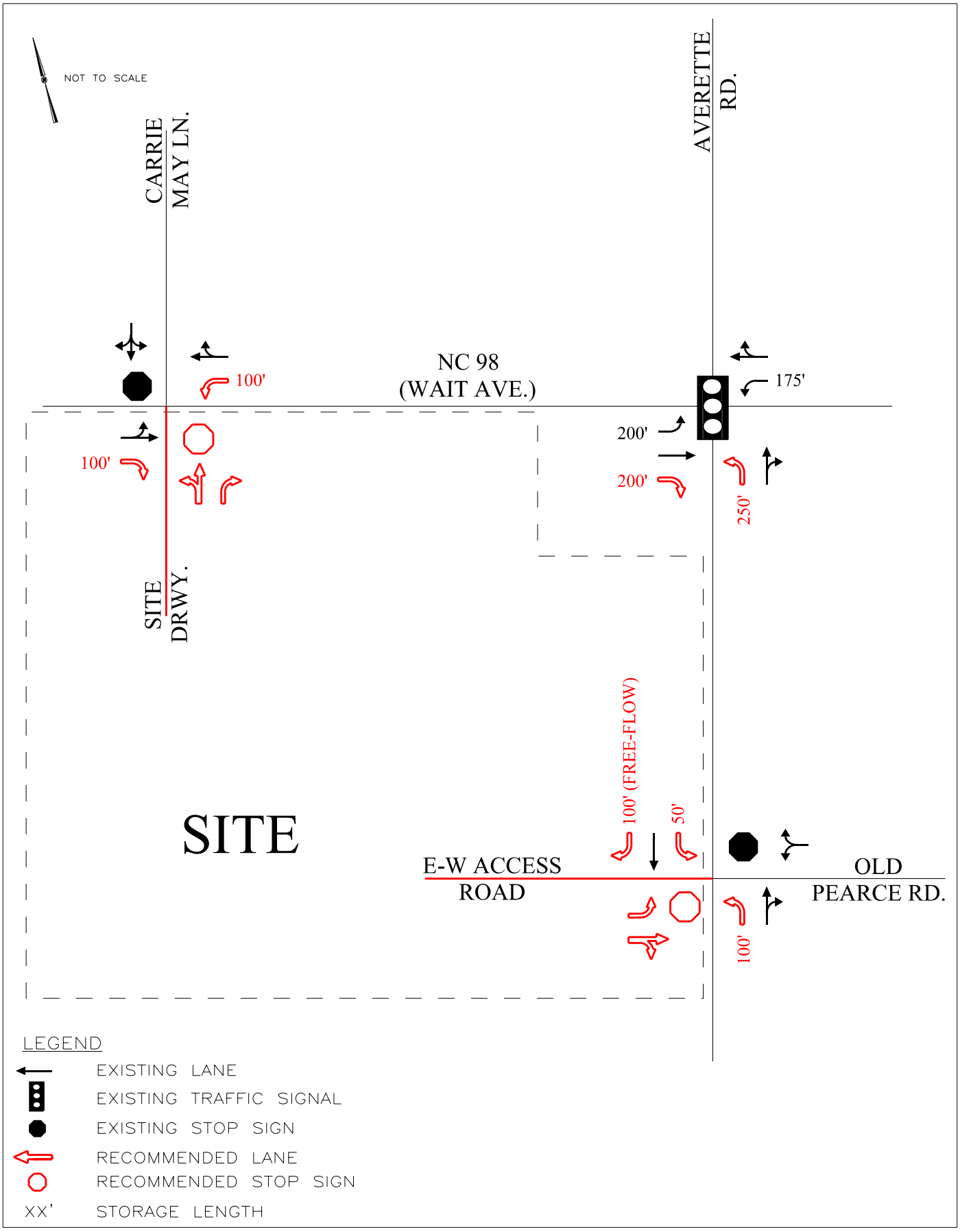
P.U.D. MASTERPLAN

MAY 15, 2018

STEWART



Kimley»Horn	THALES ACADEMY ROLESVILLE, NC TRAFFIC IMPACT ANALYSIS	BUILD (2022) PM PEAK HOUR TRAFFIC VOLUMES – FULL BUILD-OUT	FIGURE 13



Kimley»Horn	THALES ACADEMY ROLESVILLE, NC TRAFFIC IMPACT ANALYSIS	RECOMMENDED ROADWAY LANEAGE – FULL BUILD–OUT	FIGURE 15

Traffic Impact Analysis

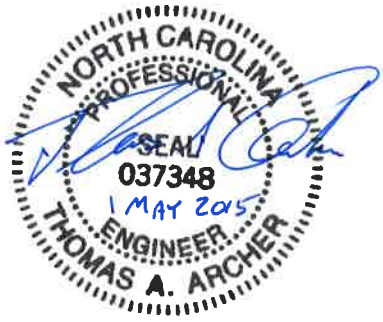
For

Perry Farms

Located in

Rolesville, North Carolina

Prepared For:
Bill Clark Homes
200 E. Arlington Boulevard, Suite A
Greenville, NC 27858

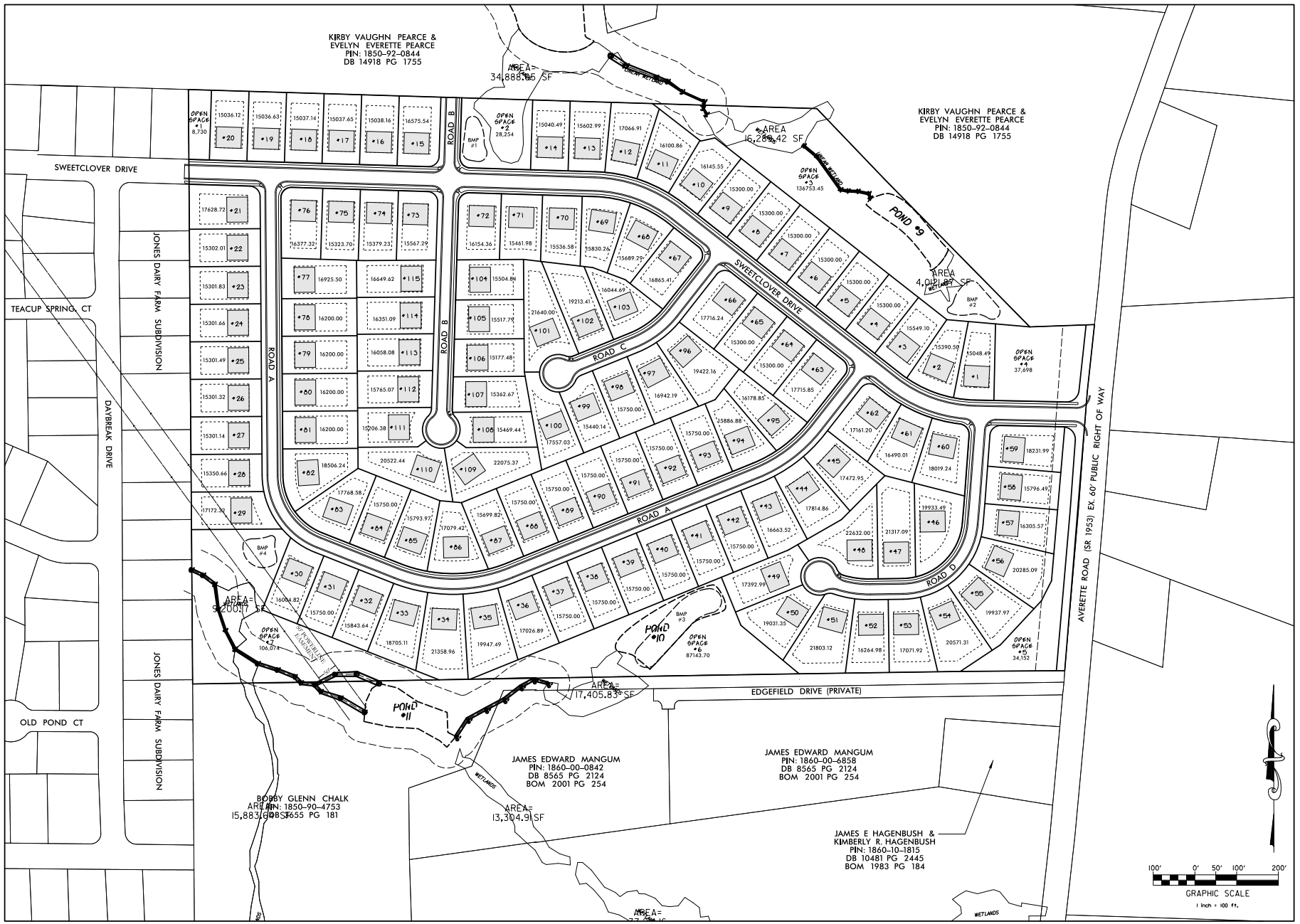


Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
NC Corporate License # C-0910

May 2015

RKA Project #15085

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE AND / OR NCDOT STANDARDS AND SPECIFICATIONS"



MULKEY
ENGINEERS & CONSULTANTS
PO Box 33127
RALEIGH N.C. 27636-3127
(919) 851-1318 (FAX)
WWW.MULKEY.COM
FIRM LICENSE NO. C-1021

PERRY PROPERTY MASTER PLAN

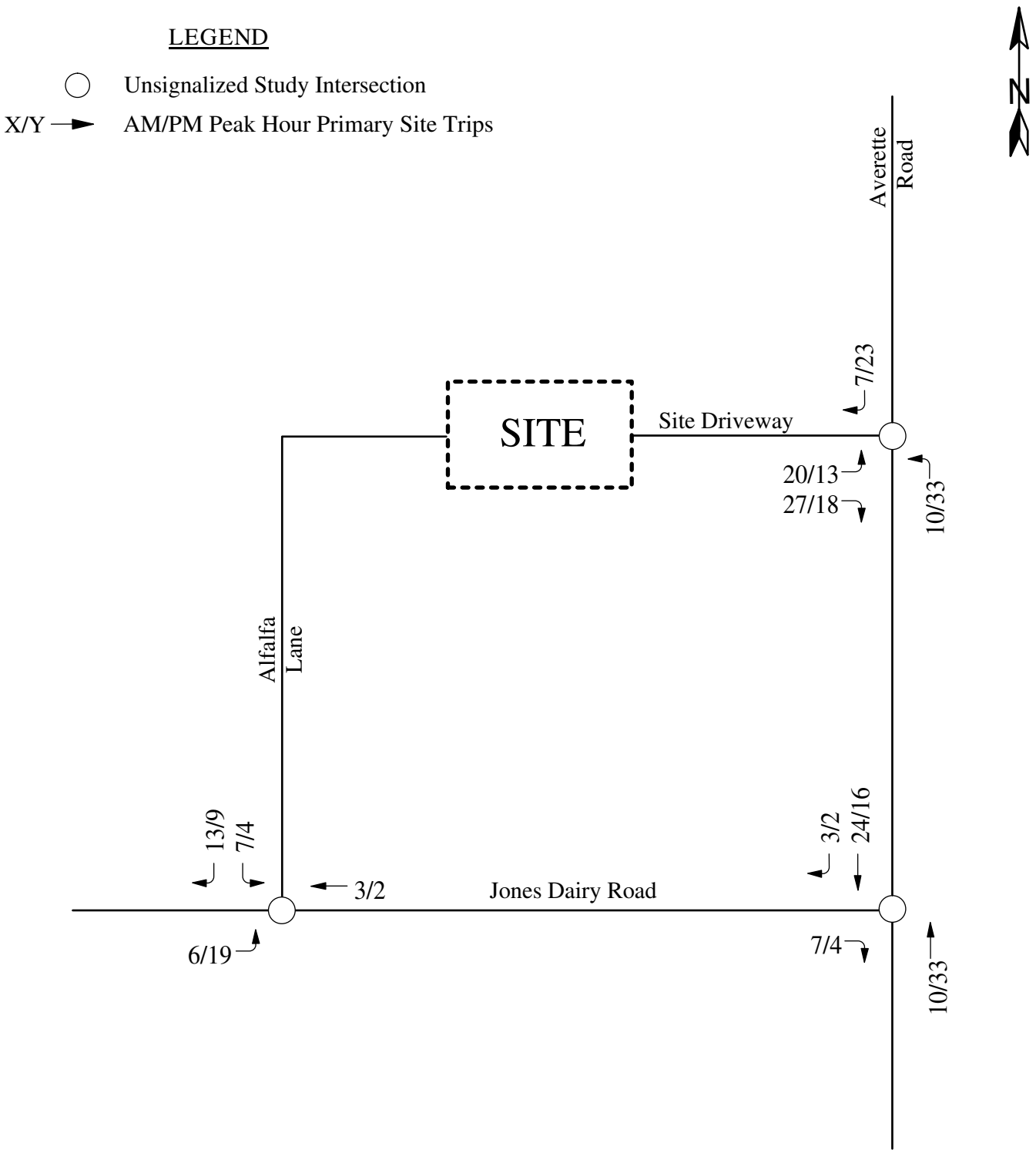
BILL CLARK HOMES
PO BOX 31028
RALEIGH NC 27622

NO	DATE	REVISIONS REMARKS
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

PROJECT NO:	2014090.00
DRAWN BY:	DFB
DWG. CHECKED BY:	PDP
SCALE:	SEE PLAN
DATE:	04-29-2015

SITE PLAN

C-200



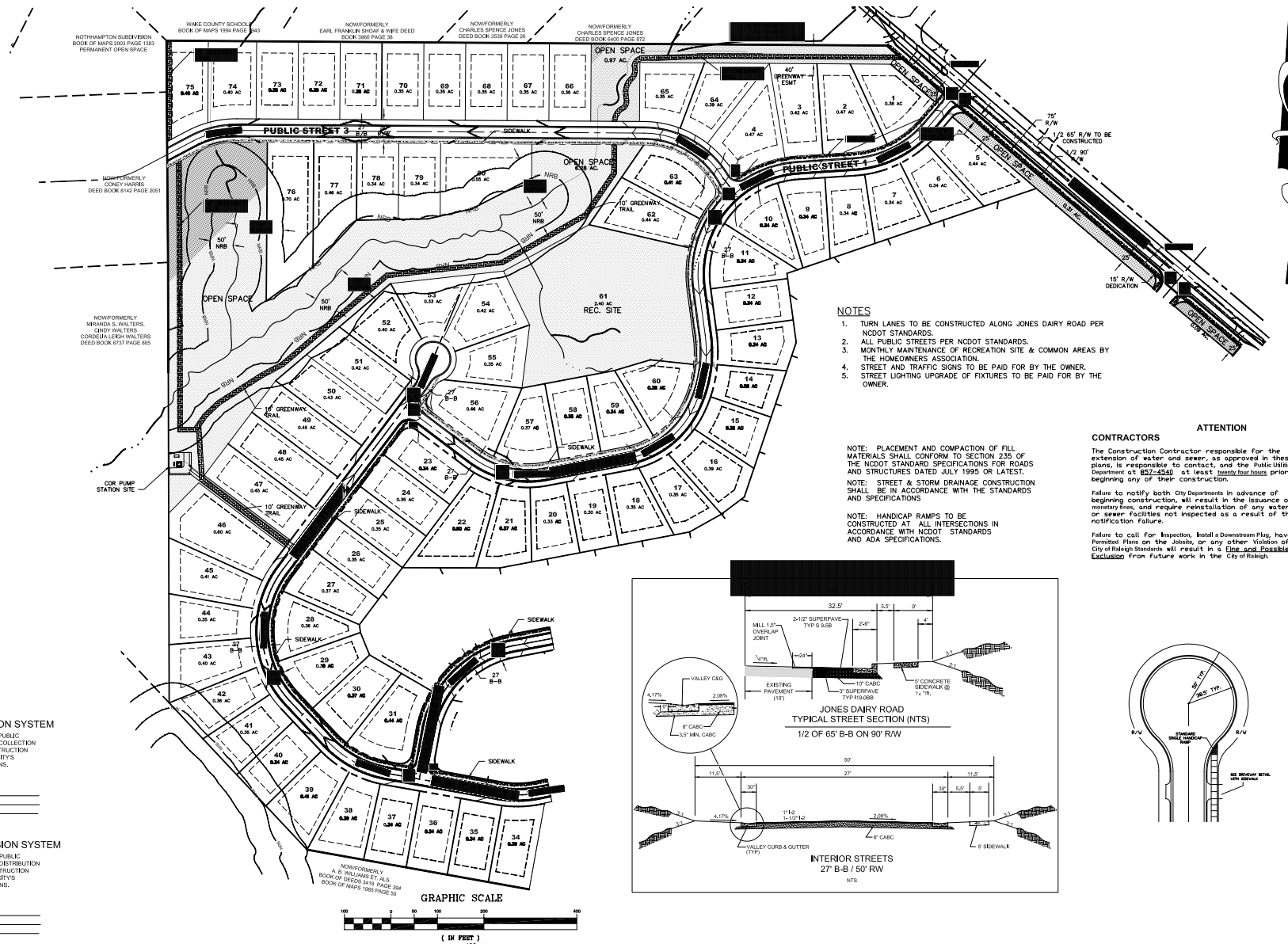
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Perry Farms

Rolesville, North Carolina

Site Trip Assignment

Scale: Not to Scale | Figure 7



NOTES

1. TURN LANES TO BE CONSTRUCTED ALONG JONES DAIRY ROAD PER NCDOT STANDARDS.
2. ALL PUBLIC STREETS PER NCDOT STANDARDS.
3. MONTHLY MAINTENANCE OF RECREATION SITE & COMMON AREAS BY THE HOMEOWNERS ASSOCIATION.
4. STREET AND TRAFFIC SIGNS TO BE PAID FOR BY THE OWNER.
5. STREET LIGHTING UPGRADE OF FIXTURES TO BE PAID FOR BY THE OWNER.

NOTE: PLACEMENT AND COMPACTION OF FILL MATERIALS SHALL CONFORM TO SECTION 235 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JULY 1995 OR LATEST.

NOTE: STREET & STORM DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS

NOTE: HANDICAP RAMPS TO BE CONSTRUCTED AT ALL INTERSECTIONS IN ACCORDANCE WITH NCDOT STANDARDS AND ADA SPECIFICATIONS.

ATTENTION

CONTRACTORS

The Construction Contractor responsible for the extension of water and sewer, as approved in these plans, is responsible to contact, and the Public Utilities Department at 857-4540 at least twenty four hours prior to beginning any of their construction.

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, Install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from Future work in the City of Raleigh.

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

1 inch = 100 ft.

PUBLIC SEWER COLLECTION/EXTENSION SYSTEM

THE CITY OF RALEIGH CONSENTS TO THE CONNECTION TO ITS PUBLIC SEWER SYSTEM AND THE EXTENSION OF THE PRIVATE SEWER COLLECTION SYSTEM AS SHOWN ON THIS PLAN. THE MATERIALS AND CONSTRUCTION METHODS USED FOR THIS PROJECT SHALL CONFORM TO THE CITY'S PUBLIC UTILITIES HANDBOOK'S STANDARDS AND SPECIFICATIONS.

CITY OF RALEIGH

PUBLIC UTILITIES DEPARTMENT PERMIT # _____

CONSTRUCTION APPROVAL _____

DATE _____

PUBLIC WATER DISTRIBUTION/EXTENSION SYSTEM

THE CITY OF RALEIGH CONSENTS TO THE CONNECTION TO ITS PUBLIC WATER SYSTEM AND THE EXTENSION OF THE PRIVATE WATER DISTRIBUTION SYSTEM AS SHOWN ON THIS PLAN. THE MATERIALS AND CONSTRUCTION METHODS USED FOR THIS PROJECT SHALL CONFORM TO THE CITY'S PUBLIC UTILITIES HANDBOOK'S STANDARDS AND SPECIFICATIONS.

CITY OF RALEIGH

PUBLIC UTILITIES DEPARTMENT PERMIT # _____

CONSTRUCTION APPROVAL _____

DATE _____

_____ _____

CITY OF RALEIGH DATE

NORTH CAROLINA PROFESSIONAL SEAL 10078 ENGINEER JOHN A. EDWARDS JR.

DATE	REVISION	BY

JOHN A. EDWARDS & COMPANY
Consulting Engineers
333 Wade Ave, Raleigh, NC 27605
Phone (919) 828-4428
FAX (919) 828-4711
E-mail fredjaeco.com

SCALE	DATE
1"=100'	6-7-2006
FLD. BK. & PAGE	DRAWN BY: LEH, III
FILE NO.	CHECKED BY: JAE, JR.

AVERETTE RIDGE SUBDIVISION

ROLESVILLE WAKE COUNTY NORTH CAROLINA

PHASE ONE SITE PLAN

SHEET 3 OF 19

APPENDIX D

CAPACITY ANALYSIS CALCULATIONS

JONES DAIRY ROAD

&

AVERETTE ROAD

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	276	210	96	167	28
Future Vol, veh/h	31	276	210	96	167	28
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	307	233	107	186	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	774	201	217	0	-	0
Stage 1	201	-	-	-	-	-
Stage 2	573	-	-	-	-	-
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	367	840	1353	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	564	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	300	840	1353	-	-	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	461	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.6	5.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1353	-	711	-	-
HCM Lane V/C Ratio	0.172	-	0.48	-	-
HCM Control Delay (s)	8.2	0	14.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.6	-	2.6	-	-

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	203	271	166	120	30
Future Vol, veh/h	28	203	271	166	120	30
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	226	301	184	133	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	937	150	167	0	-	0
Stage 1	150	-	-	-	-	-
Stage 2	787	-	-	-	-	-
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	294	896	1411	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	224	896	1411	-	-	-
Mov Cap-2 Maneuver	224	-	-	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	342	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	5.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1411	-	657	-	-
HCM Lane V/C Ratio	0.213	-	0.391	-	-
HCM Control Delay (s)	8.2	0	13.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.8	-	1.9	-	-

Intersection						
Int Delay, s/veh	23.5					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	39	352	255	277	382	37
Future Vol, veh/h	39	352	255	277	382	37
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	391	283	308	424	41

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1319	445	466	0	-	0
Stage 1	445	-	-	-	-	-
Stage 2	874	-	-	-	-	-
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	173	613	1095	-	-	-
Stage 1	646	-	-	-	-	-
Stage 2	408	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	119	613	1095	-	-	-
Mov Cap-2 Maneuver	119	-	-	-	-	-
Stage 1	646	-	-	-	-	-
Stage 2	281	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	74.7	4.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1095	-	434	-	-
HCM Lane V/C Ratio	0.259	-	1.001	-	-
HCM Control Delay (s)	9.4	0	74.7	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	1	-	12.8	-	-

Intersection	
Int Delay, s/veh	10

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	256	339	304	201	40
Future Vol, veh/h	34	256	339	304	201	40
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	284	377	338	223	44

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1337	246	268	0	-	0
Stage 1	246	-	-	-	-	-
Stage 2	1091	-	-	-	-	-
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	169	793	1296	-	-	-
Stage 1	795	-	-	-	-	-
Stage 2	322	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	108	793	1296	-	-	-
Mov Cap-2 Maneuver	108	-	-	-	-	-
Stage 1	795	-	-	-	-	-
Stage 2	207	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.9	4.7	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1296	-	455	-	-
HCM Lane V/C Ratio	0.291	-	0.708	-	-
HCM Control Delay (s)	8.9	0	29.9	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	1.2	-	5.5	-	-

Intersection

Int Delay, s/veh	138.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	47	496	302	317	505	40
Future Vol, veh/h	47	496	302	317	505	40
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	551	336	352	561	44

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1606	583	606	0	-	0
Stage 1	583	-	-	-	-	-
Stage 2	1023	-	-	-	-	-
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	116	~ 512	972	-	-	-
Stage 1	558	-	-	-	-	-
Stage 2	347	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	66	~ 512	972	-	-	-
Mov Cap-2 Maneuver	66	-	-	-	-	-
Stage 1	558	-	-	-	-	-
Stage 2	198	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 429.4	5.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	972	-	323	-	-
HCM Lane V/C Ratio	0.345	-	1.868	-	-
HCM Control Delay (s)	10.6	0	$ 429.4	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	1.6	-	40.6	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh	131.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	39	347	493	436	279	49
Future Vol, veh/h	39	347	493	436	279	49
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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	386	548	484	310	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1917	337	364	0	-	0
Stage 1	337	-	-	-	-	-
Stage 2	1580	-	-	-	-	-
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	74	705	1195	-	-	-
Stage 1	723	-	-	-	-	-
Stage 2	186	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 28	705	1195	-	-	-
Mov Cap-2 Maneuver	~ 28	-	-	-	-	-
Stage 1	723	-	-	-	-	-
Stage 2	69	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 545.6	5.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1195	-	205	-	-
HCM Lane V/C Ratio	0.458	-	2.092	-	-
HCM Control Delay (s)	10.5	0	$ 545.6	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	2.5	-	32.9	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	47	496	302	317	505	40
Future Volume (vph)	47	496	302	317	505	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.990	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1844	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1844	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			45	45	
Link Distance (ft)	1232			4752	1629	
Travel Time (s)	18.7			72.0	24.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	52	551	336	352	561	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	52	551	336	352	605	0
Turn Type	Prot	pm+ov	Prot	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4				
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	12.0	12.0	
Minimum Split (s)	20.0	14.0	14.0	20.0	20.0	
Total Split (s)	20.0	27.0	27.0	70.0	43.0	
Total Split (%)	22.2%	30.0%	30.0%	77.8%	47.8%	
Maximum Green (s)	13.0	20.0	20.0	63.0	36.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Min	Min	
Act Effct Green (s)	10.7	30.7	22.6	60.2	29.3	
Actuated g/C Ratio	0.15	0.43	0.32	0.85	0.41	
v/c Ratio	0.19	0.80	0.59	0.22	0.79	
Control Delay	34.1	29.1	30.8	3.0	27.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	34.1	29.1	30.8	3.0	27.9	
LOS	C	C	C	A	C	
Approach Delay	29.5			16.6	27.9	
Approach LOS	C			B	C	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	24	223	152	42	255	
Queue Length 95th (ft)	59	#385	#295	79	409	
Internal Link Dist (ft)	1152			4672	1549	
Turn Bay Length (ft)	50		150			
Base Capacity (vph)	402	708	590	1602	1062	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.13	0.78	0.57	0.22	0.57	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 70.8
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 24.3 Intersection LOS: C
Intersection Capacity Utilization 68.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Averette Road & Jones Dairy Road

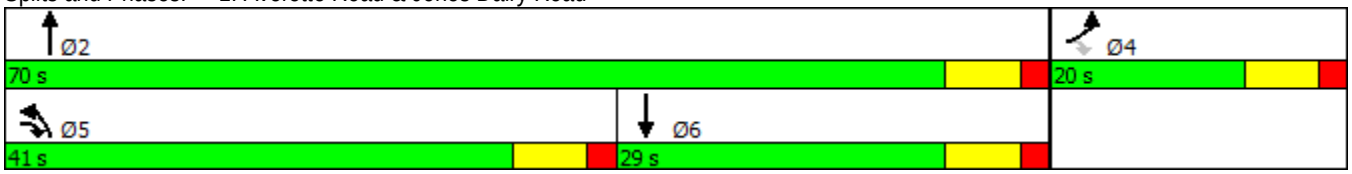
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	39	347	493	436	279	49
Future Volume (vph)	39	347	493	436	279	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.980	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1825	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1825	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			45	45	
Link Distance (ft)	1232			4752	1629	
Travel Time (s)	18.7			72.0	24.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	386	548	484	310	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	386	548	484	364	0
Turn Type	Prot	pm+ov	Prot	NA	NA	
Protected Phases	4	5	5	2	6	
Permitted Phases		4				
Detector Phase	4	5	5	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	12.0	12.0	
Minimum Split (s)	20.0	14.0	14.0	20.0	20.0	
Total Split (s)	20.0	41.0	41.0	70.0	29.0	
Total Split (%)	22.2%	45.6%	45.6%	77.8%	32.2%	
Maximum Green (s)	13.0	34.0	34.0	63.0	22.0	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	Min	Min	
Act Effct Green (s)	10.8	36.2	28.6	58.4	21.1	
Actuated g/C Ratio	0.16	0.53	0.42	0.85	0.31	
v/c Ratio	0.15	0.46	0.74	0.30	0.65	
Control Delay	33.9	11.3	26.1	3.2	30.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.9	11.3	26.1	3.2	30.6	
LOS	C	B	C	A	C	
Approach Delay	13.5			15.4	30.6	
Approach LOS	B			B	C	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	20	99	233	61	161	
Queue Length 95th (ft)	51	157	376	110	#284	
Internal Link Dist (ft)	1152			4672	1549	
Turn Bay Length (ft)	50		150			
Base Capacity (vph)	430	1099	1033	1606	710	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.10	0.35	0.53	0.30	0.51	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 68.4
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 18.0 Intersection LOS: B
Intersection Capacity Utilization 63.3% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Averette Road & Jones Dairy Road



APPENDIX E

CAPACITY ANALYSIS CALCULATIONS

S MAIN STREET

&

YOUNG STREET

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	110	137	8	175	20	175	144	8	8	232	275
Future Volume (vph)	157	110	137	8	175	20	175	144	8	8	232	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	500		0	75		0	150		75
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	100			250			100			100		
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		0.917			0.985			0.992				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1708	0	1770	1835	0	1770	1848	0	1770	1863	1583
Flt Permitted	0.319			0.515			0.370			0.650		
Satd. Flow (perm)	594	1708	0	959	1835	0	689	1848	0	1211	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		3229			4856			4453			1791	
Travel Time (s)		62.9			94.6			86.7			34.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	174	122	152	9	194	22	194	160	9	9	258	306
Shared Lane Traffic (%)												
Lane Group Flow (vph)	174	274	0	9	216	0	194	169	0	9	258	306
Turn Type	pm+pt	NA		D.Pm	NA		pm+pt	NA		D.Pm	NA	pm+ov
Protected Phases	5	2			6		3	8			4	5
Permitted Phases	2			2			8			8		4
Detector Phase	5	2		2	6		3	8		8	4	5
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	12.9	16.2		16.2	16.1		11.9	12.0		12.0	12.0	12.9
Total Split (s)	20.0	180.0		180.0	160.0		20.0	50.0		50.0	30.0	20.0
Total Split (%)	8.7%	78.3%		78.3%	69.6%		8.7%	21.7%		21.7%	13.0%	8.7%
Maximum Green (s)	14.1	173.8		173.8	153.9		15.1	45.0		45.0	25.0	14.1
Yellow Time (s)	3.0	3.8		3.8	3.8		3.0	3.7		3.7	3.7	3.0
All-Red Time (s)	2.9	2.4		2.4	2.3		1.9	1.3		1.3	1.3	2.9
Lost Time Adjust (s)	-0.9	-1.2		-1.2	-1.1		0.1	0.0		0.0	0.0	-0.9
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead				Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes				Yes		Yes				Yes	Yes
Vehicle Extension (s)	2.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	None	Min		Min	Min		None	None		None	None	None
Act Effct Green (s)	35.4	35.4		35.4	15.7		43.3	43.3		43.3	23.6	43.3
Actuated g/C Ratio	0.40	0.40		0.40	0.18		0.49	0.49		0.49	0.27	0.49
v/c Ratio	0.40	0.40		0.02	0.67		0.38	0.19		0.02	0.52	0.40
Control Delay	20.2	20.7		15.1	44.2		16.2	14.3		13.4	33.0	17.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	20.2	20.7		15.1	44.2		16.2	14.3		13.4	33.0	17.0
LOS	C	C		B	D		B	B		B	C	B
Approach Delay		20.5			43.0			15.3			24.1	
Approach LOS		C			D			B			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	66	111		3	115		58	50		2	121	104
Queue Length 95th (ft)	100	158		11	178		113	99		11	209	180
Internal Link Dist (ft)		3149			4776			4373			1711	
Turn Bay Length (ft)	250			500			75			150		75
Base Capacity (vph)	435	1708		959	1835		519	937		614	524	778
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.40	0.16		0.01	0.12		0.37	0.18		0.01	0.49	0.39

Intersection Summary

Area Type: Other
Cycle Length: 230
Actuated Cycle Length: 88.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 23.8 Intersection LOS: C
Intersection Capacity Utilization 61.1% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Young Street & Main Street

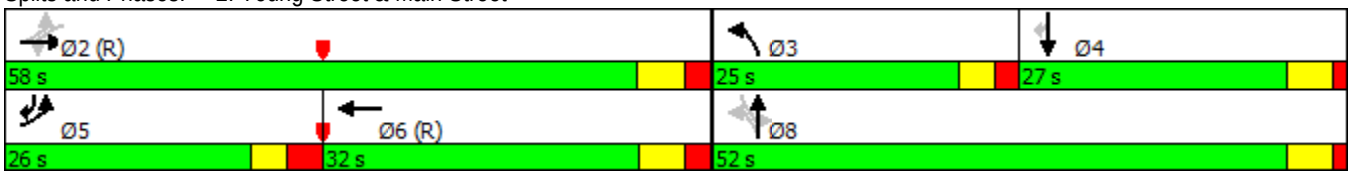
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	221	204	129	13	147	23	139	177	3	28	116	176
Future Volume (vph)	221	204	129	13	147	23	139	177	3	28	116	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	500		0	75		0	150		75
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	100			250			100			100		
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		0.942			0.979			0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1755	0	1770	1824	0	1770	1859	0	1770	1863	1583
Flt Permitted	0.567			0.502			0.372			0.520		
Satd. Flow (perm)	1056	1755	0	935	1824	0	693	1859	0	969	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		3229			4856			4453			1769	
Travel Time (s)		62.9			94.6			86.7			34.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	246	227	143	14	163	26	154	197	3	31	129	196
Shared Lane Traffic (%)												
Lane Group Flow (vph)	246	370	0	14	189	0	154	200	0	31	129	196
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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes						Yes	
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
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template												
Leading Detector (ft)	60	76		60	76		60	60		40	40	40
Trailing Detector (ft)	0	70		0	70		0	0		0	0	0
Detector 1 Position(ft)	0	70		0	70		0	0		0	0	0
Detector 1 Size(ft)	60	6		60	6		60	60		40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	15.0	0.0		0.0	0.0		15.0	10.0		3.0	0.0	15.0
Turn Type	pm+pt	NA		D.Pm	NA		pm+pt	NA		D.Pm	NA	pm+ov
Protected Phases	5	2			6		3	8			4	5
Permitted Phases	2			2			8			8		4
Detector Phase	5	2		2	6		3	8		8	4	5
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	12.9	16.2		16.2	16.1		11.9	12.0		12.0	12.0	12.9
Total Split (s)	26.0	58.0		58.0	32.0		25.0	52.0		52.0	27.0	26.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	23.6%	52.7%		52.7%	29.1%		22.7%	47.3%		47.3%	24.5%	23.6%
Maximum Green (s)	20.1	51.8		51.8	25.9		20.1	47.0		47.0	22.0	20.1
Yellow Time (s)	3.0	3.8		3.8	3.8		3.0	3.7		3.7	3.7	3.0
All-Red Time (s)	2.9	2.4		2.4	2.3		1.9	1.3		1.3	1.3	2.9
Lost Time Adjust (s)	-0.9	-1.2		-1.2	-1.1		0.1	0.0		0.0	0.0	-0.9
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead				Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes				Yes		Yes				Yes	Yes
Vehicle Extension (s)	2.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	None
Act Effct Green (s)	71.0	71.0		71.0	53.9		29.0	29.0		29.0	12.0	29.1
Actuated g/C Ratio	0.65	0.65		0.65	0.49		0.26	0.26		0.26	0.11	0.26
v/c Ratio	0.32	0.33		0.02	0.21		0.51	0.41		0.12	0.64	0.47
Control Delay	10.4	10.8		9.4	19.5		37.4	34.7		29.0	60.5	36.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	10.4	10.8		9.4	19.5		37.4	34.7		29.0	60.5	36.3
LOS	B	B		A	B		D	C		C	E	D
Approach Delay		10.7			18.8			35.9			44.4	
Approach LOS		B			B			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 109 (99%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 25.4 Intersection LOS: C
Intersection Capacity Utilization 58.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Young Street & Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	353	131	164	10	209	24	209	172	10	10	277	533
Future Volume (vph)	353	131	164	10	209	24	209	172	10	10	277	533
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	500		0	75		0	150		75
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	100			250			100			100		
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		0.917			0.984			0.992				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1708	0	1770	1833	0	1770	1848	0	1770	1863	1583
Flt Permitted	0.268			0.455			0.303			0.616		
Satd. Flow (perm)	499	1708	0	848	1833	0	564	1848	0	1147	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		3229			4856			4453			1791	
Travel Time (s)		62.9			94.6			86.7			34.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	392	146	182	11	232	27	232	191	11	11	308	592
Shared Lane Traffic (%)												
Lane Group Flow (vph)	392	328	0	11	259	0	232	202	0	11	308	592
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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes						Yes	
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
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template		Thru		Left	Thru						Thru	
Leading Detector (ft)	60	76		20	76		60	60		40	40	40
Trailing Detector (ft)	0	70		0	70		0	0		0	0	0
Detector 1 Position(ft)	0	70		0	70		0	0		0	0	0
Detector 1 Size(ft)	60	6		20	6		60	60		40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	15.0	0.0		0.0	0.0		15.0	10.0		3.0	0.0	15.0
Turn Type	pm+pt	NA		D.Pm	NA		pm+pt	NA		D.Pm	NA	pm+ov
Protected Phases	5	2			6		3	8			4	5
Permitted Phases	2			2			8			8		4
Detector Phase	5	2		2	6		3	8		8	4	5
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	12.9	16.2		16.2	16.1		11.9	12.0		12.0	12.0	12.9
Total Split (s)	20.0	180.0		180.0	160.0		20.0	50.0		50.0	30.0	20.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	8.7%	78.3%		78.3%	69.6%		8.7%	21.7%		21.7%	13.0%	8.7%
Maximum Green (s)	14.1	173.8		173.8	153.9		15.1	45.0		45.0	25.0	14.1
Yellow Time (s)	3.0	3.8		3.8	3.8		3.0	3.7		3.7	3.7	3.0
All-Red Time (s)	2.9	2.4		2.4	2.3		1.9	1.3		1.3	1.3	2.9
Lost Time Adjust (s)	-0.9	-1.2		-1.2	-1.1		0.1	0.0		0.0	0.0	-0.9
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead				Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes				Yes		Yes				Yes	Yes
Vehicle Extension (s)	2.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	None	Min		Min	Min		None	None		None	None	None
Act Effct Green (s)	38.1	38.1		38.1	18.1		45.0	45.0		45.0	25.0	45.0
Actuated g/C Ratio	0.41	0.41		0.41	0.19		0.48	0.48		0.48	0.27	0.48
v/c Ratio	0.96	0.47		0.03	0.73		0.50	0.23		0.02	0.62	0.77
Control Delay	59.8	22.6		16.4	47.7		19.0	15.5		14.1	36.8	29.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	59.8	22.6		16.4	47.7		19.0	15.5		14.1	36.8	29.2
LOS	E	C		B	D		B	B		B	D	C
Approach Delay		42.9			46.4			17.4			31.6	
Approach LOS		D			D			B			C	

Intersection Summary

Area Type: Other
Cycle Length: 230
Actuated Cycle Length: 93.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 34.2 Intersection LOS: C
Intersection Capacity Utilization 74.8% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 2: Young Street & Main Street

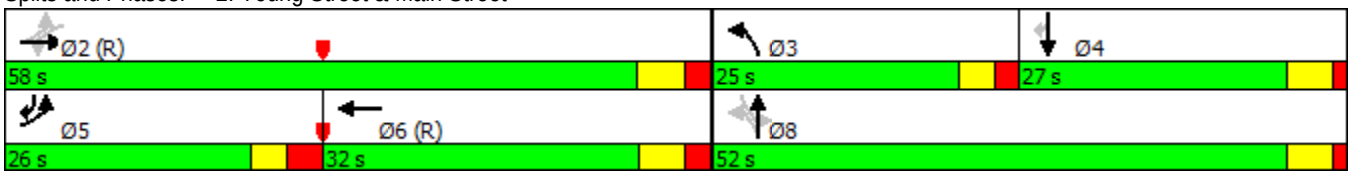
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	385	244	154	16	176	27	166	211	4	33	139	282
Future Volume (vph)	385	244	154	16	176	27	166	211	4	33	139	282
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	500		0	75		0	150		75
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	100			250			100			100		
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		0.942			0.980			0.997				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1755	0	1770	1825	0	1770	1857	0	1770	1863	1583
Flt Permitted	0.495			0.442			0.334			0.479		
Satd. Flow (perm)	922	1755	0	823	1825	0	622	1857	0	892	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		3229			4856			4453			1769	
Travel Time (s)		62.9			94.6			86.7			34.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	428	271	171	18	196	30	184	234	4	37	154	313
Shared Lane Traffic (%)												
Lane Group Flow (vph)	428	442	0	18	226	0	184	238	0	37	154	313
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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes						Yes	
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
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template												
Leading Detector (ft)	60	76		60	76		60	60		40	40	40
Trailing Detector (ft)	0	70		0	70		0	0		0	0	0
Detector 1 Position(ft)	0	70		0	70		0	0		0	0	0
Detector 1 Size(ft)	60	6		60	6		60	60		40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	15.0	0.0		0.0	0.0		15.0	10.0		3.0	0.0	15.0
Turn Type	pm+pt	NA		D.Pm	NA		pm+pt	NA		D.Pm	NA	pm+ov
Protected Phases	5	2			6		3	8			4	5
Permitted Phases	2			2			8			8		4
Detector Phase	5	2		2	6		3	8		8	4	5
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	12.9	16.2		16.2	16.1		11.9	12.0		12.0	12.0	12.9
Total Split (s)	26.0	58.0		58.0	32.0		25.0	52.0		52.0	27.0	26.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	23.6%	52.7%		52.7%	29.1%		22.7%	47.3%		47.3%	24.5%	23.6%
Maximum Green (s)	20.1	51.8		51.8	25.9		20.1	47.0		47.0	22.0	20.1
Yellow Time (s)	3.0	3.8		3.8	3.8		3.0	3.7		3.7	3.7	3.0
All-Red Time (s)	2.9	2.4		2.4	2.3		1.9	1.3		1.3	1.3	2.9
Lost Time Adjust (s)	-0.9	-1.2		-1.2	-1.1		0.1	0.0		0.0	0.0	-0.9
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead				Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes				Yes		Yes				Yes	Yes
Vehicle Extension (s)	2.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	None
Act Effct Green (s)	68.1	68.1		68.1	43.5		31.9	31.9		31.9	13.4	38.1
Actuated g/C Ratio	0.62	0.62		0.62	0.40		0.29	0.29		0.29	0.12	0.35
v/c Ratio	0.59	0.41		0.04	0.31		0.57	0.44		0.14	0.68	0.57
Control Delay	15.7	13.4		11.0	28.8		36.8	33.2		27.3	60.6	32.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	15.7	13.4		11.0	28.8		36.8	33.2		27.3	60.6	32.1
LOS	B	B		B	C		D	C		C	E	C
Approach Delay		14.6			27.5			34.7			40.4	
Approach LOS		B			C			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 109 (99%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 26.7 Intersection LOS: C
Intersection Capacity Utilization 66.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Young Street & Main Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	393	131	164	10	209	24	209	219	10	10	421	656
Future Volume (vph)	393	131	164	10	209	24	209	219	10	10	421	656
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	500		0	75		0	150		75
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	100			250			100			100		
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		0.917			0.984			0.994				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1708	0	1770	1833	0	1770	1852	0	1770	1863	1583
Flt Permitted	0.267			0.455			0.133			0.563		
Satd. Flow (perm)	497	1708	0	848	1833	0	248	1852	0	1049	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		3229			4856			4453			1791	
Travel Time (s)		62.9			94.6			86.7			34.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	437	146	182	11	232	27	232	243	11	11	468	729
Shared Lane Traffic (%)												
Lane Group Flow (vph)	437	328	0	11	259	0	232	254	0	11	468	729
Turn Type	pm+pt	NA		D.Pm	NA		pm+pt	NA		D.Pm	NA	pm+ov
Protected Phases	5	2			6		3	8			4	5
Permitted Phases	2			2			8			8		4
Detector Phase	5	2		2	6		3	8		8	4	5
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	12.9	16.2		16.2	16.1		11.9	12.0		12.0	12.0	12.9
Total Split (s)	20.0	180.0		180.0	160.0		20.0	50.0		50.0	30.0	20.0
Total Split (%)	8.7%	78.3%		78.3%	69.6%		8.7%	21.7%		21.7%	13.0%	8.7%
Maximum Green (s)	14.1	173.8		173.8	153.9		15.1	45.0		45.0	25.0	14.1
Yellow Time (s)	3.0	3.8		3.8	3.8		3.0	3.7		3.7	3.7	3.0
All-Red Time (s)	2.9	2.4		2.4	2.3		1.9	1.3		1.3	1.3	2.9
Lost Time Adjust (s)	-0.9	-1.2		-1.2	-1.1		0.1	0.0		0.0	0.0	-0.9
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead				Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes				Yes		Yes				Yes	Yes
Vehicle Extension (s)	2.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	None	Min		Min	Min		None	None		None	None	None
Act Effct Green (s)	38.1	38.1		38.1	18.1		45.1	45.1		45.1	25.0	45.1
Actuated g/C Ratio	0.41	0.41		0.41	0.19		0.48	0.48		0.48	0.27	0.48
v/c Ratio	1.07	0.47		0.03	0.73		0.64	0.28		0.02	0.94	0.95
Control Delay	89.6	22.6		16.4	47.7		26.4	16.1		14.1	62.6	48.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	89.6	22.6		16.4	47.7		26.4	16.1		14.1	62.6	48.3
LOS	F	C		B	D		C	B		B	E	D
Approach Delay		60.9			46.5			21.0			53.5	
Approach LOS		E			D			C			D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	~209	138		4	145		78	86		3	270	396
Queue Length 95th (ft)	#397	212		14	228		166	152		14	#495	#700
Internal Link Dist (ft)		3149			4776			4373			1711	
Turn Bay Length (ft)	250			500			75			150		75
Base Capacity (vph)	408	1708		848	1833		365	895		507	500	765
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	1.07	0.19		0.01	0.14		0.64	0.28		0.02	0.94	0.95

Intersection Summary

Area Type: Other
Cycle Length: 230
Actuated Cycle Length: 93.2
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 49.1 Intersection LOS: D
Intersection Capacity Utilization 84.6% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Young Street & Main Street

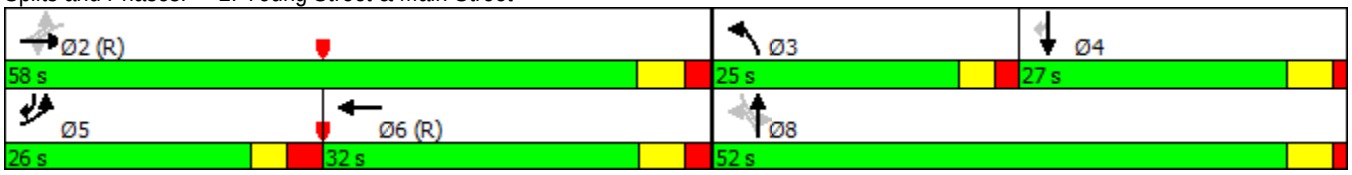
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	517	244	154	16	176	27	166	365	4	33	230	360
Future Volume (vph)	517	244	154	16	176	27	166	365	4	33	230	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	500		0	75		0	150		75
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	100			250			100			100		
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		0.942			0.980			0.999				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1755	0	1770	1825	0	1770	1861	0	1770	1863	1583
Flt Permitted	0.352			0.424			0.227			0.289		
Satd. Flow (perm)	656	1755	0	790	1825	0	423	1861	0	538	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		3229			4856			4453			1791	
Travel Time (s)		62.9			94.6			86.7			34.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	574	271	171	18	196	30	184	406	4	37	256	400
Shared Lane Traffic (%)												
Lane Group Flow (vph)	574	442	0	18	226	0	184	410	0	37	256	400
Turn Type	pm+pt	NA		D.Pm	NA		pm+pt	NA		D.Pm	NA	pm+ov
Protected Phases	5	2			6		3	8			4	5
Permitted Phases	2			2			8			8		4
Detector Phase	5	2		2	6		3	8		8	4	5
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	12.9	16.2		16.2	16.1		11.9	12.0		12.0	12.0	12.9
Total Split (s)	26.0	58.0		58.0	32.0		25.0	52.0		52.0	27.0	26.0
Total Split (%)	23.6%	52.7%		52.7%	29.1%		22.7%	47.3%		47.3%	24.5%	23.6%
Maximum Green (s)	20.1	51.8		51.8	25.9		20.1	47.0		47.0	22.0	20.1
Yellow Time (s)	3.0	3.8		3.8	3.8		3.0	3.7		3.7	3.7	3.0
All-Red Time (s)	2.9	2.4		2.4	2.3		1.9	1.3		1.3	1.3	2.9
Lost Time Adjust (s)	-0.9	-1.2		-1.2	-1.1		0.1	0.0		0.0	0.0	-0.9
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead				Lag		Lead				Lag	Lead
Lead-Lag Optimize?	Yes				Yes		Yes				Yes	Yes
Vehicle Extension (s)	2.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	None
Act Effct Green (s)	63.0	63.0		63.0	23.9		37.0	37.0		37.0	19.3	58.3
Actuated g/C Ratio	0.57	0.57		0.57	0.22		0.34	0.34		0.34	0.18	0.53
v/c Ratio	0.80	0.44		0.04	0.57		0.62	0.65		0.21	0.79	0.48
Control Delay	27.8	16.8		13.6	45.5		34.9	35.4		26.1	59.7	18.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	27.8	16.8		13.6	45.5		34.9	35.4		26.1	59.7	18.9
LOS	C	B		B	D		C	D		C	E	B
Approach Delay		23.0			43.1			35.2			34.4	
Approach LOS		C			D			D			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	245	170		5	152		95	243		18	175	153
Queue Length 95th (ft)	#522	303		20	221		133	303		40	247	278
Internal Link Dist (ft)		3149			4776			4373			1711	
Turn Bay Length (ft)	250			500			75			150		75
Base Capacity (vph)	720	1004		452	456		387	795		229	385	839
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.80	0.44		0.04	0.50		0.48	0.52		0.16	0.66	0.48

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 109 (99%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 30.9 Intersection LOS: C
Intersection Capacity Utilization 81.5% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Young Street & Main Street



APPENDIX F

CAPACITY ANALYSIS CALCULATIONS

JONES DAIRY ROAD

&

NC 98

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	418	421	279	86	661	116	475	403	24	81	379	355
Future Volume (vph)	418	421	279	86	661	116	475	403	24	81	379	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		150	300		150	363		225	250		250
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	225			150			250			125		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		4177			761			1153			2883	
Travel Time (s)		63.3			11.5			17.5			43.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	464	468	310	96	734	129	528	448	27	90	421	394
Shared Lane Traffic (%)												
Lane Group Flow (vph)	464	468	310	96	734	129	528	448	27	90	421	394
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6			Free			4
Detector Phase	5	2	3	1	6	7	3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	14.0	7.0	7.0	14.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	13.2	20.8	13.9	13.2	20.2	13.7	13.9	13.2		13.7	13.5	13.2
Total Split (s)	20.0	90.0	20.0	20.0	90.0	20.0	20.0	45.0		20.0	45.0	20.0
Total Split (%)	11.4%	51.4%	11.4%	11.4%	51.4%	11.4%	11.4%	25.7%		11.4%	25.7%	11.4%
Maximum Green (s)	13.8	83.2	13.1	13.8	83.8	13.3	13.1	38.8		13.3	38.5	13.8
Yellow Time (s)	3.0	5.6	3.0	3.0	4.8	3.0	3.0	4.3		3.0	4.1	3.0
All-Red Time (s)	3.2	1.2	3.9	3.2	1.4	3.7	3.9	1.9		3.7	2.4	3.2
Lost Time Adjust (s)	-1.2	-1.8	-1.9	-1.2	-1.2	-1.7	-1.9	-1.2		-1.7	-1.5	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	2.0	2.0	6.0	2.0	2.0	6.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	3.4	2.0	2.0	3.4	2.0	2.0	3.0		2.0	2.0	2.0
Time Before Reduce (s)	0.0	15.0	0.0	0.0	15.0	0.0	0.0	5.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	0.0	0.0	45.0	0.0	0.0	20.0		0.0	0.0	0.0
Recall Mode	None	Min	None	None	Min	None	None	None		None	None	None
Act Effct Green (s)	15.2	30.7	50.9	11.3	26.8	41.3	15.2	23.8	95.4	9.4	18.0	38.2
Actuated g/C Ratio	0.16	0.32	0.53	0.12	0.28	0.43	0.16	0.25	1.00	0.10	0.19	0.40
v/c Ratio	0.85	0.41	0.37	0.46	0.74	0.19	0.97	0.51	0.02	0.27	0.63	0.62
Control Delay	56.6	27.4	15.6	48.4	36.2	17.7	73.8	33.7	0.0	44.4	40.6	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.6	27.4	15.6	48.4	36.2	17.7	73.8	33.7	0.0	44.4	40.6	28.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	C	B	D	D	B	E	C	A	D	D	C
Approach Delay		35.4			35.0			53.9			35.8	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	140	113	100	54	207	46	162	121	0	26	123	185
Queue Length 95th (ft)	#281	185	203	117	303	91	#336	192	0	56	190	321
Internal Link Dist (ft)		4097			681			1073			2803	
Turn Bay Length (ft)	500		150	300		150	363		225	250		250
Base Capacity (vph)	545	3168	844	281	3168	780	545	1499	1583	545	1499	634
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.15	0.37	0.34	0.23	0.17	0.97	0.30	0.02	0.17	0.28	0.62

Intersection Summary

Area Type: Other
Cycle Length: 175
Actuated Cycle Length: 95.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 39.9 Intersection LOS: D
Intersection Capacity Utilization 70.9% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jones Dairy Road & NC 98

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	347	808	277	54	543	75	217	137	24	126	205	246
Future Volume (vph)	347	808	277	54	543	75	217	137	24	126	205	246
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		150	300		150	363		225	250		250
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	225			150			250			125		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		4177			761			1153			2883	
Travel Time (s)		63.3			11.5			17.5			43.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	386	898	308	60	603	83	241	152	27	140	228	273
Shared Lane Traffic (%)												
Lane Group Flow (vph)	386	898	308	60	603	83	241	152	27	140	228	273
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)		24			24			24			24	
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
Number of Detectors	1	1	0	1	1	0	1	2	0	1	1	1
Detector Template												
Leading Detector (ft)	40	426	0	30	426	0	40	306	0	40	40	40
Trailing Detector (ft)	0	420	0	-10	420	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	420	0	-10	420	0	0	0	0	0	0	0
Detector 1 Size(ft)	40	6	20	40	6	20	40	40	20	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	3.0	5.0	0.0	0.0	5.0	15.0
Detector 2 Position(ft)								300				
Detector 2 Size(ft)								6				
Detector 2 Type								Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)								0.0				
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6			Free			4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	3	1	6	7	3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	14.0	7.0	7.0	14.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	13.2	20.8	13.9	13.2	20.2	13.7	13.9	13.2		13.7	13.5	13.2
Total Split (s)	20.0	90.0	20.0	20.0	90.0	20.0	20.0	45.0		20.0	45.0	20.0
Total Split (%)	11.4%	51.4%	11.4%	11.4%	51.4%	11.4%	11.4%	25.7%		11.4%	25.7%	11.4%
Maximum Green (s)	13.8	83.2	13.1	13.8	83.8	13.3	13.1	38.8		13.3	38.5	13.8
Yellow Time (s)	3.0	5.6	3.0	3.0	4.8	3.0	3.0	4.3		3.0	4.1	3.0
All-Red Time (s)	3.2	1.2	3.9	3.2	1.4	3.7	3.9	1.9		3.7	2.4	3.2
Lost Time Adjust (s)	-1.2	-1.8	-1.9	-1.2	-1.2	-1.7	-1.9	-1.2		-1.7	-1.5	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	2.0	2.0	6.0	2.0	2.0	6.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	3.4	2.0	2.0	3.4	2.0	2.0	3.0		2.0	2.0	2.0
Time Before Reduce (s)	0.0	15.0	0.0	0.0	15.0	0.0	0.0	5.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	0.0	0.0	45.0	0.0	0.0	20.0		0.0	0.0	0.0
Recall Mode	None	Min	None	None	Min	None	None	None		None	None	None
Act Effct Green (s)	15.2	32.7	50.9	9.6	23.9	39.3	13.1	15.1	84.8	10.3	12.3	32.6
Actuated g/C Ratio	0.18	0.39	0.60	0.11	0.28	0.46	0.15	0.18	1.00	0.12	0.15	0.38
v/c Ratio	0.63	0.66	0.32	0.30	0.61	0.11	0.46	0.24	0.02	0.33	0.44	0.45
Control Delay	39.6	25.8	10.9	42.0	29.1	13.1	37.4	32.8	0.0	38.7	37.7	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	25.8	10.9	42.0	29.1	13.1	37.4	32.8	0.0	38.7	37.7	24.2
LOS	D	C	B	D	C	B	D	C	A	D	D	C
Approach Delay		26.3			28.4			33.3			32.2	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 175
Actuated Cycle Length: 84.8
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 28.7 Intersection LOS: C
Intersection Capacity Utilization 56.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Jones Dairy Road & NC 98

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	499	792	341	103	1046	139	589	481	29	97	453	424
Future Volume (vph)	499	792	341	103	1046	139	589	481	29	97	453	424
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		150	300		150	363		225	250		250
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	225			150			250			125		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		4177			761			1153			2883	
Travel Time (s)		63.3			11.5			17.5			43.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	554	880	379	114	1162	154	654	534	32	108	503	471
Shared Lane Traffic (%)												
Lane Group Flow (vph)	554	880	379	114	1162	154	654	534	32	108	503	471
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)		24			24			24			24	
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
Number of Detectors	1	1	0	1	1	0	1	2	0	1	1	1
Detector Template												
Leading Detector (ft)	40	426	0	30	426	0	40	306	0	40	40	40
Trailing Detector (ft)	0	420	0	-10	420	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	420	0	-10	420	0	0	0	0	0	0	0
Detector 1 Size(ft)	40	6	20	40	6	20	40	40	20	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	3.0	5.0	0.0	0.0	5.0	15.0
Detector 2 Position(ft)								300				
Detector 2 Size(ft)								6				
Detector 2 Type								Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)								0.0				
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6			Free			4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	3	1	6	7	3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	14.0	7.0	7.0	14.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	13.2	20.8	13.9	13.2	20.2	13.7	13.9	13.2		13.7	13.5	13.2
Total Split (s)	20.0	90.0	20.0	20.0	90.0	20.0	20.0	45.0		20.0	45.0	20.0
Total Split (%)	11.4%	51.4%	11.4%	11.4%	51.4%	11.4%	11.4%	25.7%		11.4%	25.7%	11.4%
Maximum Green (s)	13.8	83.2	13.1	13.8	83.8	13.3	13.1	38.8		13.3	38.5	13.8
Yellow Time (s)	3.0	5.6	3.0	3.0	4.8	3.0	3.0	4.3		3.0	4.1	3.0
All-Red Time (s)	3.2	1.2	3.9	3.2	1.4	3.7	3.9	1.9		3.7	2.4	3.2
Lost Time Adjust (s)	-1.2	-1.8	-1.9	-1.2	-1.2	-1.7	-1.9	-1.2		-1.7	-1.5	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	2.0	2.0	6.0	2.0	2.0	6.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	3.4	2.0	2.0	3.4	2.0	2.0	3.0		2.0	2.0	2.0
Time Before Reduce (s)	0.0	15.0	0.0	0.0	15.0	0.0	0.0	5.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	0.0	0.0	45.0	0.0	0.0	20.0		0.0	0.0	0.0
Recall Mode	None	Min	None	None	Min	None	None	None		None	None	None
Act Effct Green (s)	15.3	50.2	70.7	13.4	48.2	64.0	15.3	30.8	125.5	10.7	26.1	46.6
Actuated g/C Ratio	0.12	0.40	0.56	0.11	0.38	0.51	0.12	0.25	1.00	0.09	0.21	0.37
v/c Ratio	1.32	0.62	0.43	0.61	0.86	0.19	1.56	0.61	0.02	0.37	0.68	0.80
Control Delay	202.9	32.8	18.7	71.5	42.7	17.5	299.5	46.6	0.0	62.0	51.6	48.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	202.9	32.8	18.7	71.5	42.7	17.5	299.5	46.6	0.0	62.0	51.6	48.5
LOS	F	C	B	E	D	B	F	D	A	E	D	D
Approach Delay		81.8			42.3			181.0			51.3	
Approach LOS		F			D			F			D	

Intersection Summary

Area Type: Other
Cycle Length: 175
Actuated Cycle Length: 125.5
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.56
Intersection Signal Delay: 87.5 Intersection LOS: F
Intersection Capacity Utilization 89.1% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: Jones Dairy Road & NC 98

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	414	1050	356	64	697	90	273	164	29	150	245	294
Future Volume (vph)	414	1050	356	64	697	90	273	164	29	150	245	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		150	300		150	363		225	250		250
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	225			150			250			125		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		4177			761			1153			2883	
Travel Time (s)		63.3			11.5			17.5			43.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	460	1167	396	71	774	100	303	182	32	167	272	327
Shared Lane Traffic (%)												
Lane Group Flow (vph)	460	1167	396	71	774	100	303	182	32	167	272	327
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)		24			24			24			24	
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
Number of Detectors	1	1	0	1	1	0	1	2	0	1	1	1
Detector Template												
Leading Detector (ft)	40	426	0	30	426	0	40	306	0	40	40	40
Trailing Detector (ft)	0	420	0	-10	420	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	420	0	-10	420	0	0	0	0	0	0	0
Detector 1 Size(ft)	40	6	20	40	6	20	40	40	20	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	3.0	5.0	0.0	0.0	5.0	15.0
Detector 2 Position(ft)								300				
Detector 2 Size(ft)								6				
Detector 2 Type								Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)								0.0				
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6			Free			4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	3	1	6	7	3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	14.0	7.0	7.0	14.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	13.2	20.8	13.9	13.2	20.2	13.7	13.9	13.2		13.7	13.5	13.2
Total Split (s)	20.0	90.0	20.0	20.0	90.0	20.0	20.0	45.0		20.0	45.0	20.0
Total Split (%)	11.4%	51.4%	11.4%	11.4%	51.4%	11.4%	11.4%	25.7%		11.4%	25.7%	11.4%
Maximum Green (s)	13.8	83.2	13.1	13.8	83.8	13.3	13.1	38.8		13.3	38.5	13.8
Yellow Time (s)	3.0	5.6	3.0	3.0	4.8	3.0	3.0	4.3		3.0	4.1	3.0
All-Red Time (s)	3.2	1.2	3.9	3.2	1.4	3.7	3.9	1.9		3.7	2.4	3.2
Lost Time Adjust (s)	-1.2	-1.8	-1.9	-1.2	-1.2	-1.7	-1.9	-1.2		-1.7	-1.5	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	2.0	2.0	6.0	2.0	2.0	6.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	3.4	2.0	2.0	3.4	2.0	2.0	3.0		2.0	2.0	2.0
Time Before Reduce (s)	0.0	15.0	0.0	0.0	15.0	0.0	0.0	5.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	0.0	0.0	45.0	0.0	0.0	20.0		0.0	0.0	0.0
Recall Mode	None	Min	None	None	Min	None	None	None		None	None	None
Act Effct Green (s)	15.4	43.6	64.0	10.8	35.6	52.5	15.4	18.4	101.6	11.7	14.8	35.3
Actuated g/C Ratio	0.15	0.43	0.63	0.11	0.35	0.52	0.15	0.18	1.00	0.12	0.15	0.35
v/c Ratio	0.89	0.77	0.40	0.38	0.62	0.12	0.58	0.28	0.02	0.42	0.53	0.60
Control Delay	64.8	30.0	12.3	52.5	29.1	12.1	48.4	40.5	0.0	48.0	46.0	35.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.8	30.0	12.3	52.5	29.1	12.1	48.4	40.5	0.0	48.0	46.0	35.1
LOS	E	C	B	D	C	B	D	D	A	D	D	D
Approach Delay		34.4			29.0			42.6			41.8	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 175
Actuated Cycle Length: 101.6
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 35.5 Intersection LOS: D
Intersection Capacity Utilization 66.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Jones Dairy Road & NC 98

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	499	792	368	103	1046	139	671	502	29	97	460	424
Future Volume (vph)	499	792	368	103	1046	139	671	502	29	97	460	424
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		150	300		150	363		225	250		250
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	225			150			250			125		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		4177			761			1153			2883	
Travel Time (s)		63.3			11.5			17.5			43.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	554	880	409	114	1162	154	746	558	32	108	511	471
Shared Lane Traffic (%)												
Lane Group Flow (vph)	554	880	409	114	1162	154	746	558	32	108	511	471
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6			Free			4
Detector Phase	5	2	3	1	6	7	3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	14.0	7.0	7.0	14.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	13.2	20.8	13.9	13.2	20.2	13.7	13.9	13.2		13.7	13.5	13.2
Total Split (s)	20.0	90.0	20.0	20.0	90.0	20.0	20.0	45.0		20.0	45.0	20.0
Total Split (%)	11.4%	51.4%	11.4%	11.4%	51.4%	11.4%	11.4%	25.7%		11.4%	25.7%	11.4%
Maximum Green (s)	13.8	83.2	13.1	13.8	83.8	13.3	13.1	38.8		13.3	38.5	13.8
Yellow Time (s)	3.0	5.6	3.0	3.0	4.8	3.0	3.0	4.3		3.0	4.1	3.0
All-Red Time (s)	3.2	1.2	3.9	3.2	1.4	3.7	3.9	1.9		3.7	2.4	3.2
Lost Time Adjust (s)	-1.2	-1.8	-1.9	-1.2	-1.2	-1.7	-1.9	-1.2		-1.7	-1.5	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	2.0	2.0	6.0	2.0	2.0	6.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	3.4	2.0	2.0	3.4	2.0	2.0	3.0		2.0	2.0	2.0
Time Before Reduce (s)	0.0	15.0	0.0	0.0	15.0	0.0	0.0	5.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	0.0	0.0	45.0	0.0	0.0	20.0		0.0	0.0	0.0
Recall Mode	None	Min	None	None	Min	None	None	None		None	None	None
Act Effct Green (s)	15.3	50.4	70.9	13.4	48.5	64.3	15.3	31.6	126.6	10.7	27.0	47.4
Actuated g/C Ratio	0.12	0.40	0.56	0.11	0.38	0.51	0.12	0.25	1.00	0.08	0.21	0.37
v/c Ratio	1.33	0.62	0.46	0.61	0.86	0.19	1.80	0.63	0.02	0.37	0.68	0.80
Control Delay	208.3	33.3	19.8	72.3	43.2	17.9	399.7	47.0	0.0	62.6	51.3	47.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	208.3	33.3	19.8	72.3	43.2	17.9	399.7	47.0	0.0	62.6	51.3	47.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	C	B	E	D	B	F	D	A	E	D	D
Approach Delay		82.9			42.8			242.8			51.0	
Approach LOS		F			D			F			D	
Queue Length 50th (ft)	~305	303	195	89	448	66	~473	213	0	43	203	340
Queue Length 95th (ft)	#535	423	330	#192	613	118	#748	325	0	86	300	565
Internal Link Dist (ft)		4097			681			1073			2803	
Turn Bay Length (ft)	500		150	300		150	363		225	250		250
Base Capacity (vph)	415	2428	886	214	2428	862	415	1142	1583	415	1142	592
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.33	0.36	0.46	0.53	0.48	0.18	1.80	0.49	0.02	0.26	0.45	0.80

Intersection Summary

Area Type: Other
Cycle Length: 175
Actuated Cycle Length: 126.6
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.80
Intersection Signal Delay: 104.2 Intersection LOS: F
Intersection Capacity Utilization 91.7% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jones Dairy Road & NC 98

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	414	1050	444	64	697	90	325	176	29	150	268	294
Future Volume (vph)	414	1050	444	64	697	90	325	176	29	150	268	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		150	300		150	363		225	250		250
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (ft)	225			150			250			125		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		4177			761			1153			2883	
Travel Time (s)		63.3			11.5			17.5			43.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	460	1167	493	71	774	100	361	196	32	167	298	327
Shared Lane Traffic (%)												
Lane Group Flow (vph)	460	1167	493	71	774	100	361	196	32	167	298	327
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6			Free			4
Detector Phase	5	2	3	1	6	7	3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	14.0	7.0	7.0	14.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	13.2	20.8	13.9	13.2	20.2	13.7	13.9	13.2		13.7	13.5	13.2
Total Split (s)	20.0	90.0	20.0	20.0	90.0	20.0	20.0	45.0		20.0	45.0	20.0
Total Split (%)	11.4%	51.4%	11.4%	11.4%	51.4%	11.4%	11.4%	25.7%		11.4%	25.7%	11.4%
Maximum Green (s)	13.8	83.2	13.1	13.8	83.8	13.3	13.1	38.8		13.3	38.5	13.8
Yellow Time (s)	3.0	5.6	3.0	3.0	4.8	3.0	3.0	4.3		3.0	4.1	3.0
All-Red Time (s)	3.2	1.2	3.9	3.2	1.4	3.7	3.9	1.9		3.7	2.4	3.2
Lost Time Adjust (s)	-1.2	-1.8	-1.9	-1.2	-1.2	-1.7	-1.9	-1.2		-1.7	-1.5	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	2.0	2.0	6.0	2.0	2.0	6.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	3.4	2.0	2.0	3.4	2.0	2.0	3.0		2.0	2.0	2.0
Time Before Reduce (s)	0.0	15.0	0.0	0.0	15.0	0.0	0.0	5.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	0.0	0.0	45.0	0.0	0.0	20.0		0.0	0.0	0.0
Recall Mode	None	Min	None	None	Min	None	None	None		None	None	None
Act Effct Green (s)	15.4	44.2	64.6	10.8	36.2	53.1	15.4	19.3	103.1	11.8	15.7	36.2
Actuated g/C Ratio	0.15	0.43	0.63	0.10	0.35	0.52	0.15	0.19	1.00	0.11	0.15	0.35
v/c Ratio	0.90	0.77	0.50	0.38	0.62	0.12	0.71	0.30	0.02	0.43	0.55	0.59
Control Delay	67.2	30.5	14.2	53.6	29.4	12.4	52.9	40.6	0.0	48.9	46.5	35.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	30.5	14.2	53.6	29.4	12.4	52.9	40.6	0.0	48.9	46.5	35.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	C	B	D	C	B	D	D	A	D	D	D
Approach Delay		34.7			29.5			45.9			42.3	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	153	348	173	44	215	32	116	58	0	52	95	173
Queue Length 95th (ft)	#336	501	318	104	294	59	#240	113	0	103	166	336
Internal Link Dist (ft)		4097			681			1073			2803	
Turn Bay Length (ft)	500		150	300		150	363		225	250		250
Base Capacity (vph)	511	2952	992	263	2952	870	511	1406	1583	511	1406	555
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.40	0.50	0.27	0.26	0.11	0.71	0.14	0.02	0.33	0.21	0.59

Intersection Summary

Area Type: Other
Cycle Length: 175
Actuated Cycle Length: 103.1
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 36.4 Intersection LOS: D
Intersection Capacity Utilization 68.2% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Jones Dairy Road & NC 98

APPENDIX G

CAPACITY ANALYSIS CALCULATIONS

AVERETTE ROAD

&

NC 98

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	340	107	54	614	6	97	50	52	1	61	36
Future Volume (vph)	15	340	107	54	614	6	97	50	52	1	61	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	175		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
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		0.964			0.998			0.965			0.950	
Flt Protected	0.950			0.950				0.976				
Satd. Flow (prot)	1770	1796	0	1770	1859	0	0	1754	0	0	1770	0
Flt Permitted	0.234			0.394				0.791			0.997	
Satd. Flow (perm)	436	1796	0	734	1859	0	0	1422	0	0	1764	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		5187			3440			1454			3999	
Travel Time (s)		64.3			42.6			18.0			49.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	378	119	60	682	7	108	56	58	1	68	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	497	0	60	689	0	0	222	0	0	109	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	14.0	14.0		14.0	14.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	20.2	20.2		20.6	20.6		13.4	13.4		13.1	13.1	
Total Split (s)	90.0	90.0		90.0	90.0		20.0	20.0		20.0	20.0	
Total Split (%)	81.8%	81.8%		81.8%	81.8%		18.2%	18.2%		18.2%	18.2%	
Maximum Green (s)	83.8	83.8		83.4	83.4		13.6	13.6		13.9	13.9	
Yellow Time (s)	5.2	5.2		5.4	5.4		4.9	4.9		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.2	1.2		1.5	1.5		1.1	1.1	
Lost Time Adjust (s)	-1.2	-1.2		-1.6	-1.6			-1.4			-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	6.0	6.0		6.0	6.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.4	3.4		3.4	3.4		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0		15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	45.0	45.0		45.0	45.0		0.0	0.0		0.0	0.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Act Effct Green (s)	25.4	25.4		25.4	25.4			15.2			15.2	
Actuated g/C Ratio	0.50	0.50		0.50	0.50			0.30			0.30	
v/c Ratio	0.08	0.55		0.16	0.74			0.52			0.21	
Control Delay	6.9	11.0		7.5	15.3			22.6			16.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	6.9	11.0		7.5	15.3			22.6			16.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	B		A	B			C			B	
Approach Delay		10.9			14.7			22.6			16.9	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)	2	91		9	145			54			24	
Queue Length 95th (ft)	10	153		23	243			#149			67	
Internal Link Dist (ft)		5107			3360			1374			3919	
Turn Bay Length (ft)	175			175								
Base Capacity (vph)	436	1796		734	1859			426			528	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.04	0.28		0.08	0.37			0.52			0.21	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 50.8
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 14.7 Intersection LOS: B
Intersection Capacity Utilization 71.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Averette Road & NC 98

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	627	78	44	399	4	85	36	30	1	26	20
Future Volume (vph)	30	627	78	44	399	4	85	36	30	1	26	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	175		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
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		0.983			0.999			0.973			0.943	
Flt Protected	0.950			0.950				0.973			0.999	
Satd. Flow (prot)	1770	1831	0	1770	1861	0	0	1764	0	0	1755	0
Flt Permitted	0.466			0.226				0.797			0.993	
Satd. Flow (perm)	868	1831	0	421	1861	0	0	1445	0	0	1744	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		5187			3440			1454			3999	
Travel Time (s)		64.3			42.6			18.0			49.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	697	87	49	443	4	94	40	33	1	29	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	784	0	49	447	0	0	167	0	0	52	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)		12			12			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
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template							Left			Left		
Leading Detector (ft)	40	426		40	426		20	40		20	40	
Trailing Detector (ft)	0	420		0	420		0	0		0	0	
Detector 1 Position(ft)	0	420		0	420		0	0		0	0	
Detector 1 Size(ft)	40	6		40	6		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	3.0	0.0		3.0	0.0		0.0	5.0		0.0	5.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	14.0	14.0		14.0	14.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	20.2	20.2		20.6	20.6		13.4	13.4		13.1	13.1	
Total Split (s)	90.0	90.0		90.0	90.0		20.0	20.0		20.0	20.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	81.8%	81.8%		81.8%	81.8%		18.2%	18.2%		18.2%	18.2%	
Maximum Green (s)	83.8	83.8		83.4	83.4		13.6	13.6		13.9	13.9	
Yellow Time (s)	5.2	5.2		5.4	5.4		4.9	4.9		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.2	1.2		1.5	1.5		1.1	1.1	
Lost Time Adjust (s)	-1.2	-1.2		-1.6	-1.6			-1.4			-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	6.0	6.0		6.0	6.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.4	3.4		3.4	3.4		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0		15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	45.0	45.0		45.0	45.0		0.0	0.0		0.0	0.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Act Effct Green (s)	32.0	32.0		32.0	32.0			12.5			12.5	
Actuated g/C Ratio	0.59	0.59		0.59	0.59			0.23			0.23	
v/c Ratio	0.06	0.73		0.20	0.41			0.50			0.13	
Control Delay	5.6	13.4		8.0	7.7			25.2			18.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	5.6	13.4		8.0	7.7			25.2			18.8	
LOS	A	B		A	A			C			B	
Approach Delay		13.1			7.8			25.2			18.8	
Approach LOS		B			A			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 54.7
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 12.9 Intersection LOS: B
Intersection Capacity Utilization 61.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 4: Averette Road & NC 98

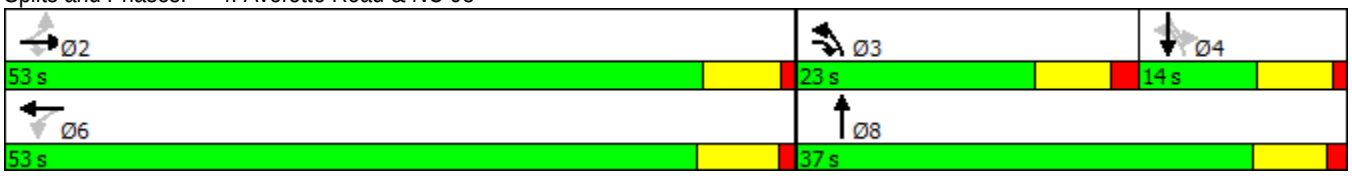
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	412	139	119	735	7	306	60	124	1	73	43
Future Volume (vph)	18	412	139	119	735	7	306	60	124	1	73	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		200	175		0	250		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	100			100			100			100		
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			0.850		0.999			0.899			0.950	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1861	0	1770	1675	0	0	1770	0
Flt Permitted	0.099			0.390			0.542				0.996	
Satd. Flow (perm)	184	1863	1583	726	1861	0	1010	1675	0	0	1763	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		5187			3440			1454			3999	
Travel Time (s)		64.3			42.6			18.0			49.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	458	154	132	817	8	340	67	138	1	81	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	458	154	132	825	0	340	205	0	0	130	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA		Perm	NA	
Protected Phases		2	3		6		3	8			4	
Permitted Phases	2		2	6			4			4		
Detector Phase	2	2	3	6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	14.0	14.0	7.0	14.0	14.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	20.2	20.2	14.0	20.6	20.6		14.0	13.4		13.1	13.1	
Total Split (s)	53.0	53.0	23.0	53.0	53.0		23.0	37.0		14.0	14.0	
Total Split (%)	58.9%	58.9%	25.6%	58.9%	58.9%		25.6%	41.1%		15.6%	15.6%	
Maximum Green (s)	46.8	46.8	16.0	46.4	46.4		16.0	30.6		7.9	7.9	
Yellow Time (s)	5.2	5.2	5.0	5.4	5.4		5.0	4.9		5.0	5.0	
All-Red Time (s)	1.0	1.0	2.0	1.2	1.2		2.0	1.5		1.1	1.1	
Lost Time Adjust (s)	-1.2	-1.2	-2.0	-1.6	-1.6		-2.0	-1.4			-1.1	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?			Yes				Yes			Yes	Yes	
Vehicle Extension (s)	6.0	6.0	3.0	6.0	6.0		3.0	2.0		2.0	2.0	
Minimum Gap (s)	3.4	3.4	3.0	3.4	3.4		3.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0	0.0	15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	45.0	45.0	0.0	45.0	45.0		0.0	0.0		0.0	0.0	
Recall Mode	Min	Min	None	Min	Min		None	None		None	None	
Act Effct Green (s)	40.6	40.6	62.5	40.6	40.6		25.7	30.8			8.9	
Actuated g/C Ratio	0.50	0.50	0.77	0.50	0.50		0.31	0.38			0.11	
v/c Ratio	0.22	0.49	0.13	0.37	0.89		0.72	0.32			0.67	
Control Delay	18.3	15.6	2.6	15.9	31.8		31.8	21.6			56.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	18.3	15.6	2.6	15.9	31.8		31.8	21.6			56.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	B	A	B	C		C	C			E	
Approach Delay		12.5			29.6			27.9			56.9	
Approach LOS		B			C			C			E	
Queue Length 50th (ft)	6	152	16	40	371		144	80			71	
Queue Length 95th (ft)	22	228	28	83	#579		#256	142			#162	
Internal Link Dist (ft)		5107			3360			1374			3919	
Turn Bay Length (ft)	175		200	175			250					
Base Capacity (vph)	110	1117	1243	435	1116		507	669			198	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.18	0.41	0.12	0.30	0.74		0.67	0.31			0.66	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 81.6
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 26.0 Intersection LOS: C
Intersection Capacity Utilization 86.9% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Averette Road & NC 98



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	753	134	88	483	5	124	43	56	1	31	24
Future Volume (vph)	36	753	134	88	483	5	124	43	56	1	31	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		200	175		0	250		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	100			100			100			100		
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			0.850		0.998			0.915			0.941	
Flt Protected	0.950			0.950			0.950				0.999	
Satd. Flow (prot)	1770	1863	1583	1770	1859	0	1770	1704	0	0	1751	0
Flt Permitted	0.362			0.150							0.991	
Satd. Flow (perm)	674	1863	1583	279	1859	0	1863	1704	0	0	1737	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		5187			3440			1454			3999	
Travel Time (s)		64.3			42.6			18.0			49.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	837	149	98	537	6	138	48	62	1	34	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	837	149	98	543	0	138	110	0	0	62	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA		Perm	NA	
Protected Phases		2	3		6		3	8			4	
Permitted Phases	2		2	6			4			4		
Detector Phase	2	2	3	6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	14.0	14.0	7.0	14.0	14.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	20.2	20.2	14.0	20.6	20.6		14.0	13.4		13.1	13.1	
Total Split (s)	62.0	62.0	14.0	62.0	62.0		14.0	28.0		14.0	14.0	
Total Split (%)	68.9%	68.9%	15.6%	68.9%	68.9%		15.6%	31.1%		15.6%	15.6%	
Maximum Green (s)	55.8	55.8	7.0	55.4	55.4		7.0	21.6		7.9	7.9	
Yellow Time (s)	5.2	5.2	5.0	5.4	5.4		5.0	4.9		5.0	5.0	
All-Red Time (s)	1.0	1.0	2.0	1.2	1.2		2.0	1.5		1.1	1.1	
Lost Time Adjust (s)	-1.2	-1.2	-2.0	-1.6	-1.6		-2.0	-1.4			-1.1	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?			Yes				Yes			Yes	Yes	
Vehicle Extension (s)	6.0	6.0	3.0	6.0	6.0		3.0	2.0		2.0	2.0	
Minimum Gap (s)	3.4	3.4	3.0	3.4	3.4		3.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0	0.0	15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	45.0	45.0	0.0	45.0	45.0		0.0	0.0		0.0	0.0	
Recall Mode	Min	Min	None	Min	Min		None	None		None	None	
Act Effct Green (s)	36.4	36.4	55.0	36.4	36.4		14.3	16.8			9.3	
Actuated g/C Ratio	0.57	0.57	0.86	0.57	0.57		0.22	0.26			0.14	
v/c Ratio	0.10	0.79	0.11	0.62	0.52		0.35	0.25			0.25	
Control Delay	7.8	17.9	2.4	30.5	10.8		25.2	23.6			35.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	7.8	17.9	2.4	30.5	10.8		25.2	23.6			35.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	B	A	C	B		C	C			D	
Approach Delay		15.2			13.8			24.4			35.1	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	8	276	14	27	139		42	33			24	
Queue Length 95th (ft)	21	427	27	#104	214		114	94			73	
Internal Link Dist (ft)		5107			3360			1374			3919	
Turn Bay Length (ft)	175		200	175			250					
Base Capacity (vph)	567	1567	1354	234	1564		399	675			269	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.07	0.53	0.11	0.42	0.35		0.35	0.16			0.23	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 64.3
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 16.5 Intersection LOS: B
Intersection Capacity Utilization 77.3% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Averette Road & NC 98

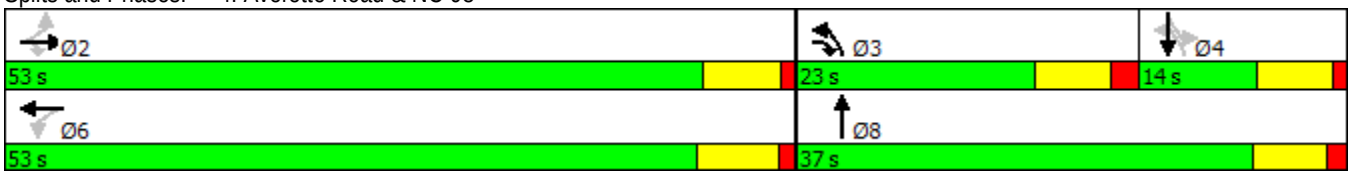
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	412	139	132	735	7	306	60	165	1	73	43
Future Volume (vph)	18	412	139	132	735	7	306	60	165	1	73	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		200	175		0	250		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	100			100			100			100		
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			0.850		0.999			0.890			0.950	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1861	0	1770	1658	0	0	1770	0
Flt Permitted	0.099			0.390			0.542				0.996	
Satd. Flow (perm)	184	1863	1583	726	1861	0	1010	1658	0	0	1763	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		5187			3440			1454			3999	
Travel Time (s)		64.3			42.6			18.0			49.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	458	154	147	817	8	340	67	183	1	81	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	458	154	147	825	0	340	250	0	0	130	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA		Perm	NA	
Protected Phases		2	3		6		3	8			4	
Permitted Phases	2		2	6			4			4		
Detector Phase	2	2	3	6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	14.0	14.0	7.0	14.0	14.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	20.2	20.2	14.0	20.6	20.6		14.0	13.4		13.1	13.1	
Total Split (s)	53.0	53.0	23.0	53.0	53.0		23.0	37.0		14.0	14.0	
Total Split (%)	58.9%	58.9%	25.6%	58.9%	58.9%		25.6%	41.1%		15.6%	15.6%	
Maximum Green (s)	46.8	46.8	16.0	46.4	46.4		16.0	30.6		7.9	7.9	
Yellow Time (s)	5.2	5.2	5.0	5.4	5.4		5.0	4.9		5.0	5.0	
All-Red Time (s)	1.0	1.0	2.0	1.2	1.2		2.0	1.5		1.1	1.1	
Lost Time Adjust (s)	-1.2	-1.2	-2.0	-1.6	-1.6		-2.0	-1.4			-1.1	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?			Yes				Yes			Yes	Yes	
Vehicle Extension (s)	6.0	6.0	3.0	6.0	6.0		3.0	2.0		2.0	2.0	
Minimum Gap (s)	3.4	3.4	3.0	3.4	3.4		3.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0	0.0	15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	45.0	45.0	0.0	45.0	45.0		0.0	0.0		0.0	0.0	
Recall Mode	Min	Min	None	Min	Min		None	None		None	None	
Act Effct Green (s)	40.6	40.6	62.5	40.6	40.6		25.7	30.8			8.9	
Actuated g/C Ratio	0.50	0.50	0.77	0.50	0.50		0.31	0.38			0.11	
v/c Ratio	0.22	0.49	0.13	0.41	0.89		0.72	0.40			0.67	
Control Delay	18.3	15.6	2.6	16.8	31.8		31.8	22.7			56.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	18.3	15.6	2.6	16.8	31.8		31.8	22.7			56.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	B	A	B	C		C	C			E	
Approach Delay		12.5			29.5			27.9			56.9	
Approach LOS		B			C			C			E	
Queue Length 50th (ft)	6	152	16	46	371		144	101			71	
Queue Length 95th (ft)	22	228	28	93	#579		#256	174			#162	
Internal Link Dist (ft)		5107			3360			1374			3919	
Turn Bay Length (ft)	175		200	175			250					
Base Capacity (vph)	110	1117	1243	435	1116		507	662			198	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.18	0.41	0.12	0.34	0.74		0.67	0.38			0.66	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 81.6
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 26.0 Intersection LOS: C
Intersection Capacity Utilization 86.9% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Averette Road & NC 98



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	753	134	132	483	5	124	43	82	1	31	24
Future Volume (vph)	36	753	134	132	483	5	124	43	82	1	31	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		200	175		0	250		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	100			100			100			100		
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			0.850		0.998			0.902			0.941	
Flt Protected	0.950			0.950			0.950				0.999	
Satd. Flow (prot)	1770	1863	1583	1770	1859	0	1770	1680	0	0	1751	0
Flt Permitted	0.362			0.150							0.991	
Satd. Flow (perm)	674	1863	1583	279	1859	0	1863	1680	0	0	1737	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		5187			3440			1454			3999	
Travel Time (s)		64.3			42.6			18.0			49.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	837	149	147	537	6	138	48	91	1	34	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	837	149	147	543	0	138	139	0	0	62	0
Turn Type	Perm	NA	pm+ov	Perm	NA		D.P+P	NA		Perm	NA	
Protected Phases		2	3		6		3	8			4	
Permitted Phases	2		2	6			4			4		
Detector Phase	2	2	3	6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	14.0	14.0	7.0	14.0	14.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	20.2	20.2	14.0	20.6	20.6		14.0	13.4		13.1	13.1	
Total Split (s)	62.0	62.0	14.0	62.0	62.0		14.0	28.0		14.0	14.0	
Total Split (%)	68.9%	68.9%	15.6%	68.9%	68.9%		15.6%	31.1%		15.6%	15.6%	
Maximum Green (s)	55.8	55.8	7.0	55.4	55.4		7.0	21.6		7.9	7.9	
Yellow Time (s)	5.2	5.2	5.0	5.4	5.4		5.0	4.9		5.0	5.0	
All-Red Time (s)	1.0	1.0	2.0	1.2	1.2		2.0	1.5		1.1	1.1	
Lost Time Adjust (s)	-1.2	-1.2	-2.0	-1.6	-1.6		-2.0	-1.4			-1.1	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0			5.0	
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?			Yes				Yes			Yes	Yes	
Vehicle Extension (s)	6.0	6.0	3.0	6.0	6.0		3.0	2.0		2.0	2.0	
Minimum Gap (s)	3.4	3.4	3.0	3.4	3.4		3.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0	0.0	15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	45.0	45.0	0.0	45.0	45.0		0.0	0.0		0.0	0.0	
Recall Mode	Min	Min	None	Min	Min		None	None		None	None	
Act Effct Green (s)	36.4	36.4	55.0	36.4	36.4		14.3	16.8			9.3	
Actuated g/C Ratio	0.57	0.57	0.86	0.57	0.57		0.22	0.26			0.14	
v/c Ratio	0.10	0.79	0.11	0.94	0.52		0.35	0.32			0.25	
Control Delay	7.8	17.9	2.4	77.4	10.8		25.2	24.5			35.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	7.8	17.9	2.4	77.4	10.8		25.2	24.5			35.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	B	A	E	B		C	C			D	
Approach Delay		15.2			25.0			24.8			35.1	
Approach LOS		B			C			C			D	
Queue Length 50th (ft)	8	276	14	56	139		42	43			24	
Queue Length 95th (ft)	21	427	27	#188	214		114	116			73	
Internal Link Dist (ft)		5107			3360			1374			3919	
Turn Bay Length (ft)	175		200	175			250					
Base Capacity (vph)	567	1567	1354	234	1564		399	665			269	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.07	0.53	0.11	0.63	0.35		0.35	0.21			0.23	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 64.3
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 20.4 Intersection LOS: C
Intersection Capacity Utilization 77.3% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Averette Road & NC 98

APPENDIX H

CAPACITY ANALYSIS CALCULATIONS

WINTER SPRING DRIVE

&

JONES DAIRY ROAD

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	250	57	25	279	6	2	4	4	14	3	41
Future Vol, veh/h	17	250	57	25	279	6	2	4	4	14	3	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	278	63	28	310	7	2	4	4	16	3	46

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	317	0	0	341	0	0	740	719	309	721	748	313
Stage 1	-	-	-	-	-	-	347	347	-	369	369	-
Stage 2	-	-	-	-	-	-	393	372	-	352	379	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1243	-	-	1218	-	-	333	354	731	343	341	727
Stage 1	-	-	-	-	-	-	669	635	-	651	621	-
Stage 2	-	-	-	-	-	-	632	619	-	665	615	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1243	-	-	1218	-	-	301	341	731	328	328	727
Mov Cap-2 Maneuver	-	-	-	-	-	-	301	341	-	328	328	-
Stage 1	-	-	-	-	-	-	659	625	-	641	607	-
Stage 2	-	-	-	-	-	-	576	605	-	646	606	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.6	13.8	12.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	419	1243	-	-	1218	-	-	536
HCM Lane V/C Ratio	0.027	0.015	-	-	0.023	-	-	0.12
HCM Control Delay (s)	13.8	7.9	-	-	8	-	-	12.6
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.4

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	189	66	24	299	12	10	2	2	5	2	22
Future Vol, veh/h	43	189	66	24	299	12	10	2	2	5	2	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	210	73	27	332	13	11	2	2	6	2	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	346	0	0	283	0	0	748	741	247	736	771	339
Stage 1	-	-	-	-	-	-	342	342	-	392	392	-
Stage 2	-	-	-	-	-	-	406	399	-	344	379	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1213	-	-	1279	-	-	329	344	792	335	331	703
Stage 1	-	-	-	-	-	-	673	638	-	633	606	-
Stage 2	-	-	-	-	-	-	622	602	-	671	615	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1213	-	-	1279	-	-	301	323	792	317	311	703
Mov Cap-2 Maneuver	-	-	-	-	-	-	301	323	-	317	311	-
Stage 1	-	-	-	-	-	-	646	613	-	608	593	-
Stage 2	-	-	-	-	-	-	585	589	-	640	591	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.6	16.3	12.1
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	334	1213	-	-	1279	-	-	542
HCM Lane V/C Ratio	0.047	0.039	-	-	0.021	-	-	0.059
HCM Control Delay (s)	16.3	8.1	-	-	7.9	-	-	12.1
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	307	68	30	355	7	2	4	4	17	4	49
Future Vol, veh/h	20	307	68	30	355	7	2	4	4	17	4	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	341	76	33	394	8	2	4	4	19	4	54

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	402	0	0	417	0	0	917	892	379	893	926	398
Stage 1	-	-	-	-	-	-	423	423	-	465	465	-
Stage 2	-	-	-	-	-	-	494	469	-	428	461	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1157	-	-	1142	-	-	253	281	668	262	269	652
Stage 1	-	-	-	-	-	-	609	588	-	578	563	-
Stage 2	-	-	-	-	-	-	557	561	-	605	565	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1157	-	-	1142	-	-	221	268	668	248	256	652
Mov Cap-2 Maneuver	-	-	-	-	-	-	221	268	-	248	256	-
Stage 1	-	-	-	-	-	-	597	577	-	567	547	-
Stage 2	-	-	-	-	-	-	492	545	-	585	554	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.6	16.1	15
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	334	1157	-	-	1142	-	-	439
HCM Lane V/C Ratio	0.033	0.019	-	-	0.029	-	-	0.177
HCM Control Delay (s)	16.1	8.2	-	-	8.2	-	-	15
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-	-	0.6

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	51	251	79	29	371	14	12	2	2	6	2	26
Future Vol, veh/h	51	251	79	29	371	14	12	2	2	6	2	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	279	88	32	412	16	13	2	2	7	2	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	428	0	0	367	0	0	936	928	323	922	964	420
Stage 1	-	-	-	-	-	-	436	436	-	484	484	-
Stage 2	-	-	-	-	-	-	500	492	-	438	480	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1131	-	-	1192	-	-	245	268	718	251	255	633
Stage 1	-	-	-	-	-	-	599	580	-	564	552	-
Stage 2	-	-	-	-	-	-	553	548	-	597	554	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1131	-	-	1192	-	-	219	248	718	234	236	633
Mov Cap-2 Maneuver	-	-	-	-	-	-	219	248	-	234	236	-
Stage 1	-	-	-	-	-	-	569	551	-	536	537	-
Stage 2	-	-	-	-	-	-	511	533	-	563	526	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.6	20.9	13.7
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	244	1131	-	-	1192	-	-	452
HCM Lane V/C Ratio	0.073	0.05	-	-	0.027	-	-	0.084
HCM Control Delay (s)	20.9	8.4	-	-	8.1	-	-	13.7
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0.1	-	-	0.3

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	334	68	30	437	7	2	4	4	17	4	70
Future Vol, veh/h	27	334	68	30	437	7	2	4	4	17	4	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	371	76	33	486	8	2	4	4	19	4	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	493	0	0	447	0	0	1066	1029	409	1029	1063	489
Stage 1	-	-	-	-	-	-	469	469	-	556	556	-
Stage 2	-	-	-	-	-	-	597	560	-	473	507	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1071	-	-	1113	-	-	200	234	642	212	223	579
Stage 1	-	-	-	-	-	-	575	561	-	515	513	-
Stage 2	-	-	-	-	-	-	490	511	-	572	539	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1071	-	-	1113	-	-	163	221	642	198	210	579
Mov Cap-2 Maneuver	-	-	-	-	-	-	163	221	-	198	210	-
Stage 1	-	-	-	-	-	-	559	545	-	501	498	-
Stage 2	-	-	-	-	-	-	408	496	-	548	524	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.5	18.7	16.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	273	1071	-	-	1113	-	-	403
HCM Lane V/C Ratio	0.041	0.028	-	-	0.03	-	-	0.251
HCM Control Delay (s)	18.7	8.5	-	-	8.3	-	-	16.9
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-	-	1

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	339	79	29	423	14	12	2	2	6	2	38
Future Vol, veh/h	74	339	79	29	423	14	12	2	2	6	2	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	82	377	88	32	470	16	13	2	2	7	2	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	486	0	0	464	0	0	1149	1135	421	1129	1171	478
Stage 1	-	-	-	-	-	-	585	585	-	542	542	-
Stage 2	-	-	-	-	-	-	564	550	-	587	629	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1077	-	-	1097	-	-	176	202	632	181	193	587
Stage 1	-	-	-	-	-	-	497	498	-	525	520	-
Stage 2	-	-	-	-	-	-	510	516	-	496	475	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1077	-	-	1097	-	-	149	181	632	165	173	587
Mov Cap-2 Maneuver	-	-	-	-	-	-	149	181	-	165	173	-
Stage 1	-	-	-	-	-	-	459	460	-	485	505	-
Stage 2	-	-	-	-	-	-	457	501	-	454	439	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.5	28.8	15.1
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	169	1077	-	-	1097	-	-	408
HCM Lane V/C Ratio	0.105	0.076	-	-	0.029	-	-	0.125
HCM Control Delay (s)	28.8	8.6	-	-	8.4	-	-	15.1
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0.1	-	-	0.4

APPENDIX I

CAPACITY ANALYSIS CALCULATIONS

SWEETCLOVER DRIVE

&

AVERETTE ROAD

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	4	4	127	195	4
Future Vol, veh/h	4	4	4	127	195	4
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	4	141	217	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	369	219	221	0	-	0
Stage 1	219	-	-	-	-	-
Stage 2	150	-	-	-	-	-
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	631	821	1348	-	-	-
Stage 1	817	-	-	-	-	-
Stage 2	878	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	629	821	1348	-	-	-
Mov Cap-2 Maneuver	629	-	-	-	-	-
Stage 1	817	-	-	-	-	-
Stage 2	875	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1348	-	712	-	-
HCM Lane V/C Ratio	0.003	-	0.012	-	-
HCM Control Delay (s)	7.7	-	10.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	4	4	194	150	4
Future Vol, veh/h	4	4	4	194	150	4
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	4	216	167	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	393	169	171	0	-	0
Stage 1	169	-	-	-	-	-
Stage 2	224	-	-	-	-	-
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	611	875	1406	-	-	-
Stage 1	861	-	-	-	-	-
Stage 2	813	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	609	875	1406	-	-	-
Mov Cap-2 Maneuver	609	-	-	-	-	-
Stage 1	861	-	-	-	-	-
Stage 2	811	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1406	-	718	-	-
HCM Lane V/C Ratio	0.003	-	0.012	-	-
HCM Control Delay (s)	7.6	-	10.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	27	10	306	392	7
Future Vol, veh/h	20	27	10	306	392	7
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	30	11	340	436	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	801	439	443	0	-	0
Stage 1	439	-	-	-	-	-
Stage 2	362	-	-	-	-	-
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	354	618	1117	-	-	-
Stage 1	650	-	-	-	-	-
Stage 2	704	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	351	618	1117	-	-	-
Mov Cap-2 Maneuver	351	-	-	-	-	-
Stage 1	650	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1117	-	467	-	-
HCM Lane V/C Ratio	0.01	-	0.112	-	-
HCM Control Delay (s)	8.3	-	13.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	18	33	305	223	23
Future Vol, veh/h	13	18	33	305	223	23
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	20	37	339	248	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	673	261	273	0	-	0
Stage 1	261	-	-	-	-	-
Stage 2	412	-	-	-	-	-
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	421	778	1290	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	409	778	1290	-	-	-
Mov Cap-2 Maneuver	409	-	-	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	650	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1290	-	564	-	-
HCM Lane V/C Ratio	0.028	-	0.061	-	-
HCM Control Delay (s)	7.9	-	11.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	88	30	335	401	11
Future Vol, veh/h	32	88	30	335	401	11
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	98	33	372	446	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	891	452	458	0	-	0
Stage 1	452	-	-	-	-	-
Stage 2	439	-	-	-	-	-
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	313	608	1103	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	650	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	304	608	1103	-	-	-
Mov Cap-2 Maneuver	304	-	-	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	631	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.4	0.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1103	-	480	-	-
HCM Lane V/C Ratio	0.03	-	0.278	-	-
HCM Control Delay (s)	8.4	-	15.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	57	99	323	254	36
Future Vol, veh/h	21	57	99	323	254	36
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	63	110	359	282	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	881	302	322	0	-	0
Stage 1	302	-	-	-	-	-
Stage 2	579	-	-	-	-	-
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	317	738	1238	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	289	738	1238	-	-	-
Mov Cap-2 Maneuver	289	-	-	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	510	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	1.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1238	-	520	-	-
HCM Lane V/C Ratio	0.089	-	0.167	-	-
HCM Control Delay (s)	8.2	-	13.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.6	-	-

APPENDIX J

CAPACITY ANALYSIS CALCULATIONS

ALFALFA LANE

&

JONES DAIRY ROAD

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	302	277	2	26	11
Future Vol, veh/h	8	302	277	2	26	11
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	336	308	2	29	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	310	0	-	0	662	309
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	353	-
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	1250	-	-	-	427	731
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	711	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1250	-	-	-	423	731
Mov Cap-2 Maneuver	-	-	-	-	423	-
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	705	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	13.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1250	-	-	-	484
HCM Lane V/C Ratio	0.007	-	-	-	0.085
HCM Control Delay (s)	7.9	0	-	-	13.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	246	264	24	21	9
Future Vol, veh/h	10	246	264	24	21	9
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	273	293	27	23	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	320	0	-	0	603	307
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	296	-
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	1240	-	-	-	462	733
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	755	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1240	-	-	-	457	733
Mov Cap-2 Maneuver	-	-	-	-	457	-
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	747	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1240	-	-	-	515
HCM Lane V/C Ratio	0.009	-	-	-	0.065
HCM Control Delay (s)	7.9	0	-	-	12.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	363	340	2	38	26
Future Vol, veh/h	16	363	340	2	38	26
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	403	378	2	42	29

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	380	0	-	0	818	379
Stage 1	-	-	-	-	379	-
Stage 2	-	-	-	-	439	-
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	1178	-	-	-	346	668
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	650	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1178	-	-	-	339	668
Mov Cap-2 Maneuver	-	-	-	-	339	-
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	637	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	15.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1178	-	-	-	424
HCM Lane V/C Ratio	0.015	-	-	-	0.168
HCM Control Delay (s)	8.1	0	-	-	15.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	31	300	320	29	29	20
Future Vol, veh/h	31	300	320	29	29	20
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	333	356	32	32	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	388	0	-	0	774	372
Stage 1	-	-	-	-	372	-
Stage 2	-	-	-	-	402	-
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	1170	-	-	-	367	674
Stage 1	-	-	-	-	697	-
Stage 2	-	-	-	-	676	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1170	-	-	-	354	674
Mov Cap-2 Maneuver	-	-	-	-	354	-
Stage 1	-	-	-	-	697	-
Stage 2	-	-	-	-	652	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1170	-	-	-	439
HCM Lane V/C Ratio	0.029	-	-	-	0.124
HCM Control Delay (s)	8.2	0	-	-	14.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	387	414	2	38	34
Future Vol, veh/h	19	387	414	2	38	34
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	430	460	2	42	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	462	0	-	0	933	461
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	472	-
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	1099	-	-	-	295	600
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	628	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1099	-	-	-	288	600
Mov Cap-2 Maneuver	-	-	-	-	416	-
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	612	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1099	-	-	-	486
HCM Lane V/C Ratio	0.019	-	-	-	0.165
HCM Control Delay (s)	8.3	0	-	-	13.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	40	379	367	29	29	25
Future Vol, veh/h	40	379	367	29	29	25
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	421	408	32	32	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	440	0	-	0	934	424
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	510	-
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	1120	-	-	-	295	630
Stage 1	-	-	-	-	660	-
Stage 2	-	-	-	-	603	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1120	-	-	-	280	630
Mov Cap-2 Maneuver	-	-	-	-	406	-
Stage 1	-	-	-	-	660	-
Stage 2	-	-	-	-	572	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1120	-	-	-	486
HCM Lane V/C Ratio	0.04	-	-	-	0.123
HCM Control Delay (s)	8.3	0	-	-	13.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

APPENDIX K

CAPACITY ANALYSIS CALCULATIONS

JONES DAIRY ROAD

&

FLASH DRIVE / SITE DRIVE 1

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	297	6	2	236	11	10
Future Vol, veh/h	297	6	2	236	11	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	330	7	2	262	12	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	337	0	600	333
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	267	-
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	-	-	1222	-	464	709
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	778	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1222	-	463	709
Mov Cap-2 Maneuver	-	-	-	-	463	-
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	777	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	555	-	-	1222	-
HCM Lane V/C Ratio	0.042	-	-	0.002	-
HCM Control Delay (s)	11.8	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	223	10	17	284	12	8
Future Vol, veh/h	223	10	17	284	12	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	248	11	19	316	13	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	259	0	606	253
Stage 1	-	-	-	-	253	-
Stage 2	-	-	-	-	353	-
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	-	-	1306	-	460	786
Stage 1	-	-	-	-	789	-
Stage 2	-	-	-	-	711	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1306	-	453	786
Mov Cap-2 Maneuver	-	-	-	-	453	-
Stage 1	-	-	-	-	789	-
Stage 2	-	-	-	-	701	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	545	-	-	1306	-
HCM Lane V/C Ratio	0.041	-	-	0.014	-
HCM Control Delay (s)	11.9	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	362	9	7	285	19	29
Future Vol, veh/h	362	9	7	285	19	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	402	10	8	317	21	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	412	0	739	407
Stage 1	-	-	-	-	407	-
Stage 2	-	-	-	-	332	-
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	-	-	1147	-	385	644
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	727	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1147	-	382	644
Mov Cap-2 Maneuver	-	-	-	-	382	-
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	722	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	506	-	-	1147	-
HCM Lane V/C Ratio	0.105	-	-	0.007	-
HCM Control Delay (s)	13	-	-	8.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	270	18	37	341	17	21
Future Vol, veh/h	270	18	37	341	17	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	300	20	41	379	19	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	320	0	771	310
Stage 1	-	-	-	-	310	-
Stage 2	-	-	-	-	461	-
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	-	-	1240	-	368	730
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	635	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1240	-	356	730
Mov Cap-2 Maneuver	-	-	-	-	356	-
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	614	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	497	-	-	1240	-
HCM Lane V/C Ratio	0.085	-	-	0.033	-
HCM Control Delay (s)	12.9	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	379	9	7	338	13	19	4	29	41	4	21
Future Vol, veh/h	7	379	9	7	338	13	19	4	29	41	4	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	421	10	8	376	14	21	4	32	46	4	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	390	0	0	431	0	0	854	848	426	858	845	383
Stage 1	-	-	-	-	-	-	442	442	-	398	398	-
Stage 2	-	-	-	-	-	-	412	406	-	460	447	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1169	-	-	1129	-	-	279	298	628	277	300	664
Stage 1	-	-	-	-	-	-	594	576	-	628	603	-
Stage 2	-	-	-	-	-	-	617	598	-	581	573	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1169	-	-	1129	-	-	263	294	628	257	296	664
Mov Cap-2 Maneuver	-	-	-	-	-	-	263	294	-	257	296	-
Stage 1	-	-	-	-	-	-	590	572	-	624	599	-
Stage 2	-	-	-	-	-	-	587	594	-	543	569	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	15.7	19.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	394	1169	-	-	1129	-	-	322
HCM Lane V/C Ratio	0.147	0.007	-	-	0.007	-	-	0.228
HCM Control Delay (s)	15.7	8.1	-	-	8.2	-	-	19.4
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.9

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	327	18	37	375	44	17	4	21	26	4	13
Future Vol, veh/h	22	327	18	37	375	44	17	4	21	26	4	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	363	20	41	417	49	19	4	23	29	4	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	466	0	0	383	0	0	955	970	373	959	955	441
Stage 1	-	-	-	-	-	-	422	422	-	523	523	-
Stage 2	-	-	-	-	-	-	533	548	-	436	432	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1095	-	-	1175	-	-	238	253	673	237	258	616
Stage 1	-	-	-	-	-	-	609	588	-	537	530	-
Stage 2	-	-	-	-	-	-	531	517	-	599	582	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1095	-	-	1175	-	-	219	239	673	216	244	616
Mov Cap-2 Maneuver	-	-	-	-	-	-	219	239	-	216	244	-
Stage 1	-	-	-	-	-	-	596	575	-	525	512	-
Stage 2	-	-	-	-	-	-	496	499	-	561	569	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.7	17.5	21
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	334	1095	-	-	1175	-	-	272
HCM Lane V/C Ratio	0.14	0.022	-	-	0.035	-	-	0.176
HCM Control Delay (s)	17.5	8.4	-	-	8.2	-	-	21
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.1	-	-	0.6

APPENDIX L

CAPACITY ANALYSIS CALCULATIONS

JONES DAIRY ROAD

&

SITE DRIVE 2 / SITE DRIVE 3

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	436	6	23	317	7	21	4	70	21	4	20
Future Vol, veh/h	7	436	6	23	317	7	21	4	70	21	4	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	484	7	26	352	8	23	4	78	23	4	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	360	0	0	491	0	0	924	914	488	951	914	356
Stage 1	-	-	-	-	-	-	503	503	-	407	407	-
Stage 2	-	-	-	-	-	-	421	411	-	544	507	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1199	-	-	1072	-	-	250	273	580	240	273	688
Stage 1	-	-	-	-	-	-	551	541	-	621	597	-
Stage 2	-	-	-	-	-	-	610	595	-	523	539	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1199	-	-	1072	-	-	233	265	580	200	265	688
Mov Cap-2 Maneuver	-	-	-	-	-	-	233	265	-	200	265	-
Stage 1	-	-	-	-	-	-	547	537	-	617	583	-
Stage 2	-	-	-	-	-	-	572	581	-	446	535	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.6	16.4	19.3
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	421	1199	-	-	1072	-	-	302
HCM Lane V/C Ratio	0.251	0.006	-	-	0.024	-	-	0.166
HCM Control Delay (s)	16.4	8	-	-	8.4	-	-	19.3
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1	0	-	-	0.1	-	-	0.6

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	329	22	75	431	22	13	4	44	13	4	13
Future Vol, veh/h	22	329	22	75	431	22	13	4	44	13	4	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	366	24	83	479	24	14	4	49	14	4	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	503	0	0	390	0	0	1094	1097	378	1111	1097	491
Stage 1	-	-	-	-	-	-	427	427	-	658	658	-
Stage 2	-	-	-	-	-	-	667	670	-	453	439	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1061	-	-	1169	-	-	191	213	669	186	213	578
Stage 1	-	-	-	-	-	-	606	585	-	453	461	-
Stage 2	-	-	-	-	-	-	448	455	-	586	578	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1061	-	-	1169	-	-	170	193	669	157	193	578
Mov Cap-2 Maneuver	-	-	-	-	-	-	170	193	-	157	193	-
Stage 1	-	-	-	-	-	-	592	572	-	443	428	-
Stage 2	-	-	-	-	-	-	402	423	-	527	565	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	1.2	16.7	22.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	374	1061	-	-	1169	-	-	238
HCM Lane V/C Ratio	0.181	0.023	-	-	0.071	-	-	0.14
HCM Control Delay (s)	16.7	8.5	-	-	8.3	-	-	22.6
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0.2	-	-	0.5

APPENDIX M

CAPACITY ANALYSIS CALCULATIONS

JONES DAIRY ROAD

&

SITE DRIVE 4

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	523	335	7	20	12
Future Vol, veh/h	4	523	335	7	20	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	581	372	8	22	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	380	0	-	0	966	376
Stage 1	-	-	-	-	376	-
Stage 2	-	-	-	-	590	-
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	1178	-	-	-	282	670
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	554	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1178	-	-	-	281	670
Mov Cap-2 Maneuver	-	-	-	-	281	-
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	552	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	16.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1178	-	-	-	359
HCM Lane V/C Ratio	0.004	-	-	-	0.099
HCM Control Delay (s)	8.1	-	-	-	16.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	373	520	22	13	8
Future Vol, veh/h	13	373	520	22	13	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	414	578	24	14	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	602	0	-	0	1033	590
Stage 1	-	-	-	-	590	-
Stage 2	-	-	-	-	443	-
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	975	-	-	-	258	508
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	647	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	975	-	-	-	254	508
Mov Cap-2 Maneuver	-	-	-	-	254	-
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	638	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	975	-	-	-	314
HCM Lane V/C Ratio	0.015	-	-	-	0.074
HCM Control Delay (s)	8.7	-	-	-	17.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

APPENDIX N

CAPACITY ANALYSIS CALCULATIONS

AVERETTE ROAD

&

SITE DRIVE 5

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	62	20	344	483	6
Future Vol, veh/h	21	62	20	344	483	6
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	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	69	22	382	537	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	967	540	543	0	-	0
Stage 1	540	-	-	-	-	-
Stage 2	427	-	-	-	-	-
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	282	542	1026	-	-	-
Stage 1	584	-	-	-	-	-
Stage 2	658	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	276	542	1026	-	-	-
Mov Cap-2 Maneuver	276	-	-	-	-	-
Stage 1	584	-	-	-	-	-
Stage 2	644	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.5	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1026	-	436	-	-
HCM Lane V/C Ratio	0.022	-	0.212	-	-
HCM Control Delay (s)	8.6	-	15.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	39	66	409	289	22
Future Vol, veh/h	13	39	66	409	289	22
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	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	43	73	454	321	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	934	333	346	0	-	0
Stage 1	333	-	-	-	-	-
Stage 2	601	-	-	-	-	-
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	295	709	1213	-	-	-
Stage 1	726	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	277	709	1213	-	-	-
Mov Cap-2 Maneuver	277	-	-	-	-	-
Stage 1	726	-	-	-	-	-
Stage 2	514	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1213	-	510	-	-
HCM Lane V/C Ratio	0.06	-	0.113	-	-
HCM Control Delay (s)	8.2	-	13	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-